Part 5 Administration of Medicines

The purpose of this section is to establish the principles for safe practice in the management and administration of medicines by registered nurses, midwives and other healthcare professionals. It is aligned to the All Wales Policy for Medicines Administration, Recording, Review, Storage and Disposal (MARRS 2015) and the RPS Professional guidance on the Safe and Secure Handling of Medicines in all Care Settings

- Definition of administration: Administer is 'to give a medicine either by introduction into the body, whether by direct contact with the body or not (e.g. orally or by injection) or by external application (e.g. application of an impregnated dressing); overseeing the self administration of medication by a patient or assisting the patient with administration of a medicine.

Definition of second checker: A staff member usually authorised to administer medication. In certain defined situations the second checker may be a health care support worker who has undergone specific training for this task (in exceptional circumstances in Community hospitals ONLY)

Standards of Practice for the administration of Medicinal Products

In the administration of medicinal products via any route, it is expected that every registered Healthcare Professional will demonstrate professional accountability for practice by taking the following actions:

1. be certain of the identity of the patient to whom the medicine is to be administered.
2. check that the patient is **not allergic** to the medicine before administering it.
3. know the therapeutic uses of the medicine, its normal dosage, side effects, precautions and contra-indications
4. be aware of the patient's care plan and medical status.
5. check that the prescription and the label on the medicine dispensed is clear and legible.
6. check the expiry date
7. consider the dosage, weight (where appropriate), method of administration, route and timing.
8. use the opportunity to emphasise to patients and their carers, the importance and implications of the prescribed treatment and enhance their understanding of the effects

and side-effects and provide additional relevant information when requested or required (e.g. Patient Information Leaflets (PIL))

9. make a clear, accurate and **immediate** record of all medicines administered- **administration must be observed before this record is made.**
10. where the medicine or fluid is given as an intermittent or continuous infusion the administration chart should be signed **immediately** after the infusion has been commenced.
11. monitor, evaluate and record the effects of the medicines administered and report to the appropriate prescribing medical practitioner or pharmacist immediately if any adverse reactions to the prescribed medication are identified.
12. when two or more All Wales Inpatient Medication Administration Records (e.g. two or more standard charts or a standard chart and a warfarin chart), are in use, ensure:
    - that they are secured together
    - that the patient's name and identification number is on each chart
    - that the number of All Wales Inpatient Medication Administration Records in use is clearly indicated on the front of all Inpatient Medication Administration Records (e.g. 1 of 2 charts).
13. that in the event of an intentionally withheld or refused drug administration by the patient or carer or guardian (in the case of a child), an **immediate**, clear and accurate record must be made. This must be discussed with the responsible medical practitioner (or on-call doctor). Also refer to 5.1.6.3.
14. Medicines must never be left unattended, and must be securely stored when not in use.

The administration of medicinal products must be guided by the relevant nursing procedures in the current edition of the Royal Marsden Manual of Clinical Nursing Procedures, (the Royal Marsden can be accessed via the HDUHB website on the Health Board Intranet or on www. blackwellroyalmarsdenmanual.com) and the HDUHB's policies/training manuals in relation to use of infusion devices, syringe drivers, dedicated pumps, PCA and epidural devices and the NPSA Safe Medication Practice Programme on Injectables (2007/8) http://www.nrls.npsa.nhs.uk/resources/?entryid45=59812

5.1 Persons who are authorised to administer medicines

All health professionals set out below and deemed competent to administer medicines can administer medicines on the authorisation of a medical practitioner, dental officer, and non medical prescriber. Patient group directions only authorise those named within the PGD to administer the particular medicine. For in-patients they must be prescribed on an approved computer prescribing system or the appropriate hand-written prescription chart or stationery approved under a model of service. It is recommended that medicines to be administered orally and by injection should be prepared and given at separate times.

5.1.1 Nurses and Midwives authorised to administer medicines

All nurses and midwives with current registration with the NMC. Agency nurses must have received appropriate training and assessment by the agency providing the nurse and the agency must be able to demonstrate this to the UHB.

5.1.2 Non-nursing staff authorised to administer medicines

- Registered Medical Practitioners and Dentists
- Registered Operating Department Practitioners with the appropriate training and assessment of competence
- After appropriate training and competence assessment specific medicines may be given by pharmacy staff, Radiographers, Podiatrists, ECG Technicians, Physiotherapists and Clinical Support Workers.
- Healthcare support workers who have demonstrated competency as set out in the All Wales Minimum Standards for Immunisation training for HCSWs may administer vaccinations **only**, as part of a PSD, within a GP practice. In addition Health care support workers may administer medication following delegation by a registrant provided they have completed Level 3 training and have been assessed as competent. Examples of these areas that support this practice include outpatients departments, community learning disability services and HCSW's who have been trained and assessed in cannulation to administer a flush of 0.9% sodium chloride using a pre-filled syringe only of up to 5mls to clear the catheter of residual blood and check positioning. If a needle

free connector is to be attached immediately post cannula insertion the pre filled syringe can also be used to prime the extension set prior to attachment [MMG Dec 2017].

5.1.3 Minimising interruptions during medication rounds within ward environments

- To ensure safe and effective administration of medication to patients within the ward environment all staff, undertaking the medicines round, will be expected to wear a red tabard indicating that the medicines round is in progress and that they should not be interrupted unless as a matter of priority.
- Tabards alone cannot be expected to reduce interruptions; they are one tool to support nurses having protected time to undertaken medicines administration.
- If a telephone call is taken or an interruption occurs which requires the attention of the nurse wearing the tabard, then the member of staff, if unable to deal with the query directly, will be expected to take a message for a reply at a more convenient opportunity.
- Contact details of the caller / enquiry, should be taken and an explanation offered that the nurse will contact them when the medicines round has been completed.
- In the event of an emergency / immediate need for a response, the nurse undertaking the medicines round, before responding to the query, will ensure that the medication trolley is locked and stored away securely in the treatment room, ensure that the patients drug locker is locked and any medication that has been administered has been signed for.
- If appropriate, a Datix should be completed giving reasons for the interruption.

