

Non medical  
independent and  
supplementary  
prescribing v300  
nursing essay



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This essay discusses the evolution of nurse prescribing in the context of legislation and political element, with the consideration of how this has changed and assisted the clinical nurse specialist role, with particularly emphasis on Heart failure. The pathophysiology of heart failure will be discussed and integrated into the relation of drug actions with particular interest into Diuretics. Alongside this; the importance of effective history taking, assessment and consultation skills to treat the patient accurately and at a high standard and quality is discussed. The decision making process and the importance of a shared approach in relation to heart failure is highlighted incorporating the importance of compliance in the maximising the treatment of heart failure.

Sources of information and decision support systems that are available will be highlighted with a discussion on the importance of these in principles. Demonstration of ability to prescribe safely, rationally, cost effectively, and in consideration of the public health issues around medicine use are discussed and finally clinical governance through quality assurance and audit of prescribing practice is considered.

For the purpose of the essay the following learning outcomes are discussed:

Evaluate understanding and application of the relevant legislation and political context of the practice of non-medical prescribing

Critically appraise sources of information/advice and decision support systems in prescribing practice and apply the principles of evidence based practice to decision making.

Integrate and apply knowledge of drug actions in relation to pathophysiology of the condition being treated

Demonstrate the ability to prescribe safely, rationally, cost effectively, and in consideration of the public health issues around medicines use

Integrate a shared approach to decision making taking account of patients/carers wishes, values, religion or culture

Evaluate effective history taking, assessment and consultation skills with patients/clients, parents and carers to inform working /differential diagnosis.

Contribute to clinical governance through quality assurance and audit of prescribing practice and regular continuing professional development

The controls of medicines in the UK has undergone a number of regulatory changes since the end of 1800's, climaxing in the Medicines Act (1968). Prior to 1992, doctors, veterinary surgeons and dentists were the only professions legally permitted to prescribe. This situation made the medical profession 'gatekeepers' for medicines, certainly the case for those medicines considered more likely to cause harm or abuse such as controlled drugs i. e. morphine.

Cumberledge Report (1986) identified the need for community nurses to prescribe, The Crown Report (1989) published findings of a review to determine the circumstances in which non-medical health professionals could undertake new roles with regard to prescribing, supply and administration of medicines and led to the development of protocols which we now know as Patient Group Directives (PGDs).

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The Crown Report (1999) recommended that legal authority to prescribe should be extended to include new groups of healthcare professionals, this also brought about the differentiation between Independent and Supplementary prescribers. This report noted that ' a doctor often rubber stamps a prescribing decision taken by a nurse, which is demeaning to nurses and doctors. (Cooper et al, 2008)

The Medicinal Products Act (1992) permitted qualified District Nurses and Health Visitors to independently prescribe, and this was only a limited number of medicines from a Community Practitioners Formulary.

Over the next few years legislative changes occurred which involved, non community qualified nurses to train as prescribers, together with an increase in medications added to the Nurses Formulary. In 2003, nurses and Pharmacists were permitted to prescribe from the whole of the British National Formulary (BNF) as supplementary Prescribers, except controlled and unlicensed drugs. Controlled Drugs were prescribable by nurses and pharmacists using supplementary prescribing from 2005. During this time other allied Healthcare professionals such as physiotherapists, Radiographers, Podiatrists and optometrists were also able to become supplementary prescribers. (DOH, 2005)

These rapid changes in the development of non medical prescribers in the United Kingdom were a contrast to the gradual introduction to prescribing rights in the United States of America. (Armstrong, 1995). The UK now has the most extended non medical prescribing rights in the world. (Armstrong, 1995) In 2006, DOH (2006) permitted trained nurses and pharmacists to

independently prescribe all medicines within their clinical competence. The most recent changes have occurred to the Misuse of Drugs Regulations (2012) which now means that appropriately qualified nurses and pharmacists will be able to prescribe controlled drugs like morphine, diamorphine and prescription strength co-codamol.

