**Hyperosmolar Hyperglycemic Nonketotic Syndrome Treatment**

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**Student statement:** By submitting this reflection, I am acknowledging that it is my own work. Comments are my own and have not been used in any previous work (inside or outside the institution). I have followed the rules outlined by my instructor and am compliant with the University of Windsor, St. Clair College, and/or Lambton College Academic Integrity Policy.

Student Name: Reem Boudali Student Number: 110007510 Date: January 19, 2021

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| **Category** | **Satisfactory** | **Unsatisfactory** | **Student Reflection (must be typed)** |
| **Look Back**  **(L)** | * Identifies **ONE** relevant clinical event/experience/ learning opportunity that was significant/impactful in one or two sentences. * Describes this **ONE** clinical event so that the reader can gain an understanding of what occurred. * Provides opinion/idea/perspective and feelings related to own. role/actions/performance in this clinical experience. | * Does not provide a clear and succinct description of ONE clinical event, experience or learning opportunity. * Does not provide own feelings related to the clinical experience. * Identified event, experience, or learning opportunity is not relevant to clinical practice. | On January 19, our case study patient developed Hyperosmolar Hyperglycemic Nonketotic Syndrome (HHNS) that required emergency intervention.  The patient was initially diagnosed with prediabetes alongside their existing hypertension and obese state. At the point of this first diagnosis, the patient was advised to properly manage their condition by exercising regularly, changing their unhealthy diet, and monitoring their blood glucose regularly. Upon the follow-up appointment, it was noted that the patient was not following through with the prescribed interventions and had then developed Type 2 Diabetes. The patient failed to act yet again which ultimately led to the emergency involving HHNS.  I think that most of the fault in this situation is with the patient not taking adequate action to manage their diabetes. I also think that the patient would have been more likely to be successful with their regime if they were equipped with more resources from the healthcare provider, such as a diabetes educator or endocrinologist referrals. |
| **Examine Experience**  **(E)** | * Selects a scholarly article that relates to this clinical experience (may use a CNO standard or BPG in addition to article, but not in lieu of an article). * Briefly summarizes key ideas/findings of the article. * Compares/contrasts own ideas/thoughts with those expressed by the author(s) with explanation. | * Does not incorporate a scholarly article. * Summary of the key ideas/findings of the article are not included.      * No explanation of the author’s ideas/thoughts compared/contrasted with own. | The article I found looked at the best ways to manage diabetic ketoacidosis (DKA) and HHNS.  Fayfman et al. (2019) explain that the recommended treatment for DKA and HHNS follows an algorithm outlined by the American Diabetes Association. The 4 main categories of the algorithm are: IV fluids (0.9% NaCl), potassium, bicarbonate, and insulin. The IV fluids help the kidneys that are under stress due to the high glucose concentration in the body. Insulin helps lower the serum glucose, but will also lower serum potassium levels, which is why potassium is administered when levels drop below 5.2 mEq. Finally, bicarbonate is not used unless that patient has severe acidosis (Fayfman et al., 2019).  While the authors highlight these various treatments further in detail along with the complications associated with each, they place a higher emphasis on prevention. Fayfman et al. reason that medication non-compliance is the biggest factor in these hyperglycemic states. Thus, they recommend changes, such as connecting patients to diabetes educators and implementing insulin assistance programs that assist patients in getting affordable insulin, to help decrease their occurences.  I agree with the recommendations made by the authors. I believe the biggest factor is treating hyperglycemic crises like HHNS is by preventing them. I think diabetes educators are the most important resource because for patients to follow their medical regime, they need to understand how dangerous their condition is and what it may result in. While the development of insulin assistance programs is also a great idea, I think a greater focus should be placed on programs that work to prevent the onset of Type 2 diabetes entirely. While Type 1 is not preventable, there are many lifestyle changes that can be made to prevent Type 2 and I think programs should focus on that to take an upstream approach to the problem. |
