

# Principles on the Disposal of Waste Pharmaceuticals used within Community Health Services

## Version 3.1

### Introduction

This document aims to define the principles which must be considered when removing or disposing of pharmaceuticals that are no longer required within Community Health Services (CHS) settings in England. It follows both current legislation and good practice guidance. CHS settings refer to services provided for patients in non-acute settings.

This updated version has been reviewed following the publication of **Safe Management of Healthcare Waste version 2.0 (May 2012)**.

**The Waste (England and Wales) Regulations 2011** have also been recently issued and these place more emphasis on waste prevention.

**The Controlled Waste (England and Wales) Regulations 2012** clarify healthcare waste arrangements.

The statutory requirements contained in the **Environmental Protection (Duty of Care) Regulations 1991** still remain in force. So those who produce, carry, keep, treat or dispose of Controlled Waste must ensure the safe handling and disposal. This duty continues throughout the waste chain and all intermediaries until final disposal. If any part of the disposal chain fails, the initial producer can be held to have failed in their duty of care.

In addition, **The Safe and Secure Handling of Medicines: A Team Approach (A revision of the Duthie Report 1988), March 2005** emphasises the Medicines Trail. This covers all the potential activities that are associated with a medicinal product, from the initiation of the patient treatment through to the activities associated with the removal and disposal of medicines that are no longer required or are no longer suitable for their intended use. It recommends that appropriate records are kept to complete the audit trail.

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## Pharmaceutical Waste

Community Health Services often get their pharmaceuticals from another supplier rather than an in-house pharmacy, where this happens the supplier will not take back waste pharmaceuticals. Complete packs of in date stock items are generally not considered to be waste, but are classed as returns. Items which have been issued to a patient are classified as waste. In addition pharmaceutical waste also includes expired, spilt, and contaminated pharmaceutical products, drugs, vaccines and sera that are no longer required. Pharmaceutical waste needs to be disposed of appropriately. See Appendix A for further advice on disposing of different pharmaceutical formulations.

A risk assessment should be carried out in connection with the drug products and also the act of discarding medicines on site. In addition a Standard Operating Procedure for the Disposal of Pharmaceutical Waste must be written.

There is usually no requirement to segregate different types of formulations e.g. tablets from liquids. Some waste contractors will require that medicines in aerosol form must be segregated, or if this is not done the presence of aerosols must be identified on the accompanying waste documentation.

There is a requirement to segregate waste pharmaceuticals into:

1. cytotoxic and cytostatic medicines; and
2. other medicines.

It is important that when sorting and disposing of pharmaceutical waste, gloves and an apron are worn. Hand washing, is also important in reducing the risk from waste handling. Where it is unsafe or not possible to segregate pharmaceutical waste it should be consigned as mixed hazardous and non-hazardous waste medicines and the relevant EWC codes for each type of waste included on the consignment note.

Any outer packaging and Patient Information Leaflets may be placed into ordinary paper / cardboard waste containers for recycling. **Patient-Sensitive Information must be obliterated with permanent black marker pen before disposal.** Whilst there is no obligation to remove the cardboard outer packaging for recycling doing so will reduce the volume of pharmaceutical waste.

Unless a Controlled Drug (CD) is involved, medicines should not be removed from the final layer of packaging, e.g. blister strips. This also includes single-use monitored dosage systems (MDS) which should be disposed of intact without removing the medicines. Where a CD is involved they will require denaturing before destruction. Where the CD waste is also contaminated with a used sharp see the section "Sharps contaminated with Pharmaceutical Waste" for more details.

Pharmaceuticals must be placed in a leak-proof container which has been UN-approved for liquids. All Pharmaceutical Waste is for incineration.

Pharmaceutical waste can be divided into four groups:

1. Pharmaceutical Hazardous (cytotoxic and cytostatic)
2. Pharmaceutical Non-Hazardous (non-cytotoxic and non-cytostatic)
3. Not pharmaceutically active and possessing no hazardous properties (examples include saline and glucose)
4. Medicines that are flammable, harmful, irritant, oxidising or ecotoxic.