5.1.4 Administration requiring two registrants

It is recognized that all healthcare professionals can make human errors. For the following types of medicinal products an independent full process two person check is recommended practice to reduce the risk of adverse drug events. In HDUHB this is required in the following processes

- All medicines administered to a child less than 16 years of age.
- Controlled Drugs see 7.9
- Cytotoxic medicines
- All intravenous, epidural injections and infusions.

- Where a calculation is involved
- For the **INTRAVENOUS (IV) or SUBCUTANEOUS (S/C)** administration of all **High Risk medicines**. These are defined as insulin, methotrexate, heparin, low molecular weight heparin (treatment doses only *), medicines with a complex preparation method (eg IV liposomal amphotericin), immunoglobulins, anti-arrhythmic drugs and thrombolytic drugs.
- All intravenous or subcutaneous infusions that are initiated or where the dose and/or rate is changed require 2 Registered Nurses to check and 2 Registered Nurses to administer the medicine or fluids. The checking of the administration of any fluid being administered via an infusion device, gravity or drip sets of any description includes a check/confirmation of the accuracy of the settings on the infusion device. Both Registered Nurses must sign the prescription chart (divide the box to include both signatures ☑) and the Infusion Monitoring chart.
- Both Registered Nurses and/or Registered Healthcare Professional must sign the prescription chart in these circumstances so that accountability is clear.
- In addition, when any IV or S/C **infusion is** set up, an infusion bag is replaced or the rate of the infusion is changed, **two** Registered Nurses are **always** required for both the checking and the administration of the infusion. The administration check must include verifying the infusion rate set on the device against the prescription chart. The infusion rate set must be recorded on the Infusion Monitoring Chart. To demonstrate accountability, two signatures are required on **both** the prescription chart and the Infusion Monitoring Chart.

(* Pre-filled syringes of LMWH (for example, tinzaparin 3,500 units or 4,500 units) for prophylaxis S/C are considered 'Bolus doses of low risk medications (not administered using an infusion device)', see below for checking requirements.

To support clarity on the above:

- **Bolus doses of low risk IV medications (not administered using an infusion device)** will require 2 Registered Nurses or , if applicable, a Registered Nurse and a 2nd Registered Healthcare Professional (Doctor, Pharmacist, ODP) for the purpose of checking the medication and 1 Registered Nurse or Doctor to administer. Both registered Healthcare Professionals must sign the prescription chart.

(* Pre-filled syringes of LMWH for prophylaxis S/C (for example, tinzaparin 3,500 units or 4,500 units) are considered low risk medications (not administered using an infusion device)', and will require one registered healthcare professional to check and one healthcare professional to administer.

- **Bolus doses of high risk medications (not administered using an infusion device)** will require 2 Registered Nurses or, if applicable, a Registered Nurse and a 2nd Registered Healthcare Professional (Doctor, Pharmacist, ODP) to check the preparation **and 2 Registered Nurses/Healthcare Professionals** to administer the medicine. The second Registered Healthcare professional **must** carry out the checks as outlined in **Section 5.1.6.2** (i.e. is certain of the identity of the patient, check the patient's allergy and so forth). The second Registered Healthcare Professional will be required to remain for the entire administration of the bolus dose of the medicine. Both Registered Healthcare Professionals must sign the prescription chart.

Summary of guidance relating to administration of intravenous (IV) and subcutaneous (SC) medicines and fluids.

Medication Risk	**Number of Registered Healthcare Professionals Required.**	
IV Bolus Dose of High Risk Medicine.	2	2
IV Bolus Dose of Low Risk Medicine.	2	1
IV or S/C **infusion is**	2	2

• set up via gravity or an infusion device. • an infusion bag is replaced		
the rate of the infusion is changed	2	2
Prefilled S/C prophylaxis dose Low Molecular Weight Heparin (LMWH).	1	1

By definition the independent check must not be controlled or influenced by any other person. The independent check must include that the medicine matches the prescription, that the correct strength, dose and form has been selected, including any calculations that must be clearly documented, that the product has not expired and the patient is not allergic to the particular medicine. The process must include a check of the patient's identity at the bedside and the administration or start of the administration. Accountability for the preparation and administration remains with both professionals.

5.1.4 Exclusions for double checks:

(i) Controlled Drugs in Theatre where:

- Within Theatres only, the preparation of any Controlled Drug must be checked by the anaesthetist, or other medical practitioner, and another appropriately trained person, e.g. a registered nurse or an ODP
- If a 2nd dose of that previously prepared and checked drug is required, the anaesthetist, or other medical practitioner, may administer it without needing to be observed by a second person. This is in order to maintain the optimum anaesthesia or analgesia for the patient as required.
- The anaesthetist or other medical practitioner is responsible for documenting the name of the drug and dose given on the anaesthetic chart, on the All Wales In-patient Medication Administration Record, or elsewhere in the body of the notes.
- The anaesthetist, or other medical practitioner, is personally responsible for safely disposing of any unused drug in an open ampoule or syringe and for returning any unopened ampoules to the nurse or ODP responsible for the Controlled Drugs at that time.

- Critical Care: The use of dose ranges to permit the titration of medicine dose against clinical response should comply with predetermined parameters that are already prescribed on the medication chart.

