



Title	Use of antipsychotic depot and long acting injections
Document Type	Guideline
Version Number	MH022/02
CGQ & RDS ID Number	<i>Clinical Governance & Quality Use only</i>
Approval/Issue date	04/2023
Review date	04/2025
Owner/Responsible Person	Barron M, maxine.barron@borders.scot.nhs.uk
Developed by	Mental Health Team – 01/2021
Reviewed by	Maxine Barron (clinical pharmacist), Jan Moffat (team leader community psychiatric nurse), Irene Knox (community psychiatric nurse) – 04/2023
Significant resource implications (financial/workload)	N/A
Approved by	ADTC
Health Inequality Impact Assessment (HIIA) (only statutory for policies)	N/A

This guideline is based on the NHS Greater Glasgow and Clyde clinical guide of the same name 2016

Uncontrolled when printed

Contents

Use of Antipsychotic Depot and Long Acting Injections	3
Introduction	3
Guideline Scope	3
Definitions	3
Standard Statement.....	3
Choice of drug and dosage selection	3
General prescribing principles.....	4
Side effects	7
Prescriptions.....	7
Licensed injection sites.....	8
Administration.....	8
Recording the administration	9
Ordering Depot Antipsychotics Good Practice Guide.....	10
Communication	12
Medication related issues	12
Appendix 1: Preparing to administer an antipsychotic depot injection.....	14
Preparation and equipment.....	14
Criteria for selection of injection site	15
Injection techniques	16
Appendix 2: Dose selection for antipsychotic depot injection	17
Appendix 3: Equipment checklist	19
Appendix 4: Preparation for administering depot antipsychotic injections.....	20
Appendix 5: Administering depot antipsychotic injections.....	21

Use of Antipsychotic Depot and Long Acting Injections

Introduction

Antipsychotic Long Acting Injections (LAIs) in the form of depot injections have been used in psychiatry for many years. Their use is endorsed by NICE CG178 Psychosis and schizophrenia in adults: prevention and management.

“Consider offering depot/long acting injectable antipsychotic medication to people with psychosis or schizophrenia:

- *Who would prefer such treatment after an acute episode*
- *Where avoiding covert non-adherence (either intentional or unintentional) to antipsychotic medication is a clinical priority within the treatment plan.*

Other advantages may include patient preference because of convenience, providing awareness of adherence and the opportunity for regular scrutiny of a patients mental state and side effects at time of LAI administration.

A notable disadvantage is that side effects, if experienced, may be prolonged.

The use of antipsychotic LAIs can be subject to controversy, however in appropriate circumstances they are a very useful addition to the range of antipsychotic preparations available.

The purpose of this good practice statement is to support the safe and effective use of antipsychotic depot injections.

Guideline Scope

These guidelines apply to all staff involved in the prescribing, administration and supply of depot antipsychotics in the Mental Health Services of NHS Borders. It is the responsibility of all appropriate senior managers to ensure that these guidelines are implemented.

Definitions

Antipsychotic depot or long acting injection: an antipsychotic drug formulated in such a way as to allow the steady gradual release of a drug over a defined time period. There are a variety of formulations and delivery vehicles but all are administered by deep intra-muscular injection.

Standard Statement

Only appropriately trained and competent staff may administer depot antipsychotics.

Choice of drug and dosage selection

The antipsychotics currently available as depot preparations are:

First Generation:

- Flupentixol Decanoate (Depixol)

- Haloperidol Decanoate (Haldol Decanoate)
- Zuclopenthixol Decanoate (Clopixol Decanoate)

Second Generation:

- Aripiprazole (Abilify Maintena)
- Risperidone (Risperdal Consta) (not on current formulary)
- Paliperidone Palmitate (Trevicta, Xeplion)
- Olanzapine Pamoate (Zypadhera) (not on current formulary)

They are indicated for the maintenance of schizophrenia and other psychoses.