## Pharmaceutical Hazardous (Cytotoxic and Cytostatic) Waste

Cytotoxic and cytostatic medicines are clinical hazardous waste and include any medicine that has one or more of the hazardous properties: Toxic, Carcinogenic, Toxic for Reproduction or Mutagenic. (Note: Toxic for Reproduction should not be confused with Contraindicated for Use in Pregnancy.)

This is a wide definition capturing many hormone-based preparations, antimicrobial substances such as chloramphenicol, as well as cancer-treating agents.

Appendix B is an example list of cytotoxic and cytostatic used in a hospital. This list is adapted from the updated Guidance (Safe Management of Healthcare Waste version 2.0) and is provided to assist pharmacists, but is not presented, or intended to be used, as a comprehensive list, since this is highly dependent on what medicines are used in a particular healthcare setting. It is inferred that each organisation should ensure that the list they are using to identify hazardous (Cytotoxic and Cytostatic) waste reflects the medicines used by the organisation. It may be useful to do this in conjunction with the Waste Manager. The list given in Appendix B is adapted from the published list and includes BCG following a personal communication with DH.

A purple-lidded waste container must be used and should be clearly labelled, with a black permanent marker pen before filling the container, with the following information:

### **Purple-lidded Container**

**Pharmaceutical Hazardous Waste for incineration.**

**Cytotoxic and Cytostatic. Mixed Form.**

**EWC 18 01 08\***

**If the waste includes any patient's own medicines it should additionally be coded as EWC 20 01 31\***

Once the container is filled to the fill-line it should be securely sealed and the appropriate consignment note completed.

## **Pharmaceutical Non-Hazardous (Non-Cytotoxic and Non-Cytostatic) Waste**

This is the largest group of pharmaceutical waste and includes all those medicines which are not deemed by the organisation to be hazardous (Cytotoxic and Cytostatic)

A blue-lidded waste container must be used and should be clearly labelled, with a black permanent marker pen before filling the container, with the following information:

### **Blue-lidded Container**

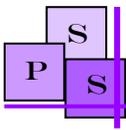
**Pharmaceutical Non-Hazardous Waste for incineration.**

**Non-Cytotoxic and Non-Cytostatic. Mixed Form.**

**EWC 18 01 09**

**If the waste includes any patient's own medicines it should additionally be coded as EWC 20 01 32**

Once the container is filled to the fill-line it should be securely sealed and the appropriate transfer note completed.



## Not pharmaceutically active and possessing no hazardous properties

There are a number of licensed medicinal products that are not pharmaceutically active and possess no hazardous properties.

### Intravenous Fluids

Where non-pharmaceutically active intravenous fluids occur in small quantities and present no other hazard (for example infectious due to contamination with body fluids or the addition of pharmaceutically active substances), these can:

1. Either be placed in the medicinal waste stream; or
2. Be discharged to the foul sewer (if less than 1 litre) and the empty containers placed in the offensive/hygiene waste stream.

Examples include Sodium Chloride 0.9% and Dextrose solutions. Where an intravenous fluid contains a pharmaceutically active ingredient e.g. potassium, they must be placed in the appropriate pharmaceutical waste container.

### Dietary Supplements

Where liquid dietary supplements occur in small quantities (less than 1 litre) and present no other hazard, these can be discharged to the foul sewer.

This has been agreed across the UK and Northern Ireland in the National Guidance for Healthcare Waste Water Discharges April 2011.

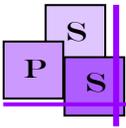
Containers must be opened individually and emptied. The containers themselves must be placed in landfill waste. Under Landfill regulations, liquid waste cannot be sent for disposal to a landfill site.

If larger quantities need to be disposed of, the manufacturer or supplier may be able to arrange for uplift. In the case of individual patients, the "Homecare" provider will usually be able to arrange uplift. **Bulk quantities should not be discharged into the foul sewer without prior discussion with your local sewerage undertaker.**

Where disposal of powder dietary supplements (e.g. in a sachet or in a tin) is required these must be placed into a Pharmaceutical Non-Hazardous Waste container.

### Alcohol Hand Gels

Alcohol hand gels that do not contain siloxanes (which cause significant damage to plant and equipment used in the sewage treatment process) and whose safety data sheet (SDS) does not prohibit discharge to the sewer may be rinsed out and the packaging recycled or placed into the municipal waste stream.



