

Reflective summary on prescribing practice learning nursing essay



**ASSIGN
BUSTER**

The author, a nurse practitioner based in an Emergency Department (ED), from here on in will be referred to as 'the practitioner'. The practitioner is currently employed in a development role with the view, following training, of becoming an acute care practitioner. This will entail working autonomously: taking accurate clinical histories, physical examination, gain differential and working diagnosis and organise a plan of care. This plan of care could well include a number of prescribed medications. Hence it is in the practitioners job description (as it is increasingly in many specialist/autonomous nursing roles) to become a Nurse Independent and Supplementary Prescriber (NISP).

The Cumberlege Report (1986) suggested that nurses should be able to prescribe independently and highlighted that patient care could be improved and resources used more effectively by doing so. It identified that nurses were wasting their time requesting prescriptions from Doctors. Since the publication of this seminal piece of work, non-medical prescribing has been analysed, reflected upon, researched at great lengths and changes in practice made (DoH 1989, 1999, 2006 & 2008; Luker et al 1994; Latter et al 2011) and is still under constant review.

The aim of this portfolio is to:

Reflect on practice as a means of on-going personal and professional development.

Demonstrate a capability of integrating learning into practice.

Submit a range of material mapped against the module learning outcomes, NMC 2006 prescribing standards, domains of practice and core competencies.

Establish an evidence-based approach to practice competence as a safe independent & supplementary prescriber.

This prescribing practice portfolio will be a reflective portfolio using Rolfe et al (2001) model of reflection to aid learning from experience and close the gap between theory and practice. This model has been chosen as it is something the practitioner is familiar with and has used before.

The portfolio will conclude with a reflective summary on prescribing practice learning which will draw together the evidence used to support achievement of the competences identified.

After discussing with colleagues who have already completed the NISP course, the practitioner is aware of the complex nature and volume of work that is required over the duration of it. There is a feeling of nervousness due to this but also a feeling excitement over what will be learnt. If successful the practitioner believes her practice will be enhanced significantly as she will have the ability to give patients seamless care.

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Consultation

Holistic Assessment Case Study

In this case study the consultation, diagnosis, prescribing options and decisions of a 35 year old female seen in the ED will be discussed. This case study will aim to improve the practitioners' knowledge of conducting a consultation and its relationship with making a diagnosis and treatment options. To maintain confidentiality, in line with the code of professional conduct, the patient will be referred to as Mrs A (Nursing and Midwifery Council (NMC), 2008).

Consultation

Examining the holistic needs of the patient is the first of seven principles of good prescribing (National Prescribing Centre (NPC), 1999) and must be undertaken before making a decision to prescribe (NMC Practice Standard 3, 2006). Holistic assessment takes into consideration the mind, body and spirit of the patient (Jarvis, 2008). Traditionally consultation and making a diagnosis has been completed by Doctors. However, nurse diagnosis would appear to have been formally acknowledged since The Crown Two Report (DoH, 1999) as part of the independent prescriber role. Horrocks et al, (2002), found greater patient satisfaction with nurse consultations than with GP consultations. Jennings et al, (2009) and Wilson & Shifaza, (2008) also found this to be true of nurse practitioners working in emergency departments. Importantly, they also found no significant variation in other health outcomes. Most of these studies found that consultations with nurses were to some extent longer, they offered more advice on self-care and self-management and that nurses gave more information to patients.

Although there are various consultation models that have been described (Byrne & Long, 1976; Pendleton et al, 1984; Neighbour, 2005; Kurtz et al, 2003; Stott & Davis, 1979), these are based upon observation of doctor, not nurse consultations. Nevertheless, the consultation models and skills described in the medical literature are relevant to all practitioners (Baird, 2004). Consultation models help the practitioner centre the consultation around successful information exchange and try to provide a theoretical structure. Consultation models can also be used to help make maximum use of the time available at each consultation (Simon, 2009). Traditionally the medical model is used to assess patients however; it does not take into account the social, psychological, and other external factors of the patient. The model also overlooks that the diagnosis (that will affect treatment of the patient) is a result of negotiation between doctor and patient (Frankel et al, 2003)

In this case study, the practitioner has used Roger Neighbour's model of consultation. This was found by the practitioner to be simple and easy to remember, whilst covering all areas needed to make an effective consultation and assessment. He describes a 5 stage model which he refers to as a journey with ' checkpoints' along the way:

Connecting – establishing a relationship and rapport with the patient.