(ii) Community Services

Community nurses may administer IV drugs as prescribed by the appropriate medical (GP or hospital doctor) or non-independent prescriber without a second check.

However independent checking is required for any medicine, which the primary registered healthcare professional, who is administering, is not familiar; particular care must be taken with medicines that are to be administered parenterally.

Any exemptions to these requirements can only be authorised by MMSC following a full risk-assessment and approval of any mitigation required to minimise patient safety risks.
Approved special authorizations can be viewed here:
http://howis.wales.nhs.uk/sitesplus/documents/862/268-AppV-TyBrynSpecialAuthorisationforExemptionFromDoubleCheckingInsulinAdmin1.pdf

5.1.5 In the absence of a registered second checker

In certain clinical areas, and exceptional circumstances, if a second registrant is not available to confirm a second check, MMSC can approve a process for a member of staff e.g. healthcare support worker, to undergo suitable preparation and assessment to act as a second check.

N.B. Student nurses/midwives or student operating department practitioners, cannot act as a second check for IV preparation and administration of medicines.

5.1.6 Selection and administration of medicines

5.1.6.1 Selection of medicines

When a healthcare professional is selecting a medicine for administration it is vital that the process results in the correct medicine to be given in the prescribed dose by the prescribed route and at the required time.

To support this process all medicines supplied from the pharmacy will be labeled by the original manufacturer or by the pharmacy in a manner that will allow identification of the medicine contents against the patient's prescription.

If the pharmacy repackages an original manufacturer pack, the pharmacy label will then

identify the contents of the dispensed container. If the container is a box containing a strip of tablets it is good practice to confirm identity marked on the label with the tablet/capsule name and strength printed on the strip. This is necessary to ensure that a wrong strip has not been returned to another container box at a previous administration time. If the name and strength of a medicine is not clearly printed on a medicine strip, or a label seek advice from another healthcare professional. If there is any ambiguity it is advisable to check with the local pharmacy to confirm identity of the medicine.

Monitored Dose Systems (MDS) or medication compliance aids (MCA) ('Dosette Boxes')

Medicines can be administered from an MCA belonging to the patient if the healthcare professional can positively identify the medicine before administration.

5.1.6.2 Safe Administration of medicines.

It is the responsibility of the Ward Sister / Ward Unit Manager to ensure that standards of medicines practice are adhered to and ensure that the person administering medicines has received the relevant training and education to enable them to safely administer medicines.

To ensure medicines are safely administered the administrator must-

- Know the therapeutic use of the medicine to be administered, its normal dose, side effects, precautions, contra-indications and monitoring requirements. In the event that the administrator is not aware of this information, they must be able to locate the information before administration. (Sources include BNF and Medusa).
- Be aware of the patients care plan, the patient's condition, in particular with regards to their medication needs.
- Be alert to potential errors in prescribing or dispensing.
- Contact the prescriber without delay if :-
    - Contraindications to the medicine are identified
    - The patient develops a reaction to the medicine
    - Assessment of the patient indicates that the medicine may no longer be suitable for the patient
    - If the prescription is not clear (e.g. illegible or incomplete).

5.1.6.3 Non- administration of medicines.

In some circumstances it may be appropriate for the administrator not to administer the prescribed medicine, either because they are unable to administer (e.g. patient refuses) or because the administrator feels there is an appropriate reason to withhold (e.g. with holding anti-hypertensive medication if the patient's blood pressure is too low). In the event of the non administration of medicines the administrator must annotate the medicines administration chart with the appropriate policy. i.e.

X – Prescribers request.	2- Patient not on ward.
3 – Patient unable to receive/no access.	4 – Patient refused.
5 – Medicines unavailable.	6 – See notes.

It is the administrator's responsibility to inform the patient's medical team, or the "on call' medical team, that the medicine has not been administered, the reasons why, and to discuss the need for alternative action. The patient's condition must be taken into account to determine the urgency with which this information needs to be passed onto the medical team. Discussion with the pharmacist may facilitate this.

A list of medicines whose administration is considered time critical can be found at: http://howis.wales.nhs.uk/sitesplus/documents/862/268-AppU-HDUHBCriticalMedicinesListPoster.pdf

If for any reason it is not possible to administer the medicine and the healthcare professional has any concerns they should seek further advice, from the prescriber, pharmacy or the BNF, especially where the prescription is for administration every four hours or more frequently.

5.1.6.4 Administration of medicines to adult with swallowing difficulties.

Not all tablets and capsules can be crushed or opened as the clinical effect of the medicine may be altered or adverse reactions occur. The Pharmacy Department must be contacted for advice on individual products. The crushing of tablets or opening of capsules and subsequent administration must be carried by the registered healthcare professional only after receiving advice from the Pharmacy Department. It should be noted that crushing or opening capsules

might affect the licensing status of the product. Whatever action is decided upon must be recorded on the patient's chart.

Refer to the All Wales Medicines Strategy Group guidance on the following link:

Primary Care Guidance: Prescribing medicines for adults who are unable to swallow oral solid dosage forms. http://www.awmsg.org/awmsgonline/app/sitesearch?execution=e2s1

The HDUHB Enteral Feeding Policy for Adults with Operational Guidelines provides procedures and information on the administration of medicines via feeding tubes and can be accessed at: http://howis.wales.nhs.uk/sitesplus/documents/862/331-EnteralFeedingPolicyforAdultsincludingOperationalGuidelines-approved.pdf

5.1.6.4.1 Enteral Syringes

Sterile purple enteral syringes must be used for the administration of all medication to be given via the enteral route (including patients who have nasogastric, gastrostomy or jejunostomy tubes) where a 5ml spoon or graduated measuring cup cannot be used *(NPSA: Promoting safer measurement and administration of liquid medicines via oral and other enteral routes).* The HDUHB Enteral Feeding Policy for Adults with Operational Guidelines gives further advice and can be accessed at: http://howis.wales.nhs.uk/sitesplus/documents/862/331-EnteralFeedingPolicyforAdultsincludingOperationalGuidelines-approved.pdf

5.1.7 Administering cytotoxic medication

Cytotoxic chemotherapy can only be administered to patients by those specific health professionals authorised to administer cytotoxic chemotherapy by HDUHB.