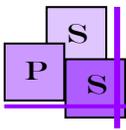
## **Medicines that are flammable, harmful, irritant, oxidising or ecotoxic**

Other waste medicines may possess a range of hazardous properties that need to be notified to the waste contractor for duty of care purposes and may require segregation to keep chemically-incompatible substances apart e.g. medicines that are flammable, harmful, irritant, oxidising or ecotoxic.

Advice should be sought from the waste contractor as to how to store this waste and consign it.

See Appendix A for further advice on disposing of flammable formulations and the section on Specific Waste examples relating to CHS Settings for examples of medicines with hazardous properties that are used in CHS.

Appendix C gives a summary for the disposal of pharmaceuticals.



## Sharps contaminated with Pharmaceutical Waste

Sharps are items (or parts of items) that could cause cuts or puncture wounds, including needles, the needle part of a syringe, scalpel and other blades, broken glass ampoules, and the patient end of an infusion sets.

Pharmaceuticals which are supplied as pre-filled syringes even though they may not been prepared for administration to a patient are considered in this category.

Syringes containing pharmaceuticals should not be discharged prior to placing them into a sharps bin. Syringes containing pharmaceuticals or traces of pharmaceuticals should be disposed of in a receptacle that has been UN-approved for liquids. Where the sharp also contains a Controlled Drug an organisational risk assessment should be undertaken to decide if the Controlled Drug should be denatured before disposal. Factors to consider would be the risks to the member of staff of receiving a needle stick injury whilst denaturing a Controlled Drug, compared with the risk of the Controlled Drug being diverted for illicit purposes. It is recommended that the risk assessment is supported by a Standard Operating Procedure.

Sharps waste bins must be available close to the point of production of the sharps waste. They should be secure and located away from public areas. They should not be placed on the floor. They must not be filled above the mark, which indicates that they are full.

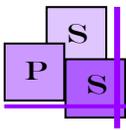
The storage of filled sharps bins, pending collection by a waste contractor, must be arranged on an individual site basis. They should not be allowed to accumulate in corridors, wards or other places accessible to members of the public.

It is recommended that sharps containers are exchanged at regular intervals. If the sharps box is seldom used, it should be collected after a maximum of three months, regardless of the filled capacity.

Only sharps waste produced in the business of the employing organisation e.g. resulting from the administration of medicines may be consigned from the organisation's premises. Sharps originating elsewhere e.g. by a self-medicating patient in their own home must not be accepted for disposal by staff. In such cases the GP or health worker should prescribe the appropriate container (e.g. a sharps bin) and advise them of local disposal options. The Local Council should be contacted for current advice for a specific locality.

Sharps contaminated with Pharmaceutical Waste can be divided into two broad groups:

1. Sharps contaminated with Pharmaceutical Hazardous (Cytotoxic and Cytostatic) Waste
2. Sharps contaminated with Pharmaceutical Non-Hazardous (Non-cytotoxic and Non-cytostatic) Waste.



## **Sharps contaminated with Pharmaceutical Hazardous (Cytotoxic and Cytostatic) Waste**

Syringes, needles and broken glass contaminated with pharmaceuticals are considered to be sharps. If the sharps are contaminated with cytotoxic or cytostatic products they should be placed in suitable Pharmaceutical Hazardous Waste containers for disposal by incineration.

Please see the section on Pharmaceutical Hazardous (Cytotoxic and Cytostatic) Waste (page 4) for the definition of medicines that are classified in this category.

A purple-lidded sharps bin must be used and should be clearly labelled, with a black permanent marker pen before filling the sharps bin, with the following information:

### **Purple-lidded Sharps Bin**

**Sharps waste contaminated with Pharmaceutical Hazardous Waste for incineration.**

**Cytotoxic and Cytostatic.**

**EWC 18 01 03\* and 18 01 08\***

**If the waste includes any patient's own medicines it should additionally be coded as EWC 20 01 31\***

Once the container is filled to the fill-line it should be securely sealed and the appropriate consignment note completed.