Summarising – taking a history from the patient including their ideas, expectations, concerns and summarising back to the patient to ensure there are no misunderstandings.

Handing over – negotiating between the practitioners and patients agenda and agreeing on a management plan.

Safety netting – the consideration of ‘ what if?’ and what the practitioner might do in each case.

Housekeeping – reflecting on the consultation.

(Neighbour, 2005)

Connecting

Mrs A was called through to the Rapid Assessment and Treatment area in the ED. It was apparent from Mrs A’s facial expression and limp that walking caused her pain. Silverman & Kinnersley, (2010) state that non-verbal communication is extremely important and can often provide clues to underlying concerns or emotions. The practitioner had never met the patient before so had no previous ‘ relationship’ with her but was aware that she may have pre-conceived ideas about the ED which may have caused her anxiety. The practitioner introduced herself to Mrs A, explained her job role, the process that was about to be undertaken and consent obtained. During this time eye contact was maintained and the practitioner also asked Mrs A how she would like to be addressed. This was done to try and build up a rapport with Mrs A, to help her feel at ease and reassure her. Simon, (2009) and Moulton, (2007) agree and state that rapport is essential to effective communication and consultation. Mrs A was also offered a trolley to sit on to make herself comfortable and the curtains pulled around for privacy and dignity. On reflection the practitioner was aware that the environment was a

busy and noisy assessment area and this can have a negative impact on the consultation (Silverman et al, 2005). Identifying this with Mrs A and apologising may have re-assured her further and gained trust and respect.

Summarising

The practitioner began with an open ended question and did not interrupt the patients' response. Neighbour, (2005) and Moulton, (2007) advise this to open the consultation. Gask & Usherwood, (2002) found that if a practitioner interrupts, patients then rarely disclose new information, which could lead to not finding out the real reason for the consultation.

Mrs A revealed that she received an insect bite to her right lower leg 5 days ago, since then the surrounding skin had become swollen, increasingly red, painful and hot to touch. She explained that the redness was spreading up her leg and the pain was getting worse. Mrs A explained that she was concerned that it was not going to get better and was very worried that it had got worse during the last 3 days. Upon questioning Mrs A also complained of malaise and that she had been feeling very hot and cold and at times. She had been managing to eat and drink as normal. Mrs A lived with her husband, was a non smoker and drank alcohol occasionally. She had no past medical history and took no prescribed or over the counter (otc) medications. It was also elicited that she was allergic to Penicillin which she had an anaphylaxis reaction to. Taking a medical, social, medication and allergy history is important as it can be relevant to the presenting complaint, makes sure key information has not been overlooked and is essential in preventing prescribing errors (Bickley, 2008; Young et al, 2009).

The practitioner actively listened to what Mrs A was saying by maintaining eye contact, using open questions and by summarising the history back to clarify points and to make sure nothing was missed. On reflection the practitioner feels this also gave the opportunity for Mrs A to add any further information not disclosed so far. Closed questions were then used to gain specific information related to the initial information given, this is advised by Young et al, (2009) and Moulton, (2007). Effective communication is important as Epstein et al, (2008) explains that a precise history can supply at least 80% of the information necessary for a diagnosis.

Upon examination there was obvious erythema. Light palpation revealed that the area was very warm and tender. Neurovascular assessment was performed and was unremarkable. Mrs A's chest was clear, heart sounds normal and her abdomen was soft, non tender. Physical examination is important as it is used to detect physical signs that the patient may not be aware of and can be used to confirm or disprove a possible diagnosis. It also suggests to the patient that their illness is being taken seriously. (Bickley, 2008, Charlton, 2006). Observations were taken including blood pressure, heart rate, temperature, respiratory rate and oxygen saturations. All were within normal parameters except her temperature which was 38.2 degrees Celsius. Venous blood was taken to check haematological, biochemical and coagulation status. Mrs A white cell count (WCC) and C-reactive protein (CRP) levels were raised, all other blood results were normal.