5.2 Administration via the intravenous route

Practitioners (including doctors, dentists, nurses and other health professions) are permitted to administer intravenous medicines provided they have received UHB delivered or endorsed appropriate education, training and assessment of competence. All intravenous medicines and fluids should be prepared and administered in accordance with HDUHB approved local procedures (See Part 6). Practitioners can only administer intravenous cytotoxic chemotherapy as set out in Part 6.

5.3 Consent and Covert administration

5.3.1 Consent

Every adult must be presumed to be able to consent to receive or to refuse medication unless there are reasons to doubt the person's mental capacity for this decision.

Wherever such circumstances arise the capacity of the patient must be formally assessed to determine his / her clinical condition at that precise time and the outcomes recorded in the health record. It must be borne in mind that capacity is variable and can change from day to day. A person will lack the necessary mental capacity to consent to or refuse medication if the assessment shows that they have an impairment or disturbance of the mind or brain which prevents the person from being able to do any of the following:

- to understand the nature and consequences of accepting or refusing the medication
- to retain the information about the medication provided by the treating staff long enough to make a decision
- to weigh up the information about the medication as part of the process of arriving at a decision.
- to communicate their decision in some way

Where adult patients are capable of giving or withholding consent, no medication should be given without their agreement since failure to do so may amount to criminal battery, civil trespass, or a breach of their human rights. **The exception to this principle applies to treatment authorised under Part IV of the Mental Health Act (1983)** (also see part.15 of Health Board Policy No: 008, 'Policy for Consent to Examination or Treatment' http://howis.wales.nhs.uk/sitesplus/documents/862/008ConsenttoExaminationorTreatmentPolicyversion2signed.pdf).

Children under the age of 16 years are able to consent to or refuse medication providing they are have sufficient maturity and understanding to do so (known as Gillick competence) but the refusal of a competent child may be overridden by those with parental responsibility.

Young people aged 16 or 17 years are presumed to be able to consent for themselves in the same way as an adult. The refusal of a young person can also be over-ridden by a person with parental responsibility. However, the GMC Guidance ('0-18 years: guidance for all doctors', 2007) acknowledges this area of law as complex and suggests that, where a competent young person refuses medication the treating doctor thinks is in their best

interests, legal advice is sought. In exceptional circumstances this may involve seeking an order from the court

The wishes of patients (adults) /parents/guardians who have the necessary competence to make a decision but refuse to consent to receive medication must be respected, even if this could have an adverse effect upon their condition.

5.3.2 Covert administration of Medicines

Covert administration of medicines, usually by disguising medication in food or drink, is a complex issue that has provoked widespread concern. It engages the fundamental principles of patient autonomy and consent to treatment, set out in common and statute law and underpinned by the Human Rights Act 1988.

The NMC (2008) has issued a position statement on the covert administration of medicines (9/01) and it is the principles contained in this document which form the basis of this section.

Disguising medication in the absence of informed consent could be regarded as deception and will represent a breach of a person's rights under Article 8 of the European Convention on Human Rights (1950). A clear distinction must always be made between patients or clients who have the necessary mental capacity to make a decision to refuse medication and whose refusal should be respected, and patients or clients who lack this capacity. Among people who lack this capacity, a further distinction must be made between those for whom no disguising is necessary because they are willing to take medication and others who would not be willing to take medication unless it is administered covertly.

General principles to be taken into account when considering the option of covert administration of medicinal products:-

- The best interests of the patient are paramount at all times
- The medication must be considered essential for the patient's health and well being.

Effectively this should be determined through a four-stage test:

1. the patient is assessed as lacking capacity for this decision and is unwilling to take medication unless administered covertly.
2. there is no alternative form of authority relevant to the decision about administering medication covertly (this would include a valid and applicable advance decision or an attorney or a court appointed deputy with relevant authority; see Health Board Policy

No:018, 'Guidance on the Mental Capacity Act'. http://howis.wales.nhs.uk/sitesplus/documents/862/374MentalCapacityAct2005Policy.pdf

3. the treatment is necessary and in the patient's best interests in that it is required either to save their life, to ensure improvement or prevent deterioration in their physical or mental health.
4. that it is reasonable (i.e. an acceptable medical practice to provide this treatment to the patient.)

Covert administration of medications must not develop into a routine practice but should only be undertaken following a thorough documented individual risk and care needs assessment of the patient.

Decisions to administer medication covertly must not be taken in isolation by a registered Healthcare Professional. The views and support of the multidisciplinary team and family should be sought openly and recorded in the individual care plan. The ultimate decision to administer medication covertly is the responsibility of the prescriber but must be one that has been informed and agreed by the team caring for that patient and with the involvement of relevant others. Discussions and decisions need to be documented accurately in the current care plan.

A Covert Administration of Oral Medication Plan Form has been developed for use in **Care Homes**

Where it is practicable and appropriate health care professionals should consult and take into account the views of the person's family and other relevant people. If agreement cannot be reached about the decision the health care professionals should consider holding a 'best interests' meeting or attempt some for form of mediation. They should also seek advice from the Mental Capacity Act Lead Officer or the Legal Services Department. In exceptional circumstances it may be necessary to ask the Court of Protection to decide what is in the patient's best interests.