| **Appraise**  **and**  **Analyse**  **(A)** | * Discusses at least **two** other people’s ideas/opinions/ perspectives that should be considered related to this clinical event (how might they feel: e.g. client, peer, family, other discipline, etc.).   **\*\***A reflection graded as ***excellent would also include the following:***   * Examines perspectives surrounding this event at the level of nursing in general, and/or society in general (e.g. impact on health care system/nursing profession, political, financial, cultural influences on Canadians). * Identifies how the event/situation challenged own perspective(s) and status quo (usual way of doing things). * Poses questions that should be considered due to their significance to nursing practice. | * No other perspectives are discussed. * Only one other perspective is discussed | There are two possible opinions that patients with diabetes may have regarding these recommendations. Those who are motivated to learn and take action on their diagnosis of Type 2 diabetes will actively welcome these changes and take advantage of the resources offered to them. Those who do not fully understand the dangers of their condition may see these resources as inconveniences. Likewise, family of the patient can take the same two stances about these resources depending on how they view their loved one’s illness.  In nursing, hyperglycemic crisis are viewed as a serious complication of untreated diabetes. Uncontrolled diabetes is also a huge problem in the healthcare system. The cost of acute complications related to diabetes is great and is something that can oftentimes be preventable (Fayfman et al., 2019).  Usually, patients are given instructions of how to manage their diabetes from their physician and from the nurses that care for them in acute care. Instead of this setup, diabetes educators and endocrinologists should be involved with every patient case related to diabetes to help reduce the risk of a patient’s case of worsening.  One question that should be asked in relation to this topic is what can be said to a patient to help them convince that they need to make lifestyle changes? We can equip patients with information to manage their diabetes, but if the patient themselves is not convinced that a healthy change needs to be made, the information we give them is useless. |
| **Research**  **and**  **Revision**  **(R)** | * Provides summary of learning from this clinical experience and from the article findings. * Identifies what they could have done differently in this clinical experience. | * Summary not provided * Does not identify what they could have changed about their own role/actions/performance in this clinical experience. | In conclusion, I learned that IV fluids, potassium, insulin, and bicarbonate are all used for treatment of hyperglycemia in hospitals; however, the most important aspect of treatment is prevention.  In our clinical situation, we could have made sure to follow-up with the patient more often and we could have connected them to the resources I previously mentioned. |
| **New Perspective**  **(N)** | * Incorporates specific examples of how this new/enhanced knowledge will be implemented into future practice as a nurse. * Identifies a nursing resource(s) that will assist to develop this aspect of practice (e.g. identify a specific nursing textbook etc.). | * No specific examples for implementation into future practice are incorporated. * Does not identify a nursing resource to assist with learning | In the future, I will use this knowledge on hyperglycemic crises to help educate my patients on the potential complications of their diabetes. I will also connect my patients with diabetes to local resources including diabetes education centres.  Some resources that can help me learn more about diabetes and its management include the Canadians Fundamentals of Nursing textbook and local centers like Diabetes Canada. |
| **Concept Identification** | * Identifies and describes key curricular concepts that influence the experience (minimum one in 1st year; two in 2nd year; three in 3rd year; minimum four in 4th year)   (critical thinking, know-based practice, evidence informed decision-making, health, teaching & learning, professional practice, communication, leadership, collaboration, safety, person family centered care, and informatics) | * Does not identify and/or describe related curricular concepts that relate to the experience/reflection. | Evidence-informed decision making – treatments for hyperglycemic crises  Safety – prevention of HHNS |
| **References and APA Format** | * Scholarly article(s) and any additional resources (CNO, BPG) correctly cited in reflection in APA format. * Title page in correct APA format * Reference in correct APA format | * Incorrect APA format throughout reflection * Incorrect APA format on title page * Incorrect APA format for article(s) and/or other sources. | **Student Reference(s) in APA Format:**  Fayfman, M., Pasquel, F. J., & Umpierrez, G. E. (2017). Management of hyperglycemic crises: Diabetic ketoacidosis and hyperglycemic hyperosmolar state. *The Medical clinics of North America, 101*(3), 587–606. https://doi.org/10.1016/j.mcna.2016.12.011 |
| **Grade:** | **□ Satisfactory □ Excellent** | **□ Unsatisfactory** |  |
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