## **Sharps contaminated with Pharmaceutical Non-Hazardous (Non-Cytotoxic and Non-Cytostatic) Waste**

Syringes, needles and broken glass contaminated with pharmaceuticals are considered to be sharps. If the sharps are contaminated with pharmaceuticals other than cytotoxic or cytostatic products they should be placed in suitable Pharmaceutical Non-Hazardous Waste containers for disposal by incineration.

Syringe drivers removed from a patient are considered to be in this category. See page 8 for more information about what to do if the syringe driver contains a Controlled Drug.

A yellow-lidded sharps bin must be used and should be clearly labelled, with a black permanent marker pen before filling the sharps bin, with the following information:

### **Yellow-lidded Sharps Bin**

**Sharps waste contaminated with Pharmaceutical Non-Hazardous Waste for incineration.**

**Non-Cytotoxic and Non-Cytostatic.**

**EWC 18 01 03\* and 18 01 09**

**If the waste includes any patient's own medicines it should additionally be coded as EWC 20 01 32**

Once the container is filled to the fill-line it should be securely sealed and the appropriate consignment note completed.

Appendix C gives a summary for the disposal of pharmaceuticals.

## Disposal of Controlled Drugs

The Home Office has advised that all Controlled Drugs in Schedules 2, 3 and 4 (part 1) should be denatured and, therefore, rendered irretrievable before being placed into waste containers.

The Environment Agency allows this activity to take place at the location **where the waste is produced** without the need to obtain an environmental permit under an exemption known as the "T28 exemption". Therefore all sites where Controlled Drugs waste is produced and subsequently denatured on the same premises should register for a T28 exemption. Registration of an exemption is different from obtaining a permit. This exemption needs to be registered with the Environment Agency. This means that if a community hospital produces Controlled Drugs waste which is denatured at the community hospital before disposal it would need to register a T28 exemption.

The Environment Agency has also issued a Regulatory Position Statement on the **Denaturing of controlled drugs at a place other than the premises of production**. This activity is not covered by the T28 exemption, so would need an environmental permit, but the statement allows the activity to occur without a permit. This allows the denaturing of Controlled Drugs that are brought together at a collection point or a denaturing session as long as there is compliance with the following:

- the method of denaturing used is consistent with the guidance provided by the Royal Pharmaceutical Society. See Medicines, Ethics and Practice for more guidance.
- the activity is witnessed by an 'authorised person' where required.
- the storage of the controlled drugs prior to denaturing is appropriate.

There is no need for the central site where drugs are returned for denaturing to register a T28 exemption. However the site would need to register this exemption if it is also using controlled drugs and producing waste as part of its normal activities in addition to denaturing drugs returned to it.

Where the CD waste is also contaminated with a used sharp see the section "Sharps contaminated with Pharmaceutical Waste" for more details.

## Specific Waste examples relating to CHS Settings

**Community Nurses** are likely to administer a wide variety of medicinal products by injection. Some of these may be classified as cytotoxic and cytostatic (this will include the administration of hormonal preparations e.g. Zoladex<sup>®</sup>); therefore the associated sharps and liquid residues of the medicinal products should be placed in an appropriate purple-lidded sharps bin. Other non-cytotoxic or non-cytostatic products used for injection and the associated sharps and liquid residues will need to be disposed of in a yellow-lidded sharps bin. Safe Management of Healthcare Waste version 2.0 (May 2012) acknowledges that it is not always practical for healthcare workers to carry many different types of containers with them. Healthcare workers should be supplied with the most appropriate containers to meet their needs. Where possible, the type of container required should be determined prior to in-situ treatment based on the pre-visit assessment and patients' records. If asked by an auditor or an Environment Agency officer, the approach is to demonstrate that the choice of receptacles is based on a sound process of risk assessment with knowledge of the patients being cared for.

**Tissue Viability Nurses** may need to dispose of maggots used for wound management. They should be secured in a rigid yellow container or double-bagged in yellow bags and marked UN 3291.