If there is no-one appropriate to consult and the decision to give or withhold the medication could have a serious impact on the patient then an Independent Mental Capacity Advocate (IMCA) should be instructed.

Regular re-assessment of the individual patient must be undertaken, and recorded, particularly where there is evidence of temporary or fluctuating capacity. For mental health patients who are subject to the Mental Health (Wales) Measure Care and Treatment Programme Approach (CTP) re-assessment would take place as a minimum at each review date, or between reviews if necessary.

Regular attempts must be made to encourage the patient to take their medication through the provision of information, explanation and encouragement, preferably by the team member who has the best rapport with the patient.

Family involvement in the care process must be actively encouraged as well as that of advocates and carers.

The method of administration must be agreed with the appropriate pharmacist since adding medication to food and drink can alter its chemical properties and thereby affect its performance. HCSW often help feed the patient their food or drink; in this situation, where medicines are also given, the accountability remains with the registered Healthcare Professional who signs for administration.

Where patients are lawfully detained under the Mental Health Act some forms of treatment given against the person's wishes are authorised by law. In these cases the appropriate process must be adhered to and documented accurately.

5.4 Self administration

Hywel Dda UHB is committed to the continued improvement of patient care. Self-administration is regarded as the model for best practice in medicines management for hospitals. It provides substantial benefits for patients and hospitals. The term 'self-administration' for the purpose of this policy includes administration by a parent/guardian/carer/relative or other non-healthcare professional. All medicinal products administered **must be prescribed before administration.** The opportunity for self- and/or supervised administration of medicines allows :-

- Improved opportunity to clarify regular medication and inform the therapeutic management plan.
- Difficulties with self-administration of medicines to be identified during the hospital stay.
- Improved opportunity to educate patients on their drug treatment
- Increased patient understanding and reduced potential for re-admission due to medication error.

Self-administration facilitates and supports the appropriate use of patients own medicines and self administration whilst in hospital. The aims of the self-administration system are:

- To introduce the concept of self-administration to the patient, medical, nursing, pharmacy and ward staff.
- Allow patients who are able and willing to continue to take their own medication while in hospital.
- To provide a method of assessing patients for self-administration.
- To demonstrate how the guidelines should be used, implemented and reviewed.
- To demonstrate improved communication between doctors, nurses, ward pharmacists and patients.
- To ensure that patients understand their medication regime and manage their own medication prior to discharge from hospital into primary care. This leads to a safer transfer of medication regime between secondary and primary care

Most of the medicines brought into hospital by patients, where self-administration is not in place, are destroyed due to a lack of storage facilities or the systems to ensure they are safely returned to the patient. Utilising patients own medicines whilst in hospital can help to reduce prescribing errors as well as avoiding duplication of supply. Costs are kept to a minimum and waste reduced. People at home usually administer their own medicines. With the appropriate assessment it is logical for patients to have access to and administer their own medicines. Nurses play a major part in education of these patients to ensure the safe and effective use of the medicines, to allow self medication in hospital to develop further. For the purposes of this procedure, the word medicine describes any medication that the patient has already used or, with appropriate support would reasonably be expected to use at home.

Storage of medicines for self-administration on wards

Supplies of oral medication for all patients are kept in a locked cabinet attached to their bedside locker. Each cabinet will have a lock operated by a single key or key policy. A master key/ master policy system will be in place for nurse administration/ stock renewal etc.

It is the responsibility of the registered nurse to remove medicines no longer required from the patient's medicine cabinet.

Overall responsibility for the safety and security of patient medicines cabinets and medicine cupboard keys/procedures lies with the ward manager.

If keys are lost or the policy system is breached, every effort must be made to ensure the system remains secure. If this is not achievable this must be reported via the clinical incident process.

Staff Education

It is the responsibility of the Ward Manager/Clinical Lead, to ensure that the registered staff working in their ward have been appropriately trained to assess patients to self administer their own medicines. .

It is the responsibility of the registrant to identify to the Ward Sister/Charge Nurse/Clinical Lead if they require training or updates. A register of staff who have received training should

All patients who are identified as suitable to self administer must be assessed using the identified assessment chart. NMC Standards for Medicines Management, states that the responsibility for this assessment lies with the registrant. The assessment process ensures that the patient is placed at the right level and this minimises risks associated with self administration.

- Level 1: Registered Nurse Administration.
  Registrant administers medicines giving full explanation to patient. The patient does not have access to the key. The registrant initials the drug chart as appropriate at time of administration.

- Level 2: Patient Administration under Supervision.
  The patient administers medicines but under the supervision of the registrant. The patient does not have access to the key. The registrant initials the drug chart as

appropriate at time of administration.

- Level 3: Patient Administration without Supervision.
  The patient is happy to self administer their medicines, signs consent and continues to administer their own medicines without supervision and is given a key to their cabinet. The registrant is responsible for checking that the patient is aware of any changes to regime and is compliant and happy to continue. The registrant is required to sign the prescription chart at least once in 24 hours to demonstrate this has been done.

The registrant is responsible for acting upon a patients changing condition and move the patient to the appropriate level – NB Patients can move up or down a level.

Patient Education

The NMC state that patient education is the professional responsibility of the nurse, in conjunction with the pharmacy and medical team. All patients must receive information regarding correct use of their medicines before commencing a self administration scheme and prior to discharge. Knowledge should be checked and reinforced throughout the process. The information can be verbal, written and where appropriate a combination of both, it should include

- The name of the medicine.
- The purpose of the medicine.
- The dose and frequency of the medicine.
- Any special instructions
- Possible side effects.
- Duration of treatment.