Currently there are more than 50, 000 Non medical prescribers in the UK, around 19, 000 nurses and almost 2, 000 pharmacists are qualified as Independent and/or supplementary prescribers (Carey, 2011)

The changing legislation of Non medical Prescribers has changed alongside with the environment of the NHS services. This is recognised in the guide produced by NMC (2010) stating that the ' services delivered by the NHS become more challenging and complex as there is an ever increasing need for improved productivity without the compromising of quality'.

Coronary Heart disease, puts great pressure and demands on the National Health Service (NHS). Hospital admissions for Chronic heart failure have increased markedly, chronic heart failure accounts for about 5% of all medical admissions and approximately 2% of total health care expenditure. Despite improvements in medical management, under treatment for heart failure is still common. (Mcmurray et al, 2002) In 2002, The British Heart Foundation (BHF) piloted a scheme and funded with the help of Big Lottery Fund ninety two Heart failure nurses throughout the United Kingdom. The results were shown in the final report BHF (2008) showing an average reduction in heart failure admissions of 43% and an average estimated saving, per heart failure patient of £1, 826. Increasing the role of the Non

medical prescribers therefore increasing the skills and knowledge of nurses/pharmacists only enhances the vital role within the field these nurses have in today's current fight to provide the highest quality care possible. It has been shown that registered nurses are extending their roles and responsibilities to work in new ways (Furlong + smith, 2005). Crowther et al (2003), Gattis et al (1999), Paniagua (2011) Lambrinou et al (2012) and Jaarsma (2010) have all shown that Heart failure nurse specialists are optimal providers to assist physicians with Heart failure care for this complex and time-consuming patient population.

The management of heart failure is complex involving both pharmacological treatments and strategies to improve patients functional status and quality of life (Palmer et al, 2003) Heart failure can be defined as an abnormality of cardiac structure or function leading to failure of the heart to deliver oxygen at a rate commensurate with the requirements of the metabolizing tissues. (ESC, 2012)

Clinically patients present with typical symptoms; breathlessness, ankle swelling and fatigue. And signs; elevated JVP, pulmonary crackles and displaced apex beat. Diagnosis of heart failure relies on a detailed history and accurate physical examination (NICE, 2010). These symptoms can be related to either a reduction of cardiac output (fatigue) or to excess fluid retention (dyspnea, orthopnea and 'cardiac wheezing') fluid retention also results in peripheral oedema and occasionally an increasing abdominal girth secondary to ascites. Symptoms and signs are often non-specific and could be related to other conditions. Knowledge on the use of other diagnostic

services is necessary: Echocardiography, Electrograph, Chest Xray, Blood tests all contribute to the confirmation of diagnosis.

Case study One demonstrates a typical presentation of a patient presenting with first presentation of heart failure symptoms; typically compromised and in need of expert medical treatment; Pharmacological and non pharmacological therapies. This patient presented with clear signs of congestion and volume retention of which a diuretic therapy plays a central role in the treatment (Felker and Mentz, 2012)

As the heart fails, there is a reduction in both blood pressure and cardiac output, in response to this the body conserves water which results in oedema. Diuretics act at different sites of the kidneys, they then eliminate sodium and water through enhanced excretion from the kidneys so are able to relieve the symptoms of fluid congestion. Different classes of diuretics work at different points within the kidney tubules. (Davies et al, 2000)

Appendix two shows the diuretics available.

This patient was treated with Furosemide intravenously (IV), most patients receive a 'loop' diuretic as first line treatment for heart failure (Faris et al, 2012.) Loop diuretics are the most frequently used diuretic in treatment of Chronic heart failure despite their unproven effect on survival, their indisputable efficacy in relieving congestive symptoms makes them first line therapy for most patients. (Bruyne, 2003) Appendix three shows how loop diuretics work.

As already stated first line treatment for acute decompensated heart failure is intravenous diuretic therapy either as a bolus or via continuous infusion.  
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Despite being available for decades, few randomized trials exist to guide dosing and administration of this drug. In 2011, the Diuretic Optimization Strategies Evaluation (DOSE) trial used a prospective, randomized design to compare bolus versus continuous infusion of IV furosemide, as well as high-dose versus low-dose therapy. The study found no difference in the primary end point for continuous versus bolus infusion. High-dose diuretics were more effective than low dose without clinically important negative effects on renal function. Although no difference was found between IV and bolus dose there are benefits to both elements so clinical judgement would be made on the specific patient needs and requirements, for example, immobilization, duration of therapy requirements, haemodynamic status. The aim of using diuretics is to achieve and maintain euvolaemia (the patients ' dry weight' with the lowest achievable dose. (ESC, 2012).