General prescribing principles

When initiating an antipsychotic depot, the following principles apply:

- Give a test dose (first generation only) or the recommended loading or initial dose first.
- Begin with the lowest therapeutic dose. Lower doses are likely to be better tolerated and are less expensive.
- Administer at the longest possible licensed interval. Follow the recommended licensed dosing interval, there is no evidence to suggest that shortening the dosing interval will improve efficacy.
- Allow an adequate assessment period before adjusting doses. Peak plasma levels, therapeutic effect and steady state plasma levels are delayed with depot injections. Adequate time must be allowed for these to occur before increasing doses. Therefore, it would be prudent to wait until these have been achieved before considering increasing the dose. The following table gives the approximate time to steady state for these drugs.

Drug	Time to steady state (weeks)
Flupentixol Decanoate (Depixol)	~8-12
Haloperidol Decanoate (Haldol Decanoate)	~14
Zuclopenthixol Decanoate (Clopixol Decanoate)	~12
Aripiprazole (Abilify Maintena)	~20
Olanzapine Pamoate (Zypadhera)	~12
Paliperidone Palmitate (Xeplion) (monthly)	~20
Risperidone (Risperdal Consta)	~8

First Generation Antipsychotic Depot:

Depots are long acting and any adverse effects are likely to be prolonged. Therefore, when using first generation antipsychotic depots, a small test dose is always given to identify if patients are likely to be susceptible to side effects or will suffer a severe reaction to the drug or delivery vehicle. Once a test dose has been given it is necessary to wait at least 4-10 days before initiating any titration to maintenance dose (always refer to the summary of product characteristics (SPC) for individual products). Adverse reactions may occur at any time during this period and the patient must be closely monitored.

The following table summarises the test doses for each first generation antipsychotic depot, the dose range per week and the usual dosage interval.

Drug	Brand	Test dose (mg)	Dose range (mg/week) ^a	Dosing intervals (weeks)
Flupentixol Decanoate	Depixol	20	10-400	2-4
Haloperidol Decanoate	Haldol Decanoate	25 ^b	12.5-75	4
Zuclopenthixol Decanoate	Clopixol Decanoate	100	100 – 600	1-4

Notes:

In older adults the dose should be quartered or halved.

- a. Dose range is given in mg/week for illustrative purposes only. Avoid using shorter dose intervals than those recommended (last column) except where the dose required necessitates an unacceptably high injection volume (>2.5ml of injection).
- b. The SPC for haloperidol does not advise of a specific test dose, therefore a test dose of 25mg is recommended as appropriate.

Second Generation Antipsychotic Depots:

Risperidone (Risperdal Consta): This preparation is non formulary. Please contact pharmacy to discuss before prescribing. The formulation and pharmacokinetics of Risperdal Consta preclude the use of a test dose. For Risperidone naïve patients it is recommended to establish tolerability with oral Risperidone prior to initiating treatment with Risperdal Consta. It is recommended that patients treated with higher doses of oral antipsychotics (risperidone or other) should be considered for 37.5mg starting dose of Risperdal Consta. Sufficient antipsychotic coverage with oral risperidone or other previous antipsychotic is necessary during the three-week lag period following the first risperidone depot administration. This depot requires to be reconstituted prior to use. Staff should be familiar with and deemed competent to prepare this drug. Once reconstituted the product must be used within 6 hours.

Paliperidone (Xeplion): With Paliperidone Palmitate a loading dose of 150mg on day 1 then 100mg on day 8 is given followed by monthly adjustments according to response. The loading dose must be administered into the deltoid muscle. Please note that Paliperidone LAI is administered every calendar month, **not** every 4 weeks. A three monthly formulation is available however, it currently is not on the formulary.

Olanzapine (Zypadhera): This preparation is non formulary. Please contact pharmacy to discuss before prescribing. Olanzapine Pamoate has a complex starting dose depending on the oral dose of Olanzapine the patient was taking.

Aripiprazole (Abilify Maintena): Oral aripiprazole 10mg/day for 14 days is recommended initially to establish tolerability and response. One of two recommended regimens may be followed for administering the starting dose of aripiprazole LAI –

1. One-injection start – on day of initiation administer one 400mg aripiprazole LAI and continue 10-20mg oral aripiprazole per day for 14 days.
2. Two-injection start – on day of initiation administer two separate injections of 400mg aripiprazole LAI at separate injection sites in two different muscles along with one 20mg dose of oral aripiprazole. This depot should be administered every calendar month **not** every 4 weeks.