Transferring Patients

Lockers with medicines cabinets attached should not be transferred to another ward as the assigned master keys for the receiving ward may be different.

When a patient is moved to another ward please follow the following steps:-

- The registrant must remove all the medicines from the patient's medicine cabinet.
- The medicines should be placed in a pharmacy green bag.

- The medicines should be taken with the patient and given to the registrant receiving the patient on the new ward.
- The medicines should then be placed in the patient's medicine cabinet if a POMS ward, or in the ward medicines trolley.

The Self administration guidance can be found at :
http://howis.wales.nhs.uk/sitesplus/documents/862/Self%20administration%20Appendix%20J%202017%20Update.pdf and
http://howis.wales.nhs.uk/sitesplus/documents/862/Addendum%20Self-Administration%20Insulin%20v%201%20Final.pdf

5.5 Non-availability of medicines

If the pharmacy department is advised by a supplier of the unavailability of a medicine it will communicate this information to medical and nursing staff as soon as possible. The pharmacy department will seek availability of any alternative that could be used. It is helpful to medicine users to know if the supply interruption is short or long term so that all avenues can be considered for temporary or long term therapeutic options.

Medication is an essential part of a patient's treatment and it is important that they receive their prescribed medication in a timely manner. This Policy also covers those instances when the medication is not on the ward for administration at that appropriate time.

5.5.1 Non availability during pharmacy department opening hours

When medicines are newly prescribed for any patient, ward staff should consider if the medicines are on the ward stock list or not. If not, then they should bring this fact to the attention of the pharmacy staff providing services to the ward. If the item is urgently required, and no pharmacy staff are available, then ward staff should order the medicine from the pharmacy dept by using the appropriate medicines requisition form or local hospital pharmacy ordering system.

Newly admitted patients should have their medicines reconciled by a member of the pharmacy staff, which will include an assessment of which medicines need to be supplied.

If any medicine is unavailable from the pharmacy department, then it is the responsibility of the pharmacist to inform the ward staff of that fact, and to discuss the options e.g. wait for the original patient's medication to be brought into the hospital or arrange for a prescription change to a formulary medicine.

5.5.2 Non availability when pharmacy is closed

If a medicine to be administered to a patient is unavailable, then a decision must be made by the staff looking after that patient as to the urgency and necessity of the patient having that medication. If a decision is made that the medication is required to be given before pharmacy reopens, then the ward staff must ensure that every effort is made to find an alternative way of obtaining it. Medications which are likely to be urgent are:

- Intravenous Medicines
- Medicines to treat acute symptoms e.g. chest pain and agitation
- Antibiotics
- Steroids
- Anticonvulsants

In the event that a prescribed medicine is unavailable on the ward (non-stock item and/or individual patients' drugs unsuitable for re-use) the following should first be checked:

- patients individual medication locker
- nurse's station and treatment room to see if any patient's own medicine has not been put away

If the above is unsuccessful, then every effort must be made to obtain the medicine from an alternative source:

- emergency drug cupboard
- inter ward borrowing
- asking a relative to bring item from home
- on-call pharmacy service

For the community hospitals a WP10 (HP) can be written and dispensed locally, or in exceptional circumstances the Emergency Duty pharmacist may be contacted in accordance with local arrangements.

5.5.2.1 Emergency Drug Cupboard

A range of emergency stock is held in Bronglais General Hospital, Glangwili General Hospital, Prince Philip Hospital, St David's Hospital & Withybush General Hospital. The contents of the emergency cupboard is determined locally and reviewed regularly by the hospital pharmacy based on ward stocks, common emergencies, and the antidote list for poisoning and previous out-of-hours requests. The stock can be accessed by the Site Nurse / Night Nurse Practitioner / On-call Pharmacist. Full packs are to be taken from the

emergency medicines room/cupboard and a record of what has been taken is to be recorded in the Emergency Stock File (held in the emergency cupboard). For personal safety, the member of staff accessing the emergency cupboard must be accompanied by another employee, wherever possible.

5.5.2.2 Inter ward borrowing

If a medicine has to be obtained from another ward (outside normal pharmacy working hours only) the registered Healthcare Professional requiring the medicine must take the patient's prescription chart to the ward loaning the item and complete an Inter Ward Transfer Form. Accessed at:
http://howis.wales.nhs.uk/sitesplus/documents/862/Inter%20Ward%20Transfer%20Form.pdf
The form is then sent to the Pharmacy department for replacement of the stock borrowed. Pharmacy will retain the record.

5.6 Omitted Doses

All patients must receive their medication as prescribed. An omitted dose can potentially cause patients harm through deterioration of their condition, and must be acted upon as a priority. If a dose has already been missed without an appropriately documented reason ('unavailable' is not considered an appropriate reason) it should be considered a serious incident.
If a patient has an omitted dose after all the above has been followed then a code '5' ('drug not available') should be recorded in the patient notes, the relevant clinical team contacted and a Datix incident submitted.

Note: where the on-call pharmacist has been contacted and has advised the nurse that there is no clinical risk if the dose is omitted until supplies can be arranged (e.g. calcium and vitamin D over the weekend) then this does **not** require a Datix incident submission

Medication safety audits are carried out on every ward each month. The SOP for this process can be accessed here: http://howis.wales.nhs.uk/sitesplus/documents/862/268-AppS-MedicinesSafetyAuditSOP.pdf

5.7 Administration error – see 9.2

If a medicine is administered in error, the person administering the medicine must report the

incident to the medical team responsible for the patient's care so that the situation can be assessed and determine that any appropriate medical action is taken. The medical team will inform the patient of the incident. The person administering the medicine must report the incident to their line manager. A clinical incident entry on Datix must be completed.