Handing Over

Before making a final diagnosis, it is important that differential diagnoses are excluded (Nazarko, 2012). The practitioners' differential diagnoses were deep vein thrombosis (DVT) or venous eczema. However, Mrs A had a straightforward history (insect bite) that together with her observations (raised temperature), examination findings (redness, heat, swelling and pain) and blood results (raised WCC and CRP) indicated an alternative diagnosis, so DVT and venous eczema were ruled out.

The practitioners working diagnosis was cellulitis. This was discussed with Mrs A and she appeared reassured that a diagnosis had been made. The practitioner explained that she would like to discuss this with a senior Doctor to help decide on a treatment plan. The practitioner presented the patient to an ED Registrar who agreed with the diagnosis. Diagnosis, treatment and prescribing options were then discussed to aid the practitioners learning.

Cellulitis is a bacterial infection of the skin and subcutaneous tissue which is potentially serious (Epstein et al, 2008). It is caused by one or more types of bacteria, most commonly streptococci and staphylococcus aureus (Nazarko, 2012). Cellulitis usually occurs on the lower legs, arms and face but can arise anywhere on the body (Bickley, 2008). Patients with cellulitis present with signs of inflammation, distinctively heat, redness, swelling and pain (Nazarko, 2012). Inflammation is localised initially but increases as the infection progresses. Patients can be systemically unwell (pyrexial, tachycardic, hypotensive) and white cell count and C-reactive protein levels will be markedly raised (Beldon, 2011, Wingfield, 2009, Nazarko, 2012).

It appears there is a general lack of evidence based literature surrounding the treatment of patients with cellulitis. The practitioner could only find one national guideline on the management of cellulitis in adults, which was published in 2005 by the Clinical Resource Efficiency Support Team (CREST, 2005). However, to the practitioners' knowledge, these have not been validated by a clinical study. Morris, (2008) found in his systematic review that antibiotics cure 50-100% of cases of cellulitis but did not find out which antibiotic regime was most successful. Kilburn et al, (2010) also could not find any definitive conclusions in their Cochrane review on the optimal antibiotics, duration or route of administration.

Eron, (2000) devised a classification system for cellulitis and its treatment which CREST used in their guidelines. This system divides people with cellulitis into four classes and can serve as a useful guide to admission and treatment decisions. However Koerner & Johnson, (2011) found in their retrospective study, comparing the treatment received with the CREST guidelines, that patients at the mildest end of the spectrum were over treated and at the more severe end undertreated. They also found a significant variation in antibiotic regimes prescribed for patients with cellulitis. Marwick et al, (2011) questioned whether classes I and II could actually be merged to improve treatment.

The practitioners trust has antibiotic guidelines (updated yearly) which also include a classification system. This aids the prescriber in choosing the correct antibiotic, dose, route and duration for certain conditions, cellulitis being one of them. After discussion with the Registrar it was determined that

Mrs A was in Class I or non-severe which meant she could be managed with oral antibiotics on an outpatient basis.

The practitioners trust and CREST, (2005) guidelines advise first line treatment for non-severe or class I cellulitis as oral Flucloxacillin 500mg, three times a day. Flucloxacillin is a moderately narrow-spectrum antibiotic licensed for the treatment of cellulitis. However, Flucloxacillin was contra-indicated for Mrs A as she had a severe penicillin allergy (British National Formulary, (BNF) 2012).

Clarithromycin is a macrolide which has an antibacterial spectrum that is similar but not identical to that of penicillin; they are thus an alternative in penicillin-allergic patients (BNF, 2012). Clarithromycin is licensed and recommended by CREST, (2005), and by the practitioners' trust, as an alternative to Flucloxacillin in cellulitis for patients with a Penicillin allergy. It is indicated in the BNF, (2012) for the treatment of mild to moderate skin and soft-tissue infections. It demonstrates suitable pharmacokinetics, with good distribution into skin and soft tissues, and is effective against the large majority of staphylococcal and streptococcal bacteria that cause cellulitis (Accord Healthcare Limited, 2012), (See drug monologue page 21-28). There were no contraindications in prescribing Clarithromycin for Mrs A.