Drug	Brand	Dose range (mg/week) ^a	Dosing intervals (weeks)
Risperidone	Risperdal Consta	12.5-25	2
Paliperidone Palmitate	Xeplion (monthly)	12.5-37.5	monthly
Olanzapine Pamoate	Zypadhera	37.5-150	2-4
Aripiprazole	Abilify Maintena	75-100	monthly

- a. Dose range is given is mg/week for illustrative purposes only. Avoid using shorter dose intervals than those recommended (last column) except where the dose required necessitates an unacceptably high injection volume (>2.5ml of injection).

Side effects

Like all drugs, antipsychotic depots are associated with side effects. A full list of possible side effects can be found in the SPC for each drug found at <https://www.medicines.org.uk/emc/>. The following are some important points to remember:

- a. Pain, erythema, swelling and nodules can occur at the injection site.
- b. Antipsychotic depots do not produce extra pyramidal side effects at the time of administration. They may occur after several hours or days.
- c. Rarer adverse effects such as rashes and agranulocytosis are well documented with antipsychotics, anaphylaxis is not. However, it is recommended that the first dose of an antipsychotic depot is administered in a clinical base with access to emergency equipment (disposable ambubag, airways, Laerdal pocket mask and supportive medicines). Thereafter there should be no need for nursing staff to carry adrenaline in case of anaphylaxis. Olanzapine LAI must always be given in a healthcare facility and patients must remain there for 3 hours post dose.
- d. Standardised tools or checklists e.g. Borders Modified LUNSERS scale should be used to monitor and assess side effects every 6-12 months.

Prescriptions

Antipsychotic depot injections must be prescribed. This prescription should be reviewed every 6 months. The prescription must be legibly written and signed by a medical practitioner or a suitably qualified non-medical prescriber. Verbal prescriptions for depot injections are not permitted.

On initiation and also at any change of medication, dose or frequency, the date the injection is due must be clearly annotated. Prescriptions should not be post dated.

The prescription must contain:

- a. The patient's name, address and CHI number
- b. Any known allergies or "no known allergies" recorded on the prescription
- c. Special notes of relevance to administration of the depot
- d. The drug name, dosage, strength and frequency of administration
- e. A review date
- f. Prescribers signature

Licensed injection sites

The following table details the licensed site of administration for each antipsychotic LAI. The information has been taken from the current SPC for each drug.

Drug	Licensed site of administration
Flupentixol Decanoate (Depixol)	Upper outer buttock or lateral thigh
Haloperidol Decanoate (Haldol Decanoate)	Gluteal
Zuclopenthixol Decanoate (Clopixol Decanoate)	Upper outer buttock or lateral thigh
Aripiprazole (Abilify Maintena)	Deltoid or gluteal
Olanzapine Pamoate (Zypadhera)	Gluteal
Paliperidone Palmitate (Xeplion)	Deltoid or gluteal
Risperidone (Risperdal Consta)	Deltoid or gluteal

Administration

Detailed guidance to support administration of antipsychotic depots is outlined in Appendix 5. The following provides summary guidance.

- a. Antipsychotic depots may only be administered against a valid prescription.
- b. Before administering any new antipsychotic depot check:
 - A test dose has been given, if appropriate, and no adverse reactions occurred.
 - The patient has received an adequate explanation of the treatment and has received any appropriate written information.
 - The patient consents to the treatment or if detained under Mental Health Legislation that the appropriate documentation is in place.
- c. Patients' identity is confirmed. If the patient is unknown to the CPN, confirm the patients' name and date of birth.
- d. Once the above criteria are satisfied appropriately trained staff or student nurses under supervision may administer antipsychotic depots. All staff must meet the competencies required for administering depot injections.
- e. Select the appropriate strength of antipsychotic depot preparation to administer the required dose in the lowest possible volume (Appendix 2).
- f. Observe good practice guidelines for hand washing and 'no touch' technique when preparing the dose for administration.
- g. Administer the antipsychotic depot by deep intramuscular injection.
- h. Dispose of all materials used as indicated by local policy.
- i. Undertake hand hygiene as per local policy.