Part 6 - Administration of Intravenous Medicines

The National Patient Safety Agency (NPSA) issued guidelines to promote the safer use of injectable medicines resulting from reports made to NPSA of errors and incidents in the use of injectable medicines. Developments in intravenous medicines have introduced precise reconstitution and administration techniques to ensure maximum efficiency of the medicine and minimise harm to the patient. The essential theme of these guidelines is that all staff involved with intravenous medication should be trained and sufficiently knowledgeable and competent in dealing with intravenous medication. The staff should also have guidelines, information and support in respect of the medication to ensure the correct prescribing, preparation, administration and monitoring of injectable medication at all times.

Epidural injections are clearly not for intravenous use, but the principles applied to training, prescribing, preparation, labeling and administration of IV medicines apply.

6.1 Professional responsibilities and accountability

Practitioners holding registration with their professional regulatory body are accountable for their actions and omissions. When administering intravenous medication staff must exercise their professional judgment as to their knowledge and experience in dealing with each individual medication. Where an individual member of staff is unfamiliar with a particular medicine, and/or has little or limited experience in administration of the medicine the individual must refer back to the prescriber or the pharmacy department for more detailed information. This information is also available from the electronic source The Injectable Medicines Guide (Medusa). Practice set out within this policy will apply to all practitioners/ staff who are involved in the prescribing, administration and safe handling of intravenous medication within the Health Board.

Each ward must ensure that all staff that are or may be involved in intravenous medication are :

- Able to access all policies, procedures and guidelines approved by HDUHB for the use of intravenous medication.
- Given the appropriate level of training, retraining and competence assessment

which must be recorded for their involvement with intravenous medication.

- Given information as to any medicine or device alert concerning intravenous medication, device or consumable which may be used in administering intravenous or parenteral medication within HDUHB.
- Staff that administer cytotoxic intravenous chemotherapy and cytotoxic medication by other routes must demonstrate that they have undertaken approved training.

6.2 Training and competency for IV and other routes of parenteral administration

All staff involved in the use of intravenous and other routes of parenteral medication must be trained and competent in all roles that they may undertake concerning parenteral medication. Within HDUHB training programmes are in place to ensure that all aspects of intravenous medication usage are covered to include:

- Prescribing
- Preparation (including calculations)
- Labeling
- Administration
- Checks involved throughout the process (who and when)
- Devices used for administration
- Monitoring requirements
- Disposal of waste material
- Risks of using intravenous medication and how to minimize them
- Standard information sources available to Health Board staff concerning intravenous medication.

HDUHB, through its Learning and Education Department, has set up a scheme to ensure that all staff involved in any aspect of intravenous medication has undergone the training and is deemed competent. The names of those deemed competent can be recorded on a database, but as a minimum will be recorded in the staff member's personal file. As part of the All Wales Policy for Medicines Administration, Recording, Review, Storage and Disposal a review of competence will take place every three years and where there has been a practice gap of 12 months or more.

Competence for administration of adult chemotherapy will be set out in standard operational procedures of the HDUHB. Administration of intravenous chemotherapy is limited to professionals who have completed the identified training and demonstrated competence.

6.3 Prescribing intravenous medication

Medicines should only be given by the intravenous route when the practicality and appropriateness of other routes has been excluded. The use of this route should be regularly reviewed in favour of switching to oral administration (or another route) as soon as clinically appropriate. When two or more patient medication records (prescription charts) are in use, it is essential that they are cross referenced so that practitioners are aware of all prescribed medicines. To ensure safe practice prescriptions for intravenous medication must specify the following:

- The allergy status of the patient
- Patient's name
- Prescribers signature
- The medication using approved name (in certain circumstances the brand and formulation
- The dose and frequency
- Date of initiation and route of administration
- Concentration or total quantity of medication in the final infusion container or syringe
- Name and volume of diluents and/ or infusion fluid to be used
- Rate and duration of administration
- Stability information to determine expiry date of the final product
- Type of pump or device number being used
- For children the age and weight should be specified
- Date for treatment review
- What clinical monitoring should take place, how often and for how long, (See product characteristics and e- Injectable Medicines Guide)

The use of a flush (usually sodium chloride 0.9%), is considered an essential part of cannula care and intravenous medication/fluid administration and should be prescribed at the same time the prescription of intravenous medication/fluid is written.

6.4 Storage of intravenous medication

The storage of intravenous and other parenteral medication (except large volume infusions) stocked on a ward or department must be in the appropriate locked pharmacy cupboard or fridge. Any medication issued for individual patients that require special storage will have this highlighted on the pharmacy label.

6.5 Preparation of intravenous medication

Whenever possible ready prepared injections, infusions or Centralised Intravenous Additive Service products (CIVAS) should be used. If any extra manipulation or medication addition is required then the staff involved must ensure that they are familiar and competent to carry out the preparation of this particular intravenous medication. Preparation and administration requires two registrants, see section 5.1.3

- Read all the prescription details carefully and confirm that they relate to the patient to be treated
- Confirm that the details on the prescription are correct e.g. dosage, diluents/s. concentration rate of administration and that the patient is not allergic to the medicine or any of its components.
- Ensure that the area to be used for the preparation is clean and clear of clutter. Ideally this should be a dedicated area just for the preparation of intravenous medication
- Assemble all the equipment and infusion devices required including flushes if they are required. Process the preparation using a Aseptic Non-Touch Technique (ANTT), i.e. avoid touching areas where bacterial contamination may be introduced e.g. syringe tips, needles and vial tops.
- Prepare the label (see below)
- Beware of confusion due to similar names and/ or packaging, by reading the labels carefully.
- Check expiry date of all the materials and medication used
- Check for damage to containers, vials, ampoules and packaging

- Confirm that the materials have been stored correctly
- Complete any calculations. These should be written in the patient's notes and checked by an independent practitioner who is competent in the administration of that intravenous medication.
- Hands must be cleaned according to the control of infection guidelines
- If a giving set is required it should be attached using the technique appropriate for the type of container. The line must be primed in accordance with nursing procedures.

