Management of diabetic ketoacidosis nursing essay

Diabetes UK (2008) explains that Diabetic Ketoacidosis (DKA) occurs when blood glucose levels are consistently high. When there is lack of glucose in the blood, the body's cells use fat stores to acquire energy, this process produces an acid called ' ketones'. As ketones are potentially harmful to the body, it tries to get rid of them by excreting them in the urine. If the level of ketones in the bloodstream continue to rise, ketoacidosis occurs whereby the blood turns acidic. as a consequence, patients may feel nauseous, have blurred vision and have very rapid breathing. Because people vomit, the body becomes dehydrated and it is harder for the body to flush out the ketones, if this happens and is left untreated, the patient will fall into a coma which can be fatal.

As Daniel was suffering from a chest infection, he was at high risk of developing DKA as his body was releasing more glucose into the bloodstream and stop insulin from working efficiently, this is a triggered response to the infection (Moore, 2004).

How is DKA managed?

Kisiel and Marsons (2009) explore the regime which is usually carried out in hospitals faced with patients like Daniel. Firstly, a diagnosis of DKA would have been made alongside hypoglycaemia (high blood glucose levels). His urine would have been tested for ketones as standard regime. Arteirial blood gas measurement may also have been performed to demonstrate the level of acidity. A series of blood tests would have been taken to measure Daniel's urea and creatinine levels (measures of kidney function), markers of infection would also have been measured such as white blood cell count.

Fluid replacement would have been commenced, insulin administered and his potassium level would have also been monitored in the high dependency unit.

What could have influenced Daniel's rising BMs?

It should be taken into consideration that Daniel's rising blood sugar levels could be influenced by a number of factors and Jo should take these into account. Jo should check the equipment supplying Daniel's insulin as it may be faulty or the pump may not be functioning correctly. She should also ensure that the line is properly connected to the cannula and that it is not leaking or that there is no blockage along the line, or that the cannula has not 'tissued'. Daniel's cannula site should be inspected on every shift to check for Phlebitis using the Visual Infusion Phelbitis score (VIP) in line with local policy.

Nursing decisions

Many factors could have contributed to both Jo and the Senior Nurse's decisions and the decision made either way could impact on Daniel's condition. If Jo had decided not to increase the insulin and the senior nurse had not increased it either, Daniel may have slipped back into a coma as his blood glucose levels had been rising over time. This would have led to more complications and could have been fatal. However, increasing the insulin may also have had a negative result for Daniel. As it was not prescribed, it may have been increased too much and the blood sugar level could be reduced to an unsafe level and he may suffer a hypoglycaemic episode. Although this is unlikely, it should be mentioned that the senior nurses decision to alter the prescription without it being prescribed was wrong.

Accountability

According to the NMC's code of professional conduct (2008), " as a professional, you are personally accountable for actions and omissions in your practice and must always be able to justify your decisions". As the senior nurses made a decision to alter the insulin infusion without it being prescribed, she is personally accountable to what happens to that patient as a consequence of doing so. On the other hand, Jo is also accountable for her omissions so it could be seen that both of the nurses are responsible for what they do or don't do in this situation. The senior nurse may have thought she was acting in the best interests of the patient, following the NMC code of conduct standard …….

Accountability is the fundamental aspect to professional practice (NMC 2008) and nurses need to be able to justify why they made any decision in practice. Nurses do make judgments based on a number of influences which include their professional knowledge/skills, evidence based practice and acting on the patients best interests. In this situation, the senior nurse may have been a nurse prescriber who had the authority to prescribe drugs from a limited group in the nurse prescriber's formulary (McHale 2003). This would have allowed her to alter Daniel's prescription without a doctor. She may also have had background knowledge of Daniel's condition and thought the best decision to make was to change the insulin dose so that the patient would not have deteriorated further.

The senior nurse should be working within her acquired job description which would have included expectations and limitations to what she was required to do as part of her job. Vicarious liability comes into mind in this instance;

Richardson (2002) explains that as the employer is responsible for any ‘ torts’ which are committed by an employee during their employment. ‘ Torts’ are described as any legal wrongs for which the law provides a remedy. In this case, the senior nurse has preformed a ‘ tort’ and the person employing her is liable.

As Jo was the nurse who was looking after Daniel that day, she also has responsibility to what happens to the patient whilst in her care. This raises the question of who actually is accountable for what happens to Daniel; the nurse looking after him or the nurse who performed the alteration.

As it states that Jo is newly qualified, it can be assumed that she may need support from her peers. She would have had a supernumerary period, where she was allocated patients but support was there when she needed it. Also known as preceptorship, newly qualified nurses are accompanied by an experienced nurse who acts as a role model and resource (Ashurst 2008). If the senior nurse was Jo’s preceptor, she would not have been setting a good example to her. The NMC code of conduct states that “ you must work cooperatively within teams and respect the skills, expertise and contributions of your colleagues”, the senor nurse was clearly not being cooperative with Jo and did not allow her to share her concerns. Castledine (1999) explains how newly qualified nurses are sometimes expected to fit into the system of the ward very quickly and in addition, adapt to a whole range of situations that they have never experienced before. Jo may have been feeling unsupported by her senior and her confidence may have been knocked due to the attitude and response of the senior nurse.