The option of not having any medication was discussed with Mrs A however, she wanted treatment so the benefits and side effects of Clarithromycin was explained, and consent obtained from Mrs A to prescribe the antibiotics and to be discharged, (NMC Practice Standard 5, 2006). Dose and duration were

then also clarified and the importance of taking the antibiotics as prescribed and to complete the full course. On reflection, by discussing and deciding on the best treatment together this would hopefully promote concordance.

Negotiating with patients and agreeing on a management plan is very important aspect of reaching patient centred care (Neighbour, 2005). Using an FP10 Clarithromycin tablets 500mg twice a day was prescribed by the Registrar (as the practitioner was not a licensed prescriber, NMC Practice Standard 1, 2006), as per trust guidelines, for 7 days. Paracetamol tablets 1g four times a day was also prescribed for its analgesic and anti-pyretic properties (BNF, 2012). A stat dose of both were prescribed and the practitioner asked the nurse to administer the first dose (NMC Practice Standard 9 & 14, 2006), and was aware that by delegating this task the prescriber remained accountable. The FP10 was given to the patient to take to the pharmacy of her choice for them to dispense (NMC Practice Standard 10, 2006), (See mock prescription page 29).

The practitioner did not initially contemplate cost effectiveness but on reflection it has been recognised that this needs to be taken into consideration when prescribing (NPC, 1999). Intravenous antibiotics may have been prescribed, which may have meant an admission into hospital or administration by nurses on an outpatient basis; thus would have increased the cost of treatment significantly. Admission to hospital can also be overwhelming and can put the patient at risk of hospital acquired infections and increased risk of antibiotic resistance (Wingfield, 2008).

Safety Netting

The erythematous border was marked, with the patient's consent, with permanent pen to monitor for any improvement or additional spread of infection (CREST, 2005, Beldon, 2011). The practitioner advised Mrs A that she should return or see her GP if she had worsening symptoms or if by the completion of the course of antibiotics symptoms had failed to resolve. Mrs A was also advised that, if a similar incident occurred, she should seek medical assistance early so that treatment could begin as soon as possible to reduce the risk of severe and long-term complications. In addition it was recommended that she should drink plenty of fluids to prevent dehydration, elevate the leg for comfort and to help reduce the swelling (CREST, 2005, Beldon, 2011). Mrs A was warned that there could be an increase in erythema in the first 24-48 hours of treatment (CREST, 2005). This advice and information empowered Mrs A and made sure that her discharge was as safe as possible.

The practitioner brought the consultation to a close by asking Mrs A if she had any questions or if there was anything else she would like to discuss. This gave Mrs A the opportunity of clarifying any information given by the practitioner and the opportunity to divulge any information or concerns not previously mentioned. This re-assured the practitioner that she had addressed her problem appropriately.

Housekeeping

The practitioner made sure there was clear concise documentation of the consultation and choice of prescription in Mrs A notes (NMC Practice Standard 7, 2006). A discharge letter was also produced to send to her GP

NMC Practice Standard 6, 2006). Once the prescription was ready, Mrs A was discharged.

This case study has shown the practitioner the importance of effective communication in consultation. By following Neighbours consultation ‘checkpoints’ it gave structure to the consultation and will be used by the practitioner in future practice. It has also helped the practitioner to gain an understanding of different prescribing options and how to explore these further. For example, the practitioner did find when reading around the subject that there has been some research on the use of corticosteroids in cellulitis to increase resolution, however, to the practitioners’ knowledge, this is not currently advised in any guidelines and further research is needed. The practitioner would also like to be involved in the development of a cellulitis pathway at her place of work. This could include an algorithm to aid practitioners to differential diagnosis so patients can receive appropriate treatment and reduce the incorrect prescribing of antibiotics.

As there are no National Institute for Health and Clinical Excellence (NICE) guidelines on the treatment and management of cellulitis, treatment of patients is not standardised and consequently quality of care could be affected. The optimal choice for antimicrobial therapy requires review and definitive study in clinical trials.