Recording the administration

Accurate record keeping is essential to patient safety, medication incidents have occurred because of poor record keeping. For example:

- Doses being given before or after the next due date in error.
- Wrong medication or dose being dispensed or administered.
- Doses missed completely

The following table lists the details that must be recorded:

On prescription or administration record	In patients record
Date given	Any side effects experienced
Site given	Details if dose refused
Nurse administering the dose	Any other relevant clinical information

Local areas should devise a system for tracking the next due dates for all patients prescribed depot antipsychotics.

If the patient did not attend the appointment the CPN should discuss with the RMO and devise a plan for further administration attempts.

Ordering Depot Antipsychotics Good Practice Guide

Community Mental Health Teams (CMHTs):

We advise that any requests for re-ordering antipsychotic depot injections take place immediately after the last injection is administered.

The NHS Borders Universal Prescribing Policy states that the timeline for prescription requests to fulfilment can take up to seven days. CMHTs need to be aware that some of the depot antipsychotics may take slightly longer than the aforementioned seven days due to restrictions placed on product access by individual manufacturers and companies. Our advice is prompt ordering post administration to ensure the depot injection is ready for the next time.

Requests can be made by patients or CMHT staff with patient permission on their behalf.

Patients and CMHTs:

To help support timely access to anti-psychotic depot injections we encourage CMHT teams to discuss the following points with their patients:

a. Do they have a nominated pharmacy they use and does their GP practice know which it is?
If not, do they want to nominate one?

b. Who is collecting the injection? And where does the patient have it administered?

The pharmacy teams based in practices (called the Pharmacotherapy Team) can help with adding this information to prescriptions. Contact the generic admin inbox for the practice and ask to discuss with their Pharmacotherapy Team to organise this.

These steps should reduce prescriptions not reaching their intended pharmacy and ensure it is clear to the patient, CMHT staff and community pharmacy where the depot injection needs to be for the next appointment.

Community Pharmacy Teams:

We understand medicines sometimes can be hard to source. We have prepared the document overleaf to highlight locations for advice when you are struggling to access depot injections.

Switching to an alternative product immediately will not be supported by the Mental Health service.

Changes to depot antipsychotics require a significant amount of time, discussion with the patient, and review of the current circumstances driving the possible need for change. Where there is a defined long-term shortage of a depot, the Mental Health services will review and change patients where appropriate.

Pharmacotherapy teams in practices can be contacted for advice via the generic practice email. If necessary, they will contact the Mental Health service to flag up a supply issue and this will be investigated.

Manufacturer

Janssen

Antipsychotic depot injections	Preparations	Problems Accessing Product
Haloperidol decanoate	50mg/ml, 100mg/ml injection	If any pharmacy has problems obtaining Janssen-Cilag products from their wholesaler they should complete the emergency supply form and send it with the redacted prescription to the following email: JanssenUKCustomerServices@its.jnj.com Emergency Supply Form is available on the PSNC website under Manufacturer Contingency Arrangements
Risperidone (Risperdal®)	25mg/37.5mg/50mg	
Paliperidone palmitate 1-monthly (Xeplion®)	50mg, 75mg, 100mg, 150mg pre-filled syringes	
Paliperidone palmitate 3-monthly (Trevicta®)	175mg, 263mg, 350mg, 525mg pre-filled syringes	

Lundbeck

Antipsychotic depot injections	Preparations	Problems Accessing Product
Flupentixol decanoate	20mg/ml, 40mg/2ml, 50mg/0.5ml, 100mg/1ml, 200mg/ml injection	Lundbeck products are distributed to the market via Alliance Healthcare. If you have outstanding prescriptions and your Alliance Healthcare depot has stock you must call your local Alliance customer service and request that these are fulfilled. If Alliance Healthcare cannot fulfil your order then please call Lundbeck on 01908 649966 to check stock availability.
Zuclopenthixol decanoate (Clopixol®)	200mg/ml, 500mg/ml injection	

Lilly

Antipsychotic depot injections	Preparations	Problems Accessing Product
Olanzapine	210mg/300mg/405mg	If wholesaler (AAH or Phoenix) can't supply the product, contact Lilly's emergency 'Direct 2 Pharmacy' customer service desk which is open Monday – Friday, 9am – 5pm 0800 012 1178