Documentation

As the senior nurse did change the prescription, it needs to be documented somewhere in line with the NMC code. In this situation it could be questioned who documents the alteration of the insulin and where in the nursing notes it should be written. Medication administration arguably carries the biggest risk for nurses (Elliot & Liu 2010). This particular scenario could be described as a medication error as the change in prescription was not verified by a doctor. Elliot and Liu (2010) confirm the fact that nurses must only administer the dose prescribed by the medical officer, and that the nurse who administers the medication must sign the medication chart. It should also be documented in the nursing notes as well as signing the chart, and should include the reason for administration and the desired effect (Elliot & Liu 2010). Woodrow (2007) stipulates that nurses should be aware of the legal responsibility of accuracy of documentation. So in this situation, the senior nurse should write in the nursing notes why she gave the unprescribed dose to Daniel, and Jo should comment why she did not, as well as outlining what happened.

Incident Reporting & Patient Safety

Jo could think about writing an incident form in this situation to voice her concerns. The scenario could be seen as a ‘ near miss’ as the patient may well have suffered dire consequences from either of the decisions made by the nurses. The Reporting of Injuries, Diseases and Dangerous Occurances Regulations (RIDDOR 1995) places a legal responsibility to employers, self employed people and people in control on premises, to report any dangerous occurrence/near miss (Ashurst 2007). Jo could include on the form that she

was not happy with the senior nurse’s decision to alter the insulin pump, and therefore cover herself. By completing an incident report, Jo is following local and national policy and it could also bring to light other problems such as rushed transfers, doctor shortage and lack of support. RIDDOR coordinates it’s work with the NPSA.

The National Patient Safety Agency (NPSA) was formed in 2001 following two publications of patient safety in the NHS. These incorporated research conducted by Vincent et al (2001) which showed that 10% of patients admitted to hospital suffered some kind of patient safety incident. The NPSA has produced a guide to good practice called “ Seven Steps to Patient Safety” (NPSA, 2003) Steps include; building a safer culture, leading and supporting your practice team, integrating your risk management activity, promoting reporting, involving and communicating with patients and the public, learning and sharing safety lessons and implementing solutions to prevent harm. Dimond (2002) explains how the NPSA aims to ensure that adverse events will be identified, reported, analyzed and recorded to make a change to local and national policies and procedures. Jo could refer to this guide and also make others aware of it and improve the patient safety of not only Daniel but every patient on the ward.

Inter-professional Working

There are several benefits of inter-professional working, the senior nurse and Jo should be aware of these in order to work together and provide effective care. Benefits of inter-professional working which were identified in a report by Cook et al (2001) showed that the team members had more confidence in their decision making as they had encouragement and support from their

colleagues. This allowed team members to make better contributions to the overall service in which they were a part of, consequently providing a more effective service to the patients in their care. Jo would have increased her confidence in dealing with similar situations in the future if the senior nurse had spoke to her and answered her questions.

There is a great deal of literature which discusses the barriers and difficulties associated with inter-professional collaboration. It should not be assumed that simply instructing professionals to work together will be sufficient to result in effective teams which provide improved services to their patients. A variety of barriers to interdisciplinary working exist that delay the developments of close collaborative working relationships. Hudson (2002) outlines some barriers to effective inter-professional working in terms of relationships between members of different professions such as nurse and doctors. One barrier that he notes is that the character of professional identity is such that where members of a certain profession have similar or shared values, perceptions and experiences, there will be more agreement between members of a profession than between members of different professions. This ‘ disagreement’ shapes inter-professional relationships, and is likely to cause problems within multi-disciplinary team working.

In Jo’s case, she could have bleeped the doctor herself and asked him about the prescription, but as mentioned if he was busy he may have been reluctant to take the call. The senior nurse’s reaction to Jo demonstrated the hierarchical struggle between a more senior nurse and a very junior member of staff. Although inter-professional working has much potential to enhance care, it can also produce tensions and concerns within the health care team

(Peate 2006). It is also important to note that some barriers are organisational or structural such as merging or Trusts, relocation and withdrawal of services. In this scenario, the main barrier is that there are two different skill mixes with conflicting ideas.

Irvine et al (2002) also consider some organisational difficulties and barriers to the effectiveness of inter-professional practice. They identify that differences in working hours may hinder the development of close working relationships between professionals. Also the time different professionals take to carry out particular work may cause difficulties. For example doctors may be making decisions regarding clients on a day-to-day basis whereas social workers need to undertake longer term casework to meet their clients' needs. Also, financial constraints can influence the ability of a team to practice effective collaborative working. McCray notes that when budgets and resources are limited, the issue of who will pay for the intervention can also create tension within teams. Even if practitioners wish to work collaboratively, their managers may be less able to facilitate this due to budgeting constraints, and may therefore place restrictions on the amount of collaboration that can take place.

Irvine et al (2002) considers that differing value systems between professions may also contribute to problems with the determining of priority of certain cases. The senior nurse may have decided that she would prioritise Daniel's well-being over the values of Jo. Different professions or grades will see patients needs as being at different levels of importance as their aims and goals for the patient will be dissimilar. This can create problems and sources of conflict between different grades of nurses and some, such as the

senior nurse may feel as though their patient’s needs are being ignored or devalued mainly in this situation by Jo or the doctor who is looking after Daniel.

Hudson (2002) also explains that issues relating to professional status also have implications for inter-professional relationships. Health and social care professions in particular have very different levels of training, education and legal restriction. In this case, it seems that the senior nurse is devaluing Jo’s opinions and knowledge and sticking to her own.

All the barriers discussed can create stress and tension between team members. Irvine et al (2002) state that ‘ professional structures are differentiated by demographics; the size of the occupation’s membership; gender composition; the class of origin of its members; educational attainment; status and the relative size and source of primary income.’ These differences are all quoted as barriers to inter-professional working.

What have I learnt?

By analysing this scenario I have learnt many attributes which contribute to effective patient care and working in a team.