**Contraceptive and Sexual Health Clinics** are likely to administer a number of pharmaceuticals which may be classified as cytotoxic and cytostatic e.g. Depo-Provera<sup>®</sup>. In such cases a purple-lidded sharps bins for sharps contaminated with cytotoxic or cytostatic products should be the bin of choice in clinical areas. In addition, a bulk purple-lidded pharmaceutical waste container may be required for the disposal of other products (expired or otherwise no longer required) on the cytotoxic/cytostatic list e.g. oral contraceptives. If the clinic is small or a mobile clinic is in operation it may be more practical to risk assess the clinic and use only one container, in which case this should be a purple-lidded sharps bin. Clinics may also remove implants and coils containing pharmaceuticals e.g. Mirena<sup>®</sup> coils, Implanon<sup>®</sup>, these will be classed as infectious waste as well as being pharmaceutical waste. It is recommended that the waste contractor is contacted for advice on which container should be used.

**Public Health Nursing Immunisation Clinics and TB** will need to ensure that, unless they are carrying out BCG vaccinations, they have a yellow-lidded sharps bin for disposing of needles and syringes. If they are providing BCG vaccination sessions they will need a purple-lidded sharps bin as BCG (Bacillus Calmette–Guérin) is classified as cytotoxic or cytostatic at the time of publication of this document. This may change in the near future.

**Podiatrists** may produce waste such as expired chemicals e.g. liquefied phenol, chloroacetic acids that may need to be classified using the EWC code 18 01 06\*. These products are highly corrosive (hazard Category H8). This should be marked on the container and advice sought from the local waste manager or the waste contractor. In addition podiatrists carrying out injection therapy will need to ensure they have a yellow-lidded sharps bin for the disposal of their used sharps and residual pharmaceutical waste.

**Physiotherapists**, who have undergone appropriate training, may be involved in the administration of injections. They will need to have a yellow-lidded sharps bin for the disposal of their used sharps and residual pharmaceutical waste.

**Dentists** are required to have amalgam separators fitted. Amalgam waste from dental care is coded 18.01.10\* and must go in leak-proof rigid white containers. Amalgam waste should be sent to suitable licensed or permitted waste management facilities where the waste undergoes a mercury recovery process prior to final disposal.

**Sharps waste produced by patients in their own homes** for example where the householder is a self-medicating patient who uses injectables (e.g. an insulin-controlled diabetic) with no healthcare worker involved in the administration, the GP or healthcare worker should prescribe the householder the appropriate container (e.g. a sharps box) and advise them of the local disposal options. In addition they should receive advice on how to use the container, when and how to seal it and how to ensure it is labelled correctly. The disposal of these containers may differ across the country; in some areas they will be returned to the GP in other areas the Local Authority will arrange for a collection from the householder's premises. It is not the role of Community nurses to provide a collection service to transport sharps waste generated by self-medicating patients.

## Frequently asked questions

### **Can a hospital pharmacy receive back in-date stock?**

A pharmacy can receive back in-date stock if it meets the criteria set down in the standard operating procedure covering this activity. The criteria may differ from organisation to organisation but generally in-date, unopened, original packs may be returned to a pharmacy. It only becomes pharmaceutical waste when it does not meet these criteria. The items returned to the pharmacy should not normally be used for re-issue to another organisation as this would constitute a breach of wholesaler regulations. They can however be stored at the pharmacy and re-supplied to the organisation that originally purchased the items. If the pharmacy then decides that the items returned are unsuitable for re-issue under these circumstances they will then be the "waste producer" and will need to dispose of appropriately.

### **We get our pharmaceuticals on an SLA from a local NHS trust; can they take back our pharmaceutical waste?**

The legislation states that each organisation is responsible for the waste it produces. Our understanding of the guidance is that the local NHS trust could only do this if it held a waste management licence for this activity. This is very complex with many obligations and responsibilities; it should be avoided wherever possible. The producer of the waste needs to segregate the waste by EWC code and complete the necessary consignment notes for hazardous waste and waste transfer notes for non hazardous waste, before transportation. The transport of the waste between the organisation and the pharmacy is also an activity requiring registration.

This activity must be defined within the SLA, which must include the responsibility of the service provider to have the necessary licences and registrations in place.

### **If two different NHS organisations share the same site can the waste be combined?**

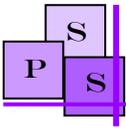
The legislation states that each organisation is responsible for the waste it produces. The waste for each organisation should be separated and consigned separately. This may cause some confusion as the waste may then be collected by the same waste company. It is important, however, to be able to trace the waste back to the producer, hence the need for separate consignment notes.