Otsuka

Antipsychotic depot injections	Preparations	Problems Accessing Product
Aripiprazole	400mg injection	If any customer has difficulty in securing Abilify stock for UK patients, please contact Otsuka Customer Services directly on 0203 747 5300

Communication

It is essential to good patient care that communication between patient settings regarding antipsychotic depot prescriptions is robust. This may be between community teams and mental health in-patient settings, between community teams and acute medical in-patient settings. When a patient is transferred between any of these settings the following details must be clearly communicated:

- a. The antipsychotic depot preparation prescribed, the dose and dosage interval
- b. Date last given and date next due

It is the responsibility of ward staff in mental health or acute settings to administer antipsychotic depots when patients are in hospital. In no circumstances should community staff administer antipsychotic depots to patients in hospitals.

Staff within community mental health teams are responsible for ensuring antipsychotic depot alerts on IT medical note system (e.g. EMIS) are up to date.

Medication related issues

A number of other important issues may impact the use of antipsychotic depots:

- a. **Concomitant medication:** Patients may be prescribed or be taking a variety of other medications. It is important to be aware of these when prescribing/advising antipsychotic depots. It is especially important when a psychiatrist is responsible for prescribing the antipsychotic depot and the GP prescribes everything else.
- b. **Changes to antipsychotic depot prescriptions:** It is essential that all changes to an antipsychotic depot prescription are quickly and clearly communicated to all relevant staff. If the GP prescribes the antipsychotic depot a local system should be developed to ensure good communication.
- c. **Drug interactions:** It is important that all health professionals involved in the use of antipsychotic depots are aware of the clinically significant interactions between antipsychotic depots and other medicines. Staff should refer to the current edition of the BNF or contact pharmacy for advice.
- d. **High dose antipsychotics:** The Royal College of Psychiatrists has issued revised guidance to the use of high dose antipsychotics (May 2014). It is possible that a patient could be prescribed regular or as required oral antipsychotics whilst on an antipsychotic depot. This may result in them reaching high dose status. Refer to available guidelines on high dose antipsychotics.
- e. **Consent to treatment:** If a patient is detained under the Mental Health Act and/or subject to a CTO, or is being treated under the Adults with Incapacity legislation, treatment with an antipsychotic depot must comply with any relevant treatment plan in place. All staff involved with the patient must be aware of the contents of any treatment plan. Staff must have access to a copy of the treatment plan with the antipsychotic depot prescription sheet at the point of administration.

f. **General physical monitoring:** The regular interaction between community staff and patients prescribed antipsychotic depots may provide an ideal opportunity to monitor relevant physical parameters. This is especially true for those patients who don't or won't attend their GP. Some of the parameters for monitoring include blood pressure, pulse, ECG, weight and adverse effects.

g. **Storage and preparation of Risperdal Consta:** Unlike the other antipsychotic depots, this preparation requires to be refrigerated prior to use. Accordingly, it is subject to cold chain transportation. If the cold chain is broken at any point the depot should be stored at room temperature and used within 7 days. Appendix 1: Preparing to administer an antipsychotic depot injection.

Appendix 1: Preparing to administer an antipsychotic depot injection

Preparation and equipment

Gloves: NHS Borders recommend the use of gloves to protect the nurse from contact with body fluids and allergic injection compounds. They may contribute to a reduction in a sense of control over the injections' materials, especially in individuals who have learned the technique without them, however this can be minimized by ensuring that gloves fit well.

Sharps: To reduce the risk of injury, sharp equipment such as needles and glass vials need to be handled and disposed of carefully. Used needles should not be re-sheathed and all used and unwanted sharp equipment should be disposed of in appropriate containers, not in clinical waste bags. Other waste can be collected in the disposal bag then placed in clinical waste bags.

Needles: Needles should be long enough to allow injection to the intended depth of muscle with a quarter of the need length remaining external to the skin. A variety of lengths are available and an assessment of the length of the needle required to reach the muscle should be made by an assessment of the individual patient, taking into account any subcutaneous fat and remembering to allow for approximately 2-3mm of the needle length to be left outside the skin to allow the needle to be removed should it break. In obese patients care must be taken to ensure administration into muscle and not subcutaneous fat. Longer than standard needles are required. The most common used for deep intra-muscular injection is 21g x 1.5 inch (green needle) or 23g x 1.25 inch (blue needle). In order to minimize the likelihood of drawing up small slivers of glass from glass drug vials, a smaller bore needle may be used to draw up the drug. The drugs' viscosity will determine whether this can be done.