Case study two identifies a patient whom is another example of heart failure but offers a different presentation; this accentuates the importance of a careful physical examination and valuable accurate history taking. The absent breathe sounds over the right base of lung field along with the history was an indication of pleural effusion and initiated the prescription of a radiograph chest to be performed. Absent or diminished breath sounds strongly suggest an effusion (Kalantri et al, 2007) unfortunately Congestive heart failure is the most common cause of a pleural effusion. (Enrique, 2008) Again, Pleural effusions from heart failure are managed with diuretic therapy, initially with a loop diuretic, intravenously titrated in response to clinical signs, daily weights and renal function to avoid excessive volume depletion. (Light, 2002)



Non-compliance in patients with heart failure (HF) contributes to worsening HF symptoms and may lead to hospitalization. (Van der wal, 2006). Using skills that were taught during basic nursing training is imperative in conducting a beneficial and effective clinical examination, these interpersonal skills may dictate how the patient and carers perceive and acknowledge their diagnosis and may have an influence on the approach the patient has on his/her own health.

Over the past 3 decades, the biopsychosocial model of health has become increasingly important in the effective practice of medicine. Central to this model is an emphasis on treating the patient as a whole person, including the biological, psychological, behavioral, and social aspects of their health (Engel, 1980). The American Heart Association (AHA) in collaboration with other professional societies has issued a new scientific statement for the management of patients with advanced heart failure. It emphasizes 'shared decision making' and is designed to help physicians and other health professionals align medical treatment options with the wishes of the patients. Allen (2012) recognises the complexity of heart failure and complexity of the treatment options can be a barrier to shared decision making, but this only emphasizes why such a patient-centred approach should be undertaken in Advanced heart failure. Shared decision making has received particular emphasis in relation to the prescribing of drug treatments. Traditionally, studies have identified 50% of patients with chronic conditions do not take their treatment as prescribed, with major reasons being because they do not share the doctors views, or they are worried about side effects. (REF QUOTE?) Therefore the aim is to explore

these issues by adopting a shared decision making approach and reach a ‘ concordance’ between doctor and patients.

Therefore getting patients involved in the planning and management of care, being sensitive to the individuals need, spending time figuring out what is important to them, will hopefully reduce some of the confusion and complexities concerning heart failure. Although knowledge alone does not insure compliance, patients can only comply when they possess some minimal level of knowledge about the disease and the health care regimen. (Van der wal, 2006).

The National Prescribing Centre (2012) designed a competency framework which can be seen in appendix 3. One of the three domains is the consultation which highlights three areas of importance 1; Knowledge; pharmacological and pharmaceutical. 2; Options; concerning the diagnosis and management 3; Competency; involving ‘ shared decision making’ with parents, patients and carers. The data is clear that for the benefit of the patient and success with the treatment regimen it is vital to consider wishes of the patient/carer, ethical, cultural opinions, lifestyle of the patients. Also contributing factors which may cause non-compliance whether intentional or not for example: polypharmacy, complicated dose regimens, unpleasant side effects, and cognitive problems or physical disability preventing the patient taking the medicines. A large number of factors need to be incorporated into the thought process prior to getting to the point and writing a prescription.

Surrounding issues that directly and indirectly support patient orientated prescribing

Sources of information are on number of levels. In a hospital ward, for example, immediate sources of information include the British National Formulary (BNF) and ward pharmacist. The role of both is, at least in part, to assist in ensuring that, for any prescription, the correct dose and timing of administration are correct and appropriate for the indication. The BNF is widely available and accessible and can and should be used to assist in prescribing whenever there is any doubt about dose and timing. The Pharmacist provides an additional ‘ safety netting’, by checking prescriptions before providing the medications. In addition, the pharmacists role includes ensuring that medications prescribed are available for administration.