6.6 Labelling of intravenous medication

All injections and infusion additives must be labeled after preparation. Under no circumstances should a practitioner have in their possession or vicinity two or more unlabelled syringes at the same time. If the syringe is to be administered via a pump device then it must be labeled in a manner not to conceal the syringe calibrations or as to otherwise affect the function of the pump device.

In Line with NPSA Guidance Labels for intravenous medicines should clearly state the following information

- name of the medicine;
- strength;
- route of administration;
- diluent and final volume;
- patient's name;
- expiry date and time;
- name of the practitioners preparing the medicine.

6.7 Infusion devices for intravenous medication

All infusion devices in use within HDUHB must be of a type that has been approved; the Medical Devices Management Policy 467 gives guidance. Healthcare professionals who use a particular device must be familiar with the function and limitation of each device that they need to use and ensure that the device is suitable for administration of the medication or diluent that is being used. Additionally, staff must be aware of the compatible giving set/s which can be used safely with that device. All staff using infusion devices must have received appropriate training for use of that particular device and have been shown to be competent in the use of that device.

6.8 Administration of intravenous medication

Before administering any intravenous medication a practitioner should be aware of any monitoring of the patient that is necessary after the medication is administered, and then check the following:

- Patient's name and hospital/NHS number
- Prescriber's signature
- The medication using the approved name (in certain circumstances the brand and formulation)
- The dose and frequency
- Date and route of administration
- The allergy status of the patient
- Check that the medication is free of haziness, particles and discoloration.
- Concentration or total quantity of medication in the final infusion container or syringe.
- Name and volume of diluents and/ or infusion fluid to be used
- Rate and duration of administration
- Stability information to determine expiry date of the final product
- Type of pump to be used
- For children the age and weight should be specified
- Date for review of treatment

- That the medication is due at that time and has not already been administered.

The person administering the medication must record the administration as soon as possible after the event in the appropriate patient record. Ask the patient to report any soreness at the injection site or any change in their well being. When an infusion is running, it should be regularly monitored by a competent member of staff who has undertaken the appropriate competence training. Administration of intravenous medication requires two registrants, see section 5.1.3.

6.9 Patient monitoring with intravenous medication

Prior to the administration of any intravenous medication the staff that will subsequently be looking after the patient must be made aware of any specific clinical requirements as to the monitoring of the patient; preferably this should be in the form of written details. Any of the results or findings from the monitoring must be documented within the patient's notes and the prescriber informed of any deviations from the expected findings. The patient should be involved in helping staff by being made aware that they should inform staff of any changes in their well being. The nurse who is looking after the patient will make frequent checks for:

- Signs of leakage from site or infusion bag
- Signs of infection or inflammation at the infusion site.
- Remaining contents of the infusion bag
- Rate of infusion.

Where particular risks are identified, these need to be clarified with the prescriber prior to administration of any intravenous medication.

6.10 Infection control and personal protective equipment

As parenteral medication is accessing the body directly, bypassing the normal infection barriers, it is imperative that the control of infection and the maintenance of the medicines sterility are made a high priority by staff that are undertaking the preparation and administration of the product.

Guidance on Personal Protective Equipment is set out in the local Infection Prevention and

Control Procedures.

6.11 Disposal of waste material

All waste must be disposed of in line with the HDUHB policy on waste which must meet the requirements of current environmental legislation. Any material that has been in contact with the patient should be classed as hazardous clinical waste and disposed of via the standard method for clinical waste. Any item deemed as 'sharps' should be disposed of by being placed in a 'sharps' bin even if they have a small amount of medication left inside them. Empty infusion sets can be placed in the yellow/orange clinical waste bags or in 'sharps' boxes.

For guidance on disposal of Controlled Drugs see Part 7.

6.12 Responsibilities of the pharmacist and the pharmacy department

The Pharmacist providing clinical services to a clinical area and its patients shall

- Ensure that a risk assessment is carried out on every new intravenous medication and, whenever possible a ready to use dosage formulation of the medicine is purchased in preference to any injection that needs manipulation prior to administration.
- Provide Information and advice is provided to all health care professionals on the administration of intravenous medication.
- Assist with the training of staff.
- Ensure that staff are aware of how to access the agreed standard references for intravenous medication.
- Ensure that all guidance produced for the prescribing and administration of any intravenous medication has been approved appropriately

6.13 Identifiable risks with intravenous medication

The following list is not exhaustive but includes some common general risks:

- Incomplete and unclear prescriptions that do not contain vital information concerning the dose, preparation or administration which can lead to possible errors and increased risk to patients
- Administration of medication by the wrong parenteral route i.e. giving medication

by the epidural route when the correct route should be intravenous.

- Absence of relevant and accurate information concerning intravenous medication
- Complex calculations needed for prescribing the correct dose, infusion rate or preparation of dilution for intravenous medication. Calculations should be independently double checked by a second registrant.
- Involvement of inexperienced staff (e.g. registrant or students in training) in some parts of the process.
- Selection of wrong medication or diluent.
- Use of expired items.
- Unsafe handling of toxic medication or non aseptic technique leading to infection.
- Failure to correctly identify and confirm identification of intended patient incompatibilities between medication, diluents, other medication and infusion sets or devices.