Syringes: Selection of syringes should take account of the volume of medication to be given as well as the syringes' suitability to measure dosage. Syringes range in size from under 1ml to over 50ml, however, for injections other than insulin you will generally choose from:

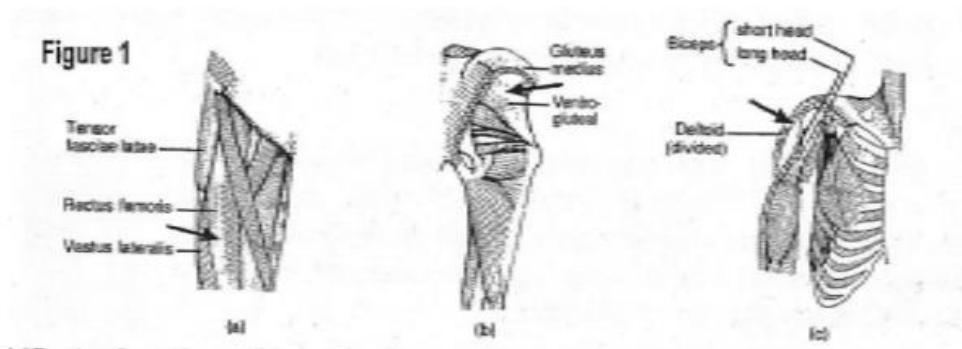
- a. 1ml which has markers showing each 0.1 of a ml
- b. 2ml which has markers showing each 0.1 of a ml
- c. 5ml which has markers showing each 0.2 of a ml

These markers are important, as prior to drawing up an injection it is necessary to calculate the volume of medication that will provide the prescribed dose. To accurately calculate the dose requires selection of a syringe which is suitably marked for measurement of the dose.

Dose selection: The administration of depot antipsychotic drugs is a skilled procedure. Intra- muscular injections can be painful. Pain can be minimized by using the smallest volume possible. Ideally, no more than 2ml should be given to one if possible. See Appendix 2 for dose selection.

Criteria for selection of injection site

Care must be taken to use concentrations in the smallest appropriate dose (ideally no more than 2ml). Prior to injecting, inspect the chosen site for signs of inflammation, swelling or infection and any skin lesions should be avoided. Following the injection, inspect the site for any adverse reaction. Document where the injection is given and alternate the site to allow an even rotation. This reduces the risk of abscess due to poor absorption and muscle atrophy.



- (a) Rectus femoris: used for anti-emetics, narcotics, sedatives, injections in oil, deep intra-muscular and Z track injections. It is rarely used in adults but is the preferred site for infants and for self-administration of injections.
- (b) Gluteus medius: used for deep intra-muscular injections and Z track injections. The gluteus muscle has the lowest absorption rate. The muscle mass is also likely to have atrophied in elderly, non-ambulant and emaciated patients. This site carries with it the danger of the needle hitting the sciatic nerve and superior gluteal arteries.
- (b) Ventrogluteal: used for antibiotics, anti-emetics, deep intra muscular and Z track injections in oil, narcotics and sedatives, typical volume is 1 – 4ml. It is best used when large volume intra muscular injections are required and for injections in the elderly, non-ambulant and emaciated patient as it provides the safer option to accessing the gluteus medius muscle. This is because the site is away from major nerves and vascular structures and there have been no reported complications.
- (a) Vastus lateralis: used for deep intra-muscular and Z track injections. This site is free from major nerves and blood vessels. It is a large muscle and can accommodate repeated injections.
- (c) Deltoid: should only be used with Paliperidone Palmitate, Risperidone Consta and Aripiprazole.

NHS Borders accept that if the patient is physically clean and the nurse maintains a high standard of hand hygiene and asepsis during the procedure, skin disinfecting is not necessary.

Any other injection sites are considered off label and require confirmation with the consultant and documented in the patient notes.