Further afield, but still within the hospital, local policies give guidance on what drugs are available and recommended for a particular indication. These policies may be produced by the hospital or by regional bodies, including SHA, Network PCTs, for example, local arrangement may mean that a particular statin is used for primary prevention of coronary heart disease, due to local procurement agreements or cost effectiveness analyses.

Beyond the hospital setting, a number of sources provide guidance on what should actually be prescribed, or considered, for a given condition. Such sources might include national bodies, in particular National institute of clinical excellence (NICE) and specialist societies. The latter may be national and or international. For example, in the field of heart failure, NICE has given guidance on what medications should be administered and at what stage of

the disease and symptoms. For all patients ACEI: should be given. There are many different ACE I. The guidelines recommend using only those which have actually been proven to be of benefit in heart failure; these are@@@@@. For those who are intolerant of ACE; ARB should be used. Again, NICE recommends those that have shown efficacy in clinical trials, and these are@@@@@. Beta-blockers are recommended but not any betablocker. Only those with proven @@@ in heart failure should be used; these are ..... Aldosterone Antagonists should also be used for patients with advanced heart failure (NYHA III/IV). Guidance recommends spironolactone, or eplerone if not tolerated (most usually due to gynaenomastia in men)

From the above, it may be seen that the National guidance indicates which drugs from each class should be considered for each purpose. This leaves room for local policies and prescribers to decide which of the available agents is suitable for a particular individual.

Pursuing the example of heart failure further, international guidelines are issued by a number of bodies. The principle of these is the European Society of Cardiology (ESC) and the American College of Cardiology (ACC) and the American Heart Association (AHA). Of these, the ESC guidelines are most applicable to the United Kingdom. Societal guidelines tend to focus more on a particular disease and the available evidence to provide best treatment, whereas NICE guidelines have greater emphasis on appraisal of cost-effectiveness, which is of greater relevance to the local health economy in the UK. Furthermore, ESC guidelines give a strength of recommendation for

a particular treatment (Class I, IIa, IIb) and an indication of the level of evidence behind the recommendation. (A, B, C)

Ultimately, the source of information which informs societal guidelines comes from research, in the form of clinical trials, performed on the back of pre-clinical research. Therefore, the doses of drugs which are recommended for use usually reflects the dose and frequency of a drug or used in a clinical trial which demonstrated benefit.

There are therefore numerous levels of information and advice which support prescribing practice. For many conditions, these are ultimately based on evidence derived from clinical trials, in some areas these will be the 'gold standard' RCT. However, some trials provide 'softer' evidence, such as observations data or even anecdotal. Understanding of these various trials and guidelines is important to understanding how local guidelines and daily prescribing practice come about and are supported by evidence.

The trials/guidelines all mentioned above have provided convincing evidence that clinically significant improvements can be achieved in heart failure by appropriate drug treatment. Moynihan et al (2002) recognises that the adoption of more effective and/or safer drugs, new technologies are usually more expensive, aging of the population leads to increased morbidity and drug therapy, all play a role in increasing drug expenditure.

Medicines are regarded an expenditure, but can also be an investment, if they are used rationally. Rational prescribing means cost effective use of safe and effective drugs.

Specialist clinics for heart failure are a tool for delivering care according to clinical guidelines and providing diagnostic treatment. They provide optimal management of the condition, education of patient and carers about the signs and symptoms of worsening disease and medication compliance. Advances in medication and technology for heart failure are vast, which again strengthens the need and importance of such clinics to enable patient treatment to change accordingly and appropriately. Studies have shown that if patients are treated by Cardiology clinicians or Heart failure specialist nurses, clinical guidelines are more likely to be followed and readmission rates are lower for these patients. (Reis et al, 1997)

An example of prescribing within heart failure is an investment for the patient and the NHS is the use of Angiotensin-converting enzyme inhibitors (ACE I). These have been shown to improve symptoms, survival and slow progression of heart failure. (Luzier et al, 1998). ACE I are one of the essential therapies for all heart failure patients, if tolerated. Treatment should be maximised and in maximising the dose quite often you can reduce or stop the use of loop diuretics due to improved symptoms and clinical signs. (Hoyt et al, 2001) Therefore patients who are appropriately treated and titrated to maximal therapy therefore benefit clinically, may reduce other medicines and they can overall reduce the chances of hospital admission with decompensated heart failure which is beneficial to the patient and the NHS finances.