### **Who can transport pharmaceutical waste?**

Only licensed carriers can transport waste. It is the employer that registers as a waste transporter, which then covers the employees.

In general this means that waste should be stored at the location at which it is produced and the waste contractor collects from this location. Where waste is generated by a healthcare worker for people in their own homes, the healthcare worker is responsible for ensuring that the waste is managed correctly. Safe Management of Healthcare Waste Version 2 gives two options.

Option 1 is collection from the premises/householder, but only if the householder consents to the storage of the waste. If the householder declines to give consent, the healthcare worker cannot legally leave the waste. Healthcare organisations and their employees have responsibility for the waste while it is being stored awaiting collection and for arranging that collection. While awaiting collection from the householder's home, the waste should be stored in a suitable place to which children, pets, pests etc do not have access. It is not appropriate or safe to leave the waste unsupervised on the pavement awaiting collection.



Option 2 is where the healthcare worker transports the waste. The healthcare worker producing the waste can transport the infectious or offensive waste from the home environment back to base where waste collection and disposal arrangements are in place. Where healthcare workers are transporting waste, they should ensure that they are transporting the waste in secure and leak-proof outer rigid packaging duly approved for the purpose for example containers or drums. Bags of waste must not be placed directly into any vehicle, including a car. Normally, the carriage of any quantity of clinical waste requires the carrier (healthcare worker) to fit a 2 kg fire extinguisher irrespective of the quantity of waste. The Department for Transport has issued an authorisation to exempt community nurses from this requirement.

## Storage and Documentation of Pharmaceutical Waste

### Storage of Pharmaceutical Waste

It is recommended that waste be dealt with promptly to avoid accumulation. The regulations allow temporary storage at the place of production for no longer than 12 months. If the waste is produced elsewhere e.g. by a community nurse and brought back to base - it must be stored for no longer than three months.

Waste containers containing pharmaceuticals must be kept in a locked cupboard (both during fill and when finally full), until just prior to collection by the waste contractor. A record of pharmaceuticals disposed of should be kept as recommended in *The Safe and Secure Handling of Medicines: A Team Approach* (A revision of the Duthie Report 1988), March 2005. An example of record of the disposal of pharmaceuticals is given in Appendix D.

### Documentation

As the producer of the waste, the organisation bears the legal responsibility of ensuring that waste documentation is complete and accurate. There are two different types of documentation required for waste transfers:

- consignment notes that are used for hazardous wastes;
- waste transfer notes that are used for non-hazardous wastes.

A consignment note is used to track the movements and ensure the safe disposal of hazardous wastes. It also ensures that the information accompanying the waste is sufficient to enable its safe disposal.

Both the consignment note and the waste transfer note require the wastes to be listed, together with the six digit EWC (European Waste Catalogue) code. Those six digit codes where there is a star (\*) are classified as hazardous waste.

The waste contractor will usually supply pre-printed consignment or waste transfer notes to help local managers correctly describe the waste produced, including appropriate codes, however the legal duty remains with the producer.

Copies of waste transfer notes need to be kept for a minimum of two years from the date of waste collection.

Copies of hazardous waste consignment notes need to be kept for a minimum of 3 years from the date of waste collection.

To avoid confusion between the different types of documents it may be easier to suggest that all documents are kept for a minimum of 3 years from the date of waste collection.

## Transporting Pharmaceutical Waste

### Transferring Pharmaceutical Waste from one Location to Another

Waste should be stored and collected from the location at which it is generated. Occasionally it may be necessary to transfer pharmaceutical waste from one location to another.

Only licensed carriers can transport waste. It is the employer that registers as a waste transporter, which then covers the employees.

There is an exemption for community nurses and others working in home healthcare which allows the healthcare worker producing the waste to transport infectious or offensive waste from the home environment back to base where waste collection and disposal arrangements are in place. Where healthcare workers are transporting waste, they should ensure that they are transporting the waste in secure and leak-proof outer rigid packaging duly approved for the purpose for example containers or drums. Bags of waste must not be placed directly into any vehicle, including a car. Normally, the carriage of any quantity of clinical waste requires the carrier (healthcare worker) to fit a 2 kg fire extinguisher irrespective of the quantity of waste. The Department for Transport has issued an authorisation to exempt community nurses from this requirement.