Injection Techniques:

As the angle of the needle entry may contribute to the pain of the injection, intra- muscular injections should be given at an angle of between 70-90°. This reduces the pain and increases the likelihood of the needle reaching the muscle.

To reduce the pain of injections:

- Prepare the patient
- Using of ice or freezing spray to numb the skin
- Correct choice of injection site
- Technique
- Positioning of the patient so that muscles are relaxed.
- Ask the patient to lie on their stomach to relax more

Appendix 2: Dose selection for antipsychotic depot injection

The administration of depot antipsychotic drugs is a skilled procedure. Intra-muscular injections can be painful. Pain can be minimized by using the smallest volume possible. Ideally, no more than 2ml should be given to one site if possible. The following tables give guidance on product selection to minimize the volume of antipsychotic depot injection administered.

Under no circumstance should different strengths of antipsychotic depot preparations be mixed.

Flupentixol Decanoate (Depixol Decanoate)			
Dose	Product	Volume	Method
10mg	Flupentixol 20mg/ml	0.5ml	Via 1ml syringe
20mg	Flupentixol 20mg/ml	1ml	Via 1ml syringe
30mg	Flupentixol 40mg/2ml	1.5ml	Via 2ml syringe
40mg	Flupentixol 40mg/2ml	2ml	Via 2ml syringe
50mg	Flupentixol 50mg/0.5ml	0.5ml	Via 1ml syringe
60mg	Flupentixol 100mg/ml	0.6ml	Via 1ml syringe
70mg	Flupentixol 100mg/ml	0.7ml	Via 1ml syringe
80mg	Flupentixol 100mg/ml	0.8ml	Via 1ml syringe
90mg	Flupentixol 100mg/ml	0.9ml	Via 1ml syringe
100mg	Flupentixol 100mg/ml	1ml	Via 1ml syringe
120mg	Flupentixol 200mg/ml	0.6ml	Via 1ml syringe
150mg	Flupentixol 200mg/ml	0.75ml	Via 1ml syringe
200mg	Flupentixol 200mg/ml	1ml	Via 1ml syringe

Zuclopenthixol Decanoate (Clopixol Decanoate)			
Dose	Product	Volume	Method
50mg	Zuclopenthixol 200mg/ml	0.25ml	Via 1ml syringe
100mg	Zuclopenthixol 200mg/ml	0.5ml	
150mg	Zuclopenthixol 200mg/ml	0.75ml	
200mg	Zuclopenthixol 200mg/ml	1ml	
300mg	Zuclopenthixol 500mg/ml	0.6ml	
400mg	Zuclopenthixol 500mg/ml	0.8ml	
500mg	Zuclopenthixol 500mg/ml	1ml	
600mg	Zuclopenthixol 500mg/ml	1.2ml	Via 2ml syringe

Haloperidol Decanoate (Haldol Decanoate)

Note: A 2ml syringe is graduated to 2.5ml. This dose may have to be split if the patient is very thin.

Dose	Product	Volume	Method
50mg	Haloperidol 50mg/ml	1ml	Via 1ml syringe
100mg	Haloperidol 100mg/ml	1ml	Via 1ml syringe
150mg	Haloperidol 100mg/ml	1.5ml	Via 2ml syringe
200mg	Haloperidol 100mg/ml	2ml	Via 2ml syringe
250mg	Haloperidol 100mg/ml	2.5ml	Via 2ml syringe

Aripiprazole (Abilify Maintena)

Dose	Product	Volume	Method
400mg	Aripiprazole 400mg	2ml	Via syringe provided
300mg	Aripiprazole 400mg	1.5ml	
200mg*	Aripiprazole 400mg	1ml	
160mg*	Aripiprazole 400mg	0.8ml	
*To deliver reduced dose with regards to specific drug interactions (see SPC)			

Appendix 3: Equipment checklist

1.	Clean tray or receiver in which to place drug and equipment	
2.	19g needle(s) to ease reconstitution and drawing up, 23g if from a glass ampoule	
3.	21, 23 or 25g needle – size dependent on route of administration	
4.	Syringe(s) of appropriate size for amount of drug to be given	
5.	Clean swab, if drug is presented in ampoule form	
6.	Drug(s) to be administered	
7.	Patient's prescription to check dose and route	
8.	Well fitting gloves	
Note:	Risperidal Consta comes in a pack with all equipment Paliperidone Palmitate comes in pre filled syringes with needles in pack Aripiprazole comes in pack with all equipment and as a prefilled syringe	