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Drug Monologue.

Name of Drug

Clarithromycin

Drug Classification

Macrolide

Therapeutic Uses(s)

Clarithromycin film-coated tablets are indicated in adults and adolescents 12 years and older for the treatment of the following bacterial infections, when caused by clarithromycin-susceptible bacteria.

- Acute bacterial exacerbation of chronic bronchitis
- Mild to moderate community acquired pneumonia.
- Acute bacterial sinusitis
- Bacterial pharyngitis.
- Skin infections and soft tissue infections of mild to moderate severity, such as folliculitis, cellulitis and erysipelas

Clarithromycin film-coated tablets can also be used in appropriate combination with antibacterial therapeutic regimens and an appropriate

ulcer healing agent for the eradication of *Helicobacter pylori* in patients with *Helicobacter pylori* associated ulcers

Dose range and route(s) of administration

Adults and adolescents (12 years and older)

- Standard dosage: The usual dose is 250 mg twice daily.
- High dosage treatment (severe infections): The usual dose may be increased to 500 mg twice daily in severe infections.

Children younger than 12 years:

Use of Clarithromycin film-coated tablets is not recommended for children younger than 12 years. Use Clarithromycin paediatric suspensions. Clinical trials have been conducted using clarithromycin pediatric suspension in children 6 months to 12 years of age.

Elderly:

As for adults

Dosage in renal functional impairment:

The maximum recommended dosages should be reduced proportionately to renal impairment. In patients with renal impairment with creatinine clearance less than 30 mL/min, the dosage of clarithromycin should be reduced by one-half, i. e. 250 mg once daily, or 250 mg twice daily in more severe infections. Treatment should not be continued beyond 14 days in these patients.

Patients with hepatic impairment:

Caution should be exercised when administering clarithromycin in patients with hepatic impairment

Administered orally.

Pharmacodynamics

Mode of Action

Clarithromycin is a semi-synthetic derivative of erythromycin A. It exerts its antibacterial action by binding to the 50s ribosomal sub-unit of susceptible bacteria and suppresses protein synthesis. It is highly potent against a wide variety of aerobic and anaerobic gram-positive and gram-negative organisms.

The 14-hydroxy metabolite of clarithromycin also has antimicrobial activity. The MICs of this metabolite are equal or two-fold higher than the MICs of the parent compound, except for *H. influenzae* where the 14-hydroxy metabolite is two-fold more active than the parent compound.

Side Effects

Dyspepsia, tooth and tongue discoloration, smell and taste disturbances, stomatitis, glossitis, and headache; less commonly: arthralgia and myalgia; rarely: tinnitus; very rarely: dizziness, insomnia, nightmares, anxiety, confusion, psychosis, paraesthesia, convulsions, hypoglycemia, renal failure, interstitial nephritis, leucopenia, and thrombocytopenia

Interactions

Aprepitant

Clarithromycin possibly increases plasma concentration of aprepitant

Atazanavir

Plasma concentration of both drugs increased when Clarithromycin given with atazanavir.

Atorvastatin

Clarithromycin increases plasma concentration of atorvastatin.

Cabazitaxel

Avoidance of clarithromycin advised by manufacturer of cabazitaxel.

Calcium-channel Blockers

Clarithromycin possibly inhibits metabolism of calcium-channel blockers (increased risk of side-effects).

Carbamazepine

Clarithromycin increases plasma concentration of carbamazepine.

Ciclosporin

Clarithromycin inhibits metabolism of ciclosporin (increased plasma concentration).

Colchicine

Clarithromycin possibly increases risk of colchicine toxicity-suspend or reduce dose of colchicine (avoid concomitant use in hepatic or renal impairment).

Coumarins

Clarithromycin enhances anticoagulant effect of coumarins.

Disopyramide

Clarithromycin possibly increases plasma concentration of disopyramide (increased risk of toxicity).

Dronedarone

Avoidance of clarithromycin advised by manufacturer of dronedarone (risk of ventricular arrhythmias).

Efavirenz

Increased risk