### Collection of Pharmaceutical Waste from a Patient's Home

Patients, relatives or carers should be encouraged to dispose of unwanted pharmaceuticals by returning them to a Community Pharmacy in their original packaging. The receipt of unwanted medicines is an Essential Service under the Community Pharmacy Contract. Medicines must not be disposed of in general, domestic waste, nor be disposed of through the sewage system.

If the patient administers his or her own injections then a sharps bin should be prescribed by the GP or non-medical prescriber. The Local Council should be contacted for current disposal advice for a specific locality. Community Healthcare staff must not accept them for disposal.

In exceptional circumstances a health professional may assess the risk of leaving pharmaceuticals in a patient's home as being too great (e.g. risk of self-harm using those pharmaceuticals or risk to an individual of taking medication incorrectly). Under these circumstances, they may choose to remove them from the patient's home. This may include Controlled Drugs labelled for an individual patient. A full list of the pharmaceuticals must be made. Where possible the consent of the patient to remove them must be obtained. It may be considered good practice to seek permission from the individual's line manager before taking this action. The health professional should return these items to a Community Pharmacy as soon as possible. The pharmaceuticals should be placed in an outer rigid, leak proof container in case of spillage of any liquid during transportation. This activity should be covered by a Standard Operating Procedure.

## Accidents and Incidents

Spillage kits should be available where pharmaceutical waste containers are filled and stored. This is of particular importance when a cytotoxic or cytostatic medicine is involved. Local guidance on the spillage of cytotoxic medicines should be followed.

## References

Safe Management of Healthcare Waste version 2.0 (May 2012).

<http://www.dh.gov.uk/health/2012/05/management-healthcare-waste/>

The Waste (England and Wales) Regulations 2011

[http://www.legislation.gov.uk/uksi/2011/988/pdfs/uksi\\_20110988\\_en.pdf](http://www.legislation.gov.uk/uksi/2011/988/pdfs/uksi_20110988_en.pdf)

Environmental Protection (Duty of Care) Regulations 1991

<http://www.legislation.gov.uk/uksi/1991/2839/made>

The Controlled Waste (England and Wales) Regulations 2012

<http://www.legislation.gov.uk/uksi/2012/811/contents/made>

The Safe and Secure Handling of Medicines: A Team Approach (A revision of the Duthie Report 1988), March 2005

<http://www.rpharms.com/support-pdfs/safsechandmeds.pdf>

National Guidance for Healthcare Waste Water Discharges April 2011

<http://www.water.org.uk/publications/water-industry-guidance/national-guidance-healthcare-waste-water-discharges>

Environment Agency T28 exemption

<https://www.gov.uk/waste-exemption-t28-sort-and-denature-controlled-drugs-for-disposal>

Environment Agency Regulatory Position Statement on the Denaturing of controlled drugs at a place other than the premises of production.

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/297772/RPS\\_004\\_Denaturing\\_of\\_controlled\\_drugs.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/297772/RPS_004_Denaturing_of_controlled_drugs.pdf)

## Acknowledgements

Eastern and Coastal Kent PCT is acknowledged for version 1.

Robert Lowe, Director of Quality Assurance Specialist Services, East of England and Northamptonshire NHS Pharmacy Practice Unit for his comments on version 2.

The Environment Agency for their clarification of the Regulations for the FAQs developed in version 2.

## Appendix A - Disposal Advice (excluding Controlled Drugs)

Any outer inert packaging and Patient Information Leaflets may be placed into ordinary paper / cardboard waste containers for recycling; however **Patient-Sensitive Information must be obliterated with permanent black marker pen before disposal.**