A recent study by Dharmarajan et al (2013) covering three million hospitalizations showed that more than a third of readmissions (within 30 days of discharge) were for heart failure. Their thought was that many of <https://assignbuster.com/non-medical-independent-and-supplementary-prescribing-v300-nursing-essay/>

these could have been preventable, with greater input from pharmacists, physicians, nurse specialists, and greater consideration to social elements; reducing readmission also reduces other risks involved in exposing patients to hospitalization. The National Heart failure Audit (2012) conducted by NICOR is an audit to monitor progress, clinical findings and patient outcomes of patients with heart failure. It is an essential audit for each NHS trust to comply and complete. ++. It provides critical information on management and outcomes which then provides data essential to drive future improvements.

Conclusion:

## CASE STUDY ONE

Description of clinical setting:

Patient was an inpatient on the Cardiology ward; he was admitted the day before and had been referred to Heart failure clinical nurse specialist for review.

Case history:

An 84 year old retired postman was admitted from home with progressive worsening shortness of breath over the last 6 weeks. He had been to see the General Practitioner two weeks ago who treated him for a chest infection with a course of oral antibiotics (Amoxycillin). He denies any chest pain, however he complains of palpitations at times of exertion and a productive cough. Patient had not experienced any syncope, dizzy spells; only other complaint was loss of appetite and poor quality sleep. Patient has been <https://assignbuster.com/non-medical-independent-and-supplementary-prescribing-v300-nursing-essay/>

sleeping with 4 pillows, waking regularly due to struggling for breathe and resulted to sleeping in the chair downstairs. Exercise tolerance had drastically reduced to 50 metres before having to stop due to breathlessness.

On examination the patient was tachypnoeic, pulse was 95 and regular, sitting blood pressure was 110/62 standing 105/55. Weight 97kg. Oxygen Saturations on air 94%. Inspiratory crackles were clearly heard on both lung bases, no heart murmur could be auscultated and apex beat was misplaced to the anterior auxiliary line. JVP was raised +4. Pitting peripheral oedema up to thighs and a large distended abdomen, which was soft and not tender on palpation. ECG confirmed Sinus tachycardia with Q waves in antero lateral leads. Chest x-ray also confirmed cardiomegaly and interstitial oedema.

Drug treatment pre admission:

Aspirin 75mg once a day (OD)

Blood pressure control

Past medical history:

Anterior lateral Myocardial infarction 7 years ago (2005) followed by Angioplasty to the right coronary artery.

No further operations or admission to hospital.

Blood results:



Chemistry: Sodium 128mmol/l, Potassium 4.8 mmol, Urea 9 mmol/l, Creatinine 145 mmol/l, LFTs, HB and clotting was all unremarkable.

Echo:

severe left ventricular dysfunction, with minor tricuspid regurgitation.

Social background:

Patient lives with wife in a two bedroom bungalow, they are both normally well and independent. He has no allergies and takes no over the counter medications or recreational drugs in the past or present.

Drug chart to date in hospital:

Aspirin 75mg OD

Furosemide 80 mg OD

Ramipril 2.5 mg OD

Discussion:

Patient was fortunate enough to have had Echocardiography that morning, which offered me the definitive diagnosis. This gentleman presents with a common clinical presentation of progressive systolic dysfunction of an ischemic cause. The patient was comfortable and stable enough for a steady and methodical examination and history taking.

On construction of a management plan for this patient, clearly first line treatment is diuretic therapy, T Effective diuresis and consequent adjustment

of the loading conditions of the failing heart is generally regarded as essential (Raftery, 1994)

This patient went on to be prescribed Intravenous Diuretics, instructions for Daily weights, Fluid balance, advice and rehabilitation for heart failure. Then longer term plan for titration of Heart failure medications to achieve maximum therapy suitable for this patient.

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