Appendix 4: Preparation for administering depot antipsychotic injections

	Action	Rationale
1.	Collect and check all equipment (appendix 3)	To prevent delays and enable full concentration on the procedure
2.	Consult the patient's prescription or administration record and ascertain the following: <ul style="list-style-type: none"> - Drug - Dose - Date and time of administration - Route and method of administration - Validity of prescription - Signature of doctor - Site of last injection 	To ensure that the patient is given the correct drug at the correct dose, at the right time via the correct route and to the correct site.
3.	Check that the packaging of all equipment is intact	To ensure sterility, if the seal is damaged, discard.
4.	Select the drug in the appropriate concentration, volume and dosage and check expiry date.	To ensure drug and dose administered is that which is intended and it is safe and appropriate.
5.	Check all details with another qualified nurse and confirm the amount of drug that is to be administered.	To minimize risk of error.
6.	Inspect all equipment.	To ensure nothing is damaged. If damaged, discard.

Appendix 5: Administering depot antipsychotic injections

	Action	Rationale
1.	Explain and discuss the procedure with the patient.	To ensure the patient understands the procedure.
2.	Evaluate the patient's knowledge of the medication being offered. If this knowledge is incomplete or the patient wishes further information, offer an explanation of the use, action, dose and potential side effects.	A patient has a right to information about treatment.
3.	Consult the patient's prescription or medication administration record to ensure patient's identity, drug, dose, date, time, route, method of administration and site of injection are correct.	To minimize risk of error.
4.	Wash hands with bactericidal soap and water or bactericidal alcohol hand rub.	To prevent contamination of medication and equipment.
5.	Prepare needles and syringes	
6.	Inspect the drug solution for cloudiness or particulate matter. If this is present do not use. Note: Risperidone Consta is a suspension of microspheres so it is always cloudy. Paliperidone is a white to off-white suspension.	
7.	Tap the neck of the ampoule gently	To ensure that all the solution is in the bottom of the ampoule.
8.	Cover the neck of the ampoule with a swab and snap it open. If there is any difficulty, devices to aid opening are available.	To reduce the risk of injury to the nurse.
9.	Inspect the solution for glass fragments, if present, discard.	To minimize the risk of injection of foreign matter into the patient.
10.	Withdraw the required amount of drug, tilting the ampoule if necessary.	To avoid drawing in any air.
11.	Tap the syringe.	To dislodge any air bubbles, expel air.
12.	Change the needle and discard used needle in an appropriate sharps container. Aripiprazole, Paliperidone and Risperdal Consta comes with their own needles that must be used as indicated in the package insert.	
13.	Assist the patient into the required position	To allow access to the chosen site and to ensure the designated muscle group is flexed and therefore relaxed.
14.	Remove the appropriate garment to expose the chosen site.	To gain access for injection.
15.	If the skin is not clean, clean the skin.	

16.	Holding the needle at an angle of 90°, quickly plunge it into the skin.	To ensure that the needle penetrates the muscle. Leave a third of the shaft of the needle exposed to facilitate removal of the needle should it break.
17.	Pull back the plunger, if no blood is aspirated, depress the plunger at approximately 1ml every 10 seconds and inject the drug slowly. If blood is aspirated, withdraw the needle, dispose of injection materials and start again. Explain to the patient what has occurred to confirm that the needle is in the correct position.	
18.	Wait 10 seconds before withdrawing the needle, releasing the skin as you withdraw.	To allow the medication to diffuse into the tissue. This seals the puncture tract.
19.	Withdraw the needle rapidly. Apply pressure to any bleeding point.	To prevent haematoma formation.
20.	Record the administration and site of injection on the prescription or administration record. Record the date next injection due in CPN diary and electronic patient notes.	To ensure site and date of next injection is appropriate.
21.	Ensure that all sharps and non sharp waste are disposed of safely and in accordance with locally approved procedures.	To ensure safe disposal and avoid injury to staff.