| Pharmaceutical   | Disposal Advice  | Notes  |
|--|--|--|
| <b>Adrenaline Pack</b>                                 | Remove adrenaline ampoules and place in Non-Hazardous Pharmaceutical waste container. Remove needles and place in yellow-lidded sharps bin. The rest of the pack, including the outer box can be placed into general, landfill waste.              |  |
| <b>Creams, Ointments and Shampoos</b>                  | Remove product from inert packaging and place in waste container   |  |
| <b>Eye, Ear and Nasal drops and ointments</b>          | Remove product from inert packaging and place in waste container   | Note that Chloramphenicol preparations are on the cytotoxic/cytostatic list  |
| <b>Flammable Liquids</b>                               | Flammable liquids must not be placed in the waste container. A separate consignment will be required, arranged on an ad-hoc basis with the waste contractor.   | Alcohol hand gels that do not contain siloxanes and whose safety data sheet does not prohibit discharge to the sewer may be rinsed out and the packaging recycled or placed into the municipal waste stream. |
| <b>Inhaler devices including aerosol devices</b>       | Remove product from inert packaging and place in waste container. Consign separately, if required, by the waste contractor   | Note that the canister itself can often be pulled from the plastic part of metered dose inhalers. Do not dismantle other devices e.g. Accuhalers, Turbohalers  |
| <b>Injections Vials or Ampoules Broken / Part-used</b> | Place in waste container designated for sharps contaminated with pharmaceutical waste. The syringe must not be discharged.   |  |
| <b>Injections Vials or Ampoules Intact</b>             | Remove product from inert packaging and place in waste container   | Note that vials or ampoules which are not broken are not considered sharps   |
| <b>Injections Prepared, but not administered</b>       | Place in waste container designated for sharps contaminated with pharmaceutical waste. The syringe must not be discharged.   |  |
| <b>Injections Pre-filled syringes with needle</b>      | Place in waste container designated for sharps contaminated with pharmaceutical waste. The syringe must not be discharged.   |  |
| <b>Liquids - External Including inhalations</b>        | The liquid should remain in the bottle and the bottle itself should be placed in the waste container. Under no circumstance should a liquid be poured directly into the waste container.   | Check that the lid is secure. A leak proof container or one with absorbent gel should be used.   |
| <b>Liquids - Oral Contained in bottle</b>              | The liquid should remain in the bottle and the bottle itself should be placed in the waste container. Under no circumstance should a liquid be poured directly into the waste container. Controlled Drugs will require denaturing before disposal. | Check that the lid is secure. A leak proof container or one with absorbent gel should be used.   |

|   |  |   |
|---|--|---|
| <b>Liquids - Oral Single doses, prepared but not administered</b> | If measured in an oral syringe, the whole syringe including the liquid should be disposed of. If the medicine is a 'free' liquid it can be placed directly into the appropriate bin (see notes) but care must be taken not to mix liquids that could react. Alternatively the 'free' liquid can be placed in a lidded container e.g. specimen bottle before disposal.  | Note that an oral syringe is not classed as a sharp. A leak proof container or one with absorbent gel should be used. |
| <b>Nebules</b>  | Treat as injection ampoules (intact)   |   |
| <b>Patches removed from a patient</b>                             | Fold the patch over on itself so that the active ingredient is rendered irretrievable. Then place in the waste container.  |   |
| <b>Patches remaining in sealed pouch</b>                          | Place unopened patches in the waste container.   | This advice is different to the disposal of unused patches containing a Controlled Drug.                              |
| <b>Powders in tins / sachets</b>                                  | Place in waste container. Sachets should not be opened. Tins which may be full or partially full, should be placed in the waste container unopened.  | Includes prescribable dietary supplements and food thickeners.  |
| <b>Rectal preparations e.g. suppositories</b>                     | Remove product from inert packaging and place in waste container   |   |
| <b>Sprays e.g. Nasal sprays</b>                                   | Remove product from inert packaging and place in waste container   |   |
| <b>Tablets / Capsules in Blister strips</b>                       | Remove the blister strip(s) from inert packaging and place in the waste container.<br>DO NOT pop the tablets or capsules out of the blister packaging.   |   |
| <b>Tablets / Capsules loose in a bottle</b>                       | The tablets / capsules must remain in the tablet bottle and the bottle itself should be placed in the waste container.   |   |
| <b>Tablets / Capsules in a Monitored Dosage System</b>            | Disposable packaging containing the unwanted medicines must be removed from any reusable equipment and placed in the waste container intact. Reusable equipment can be returned to the pharmacy that dispensed the system. The type of MDS system will determine whether it is possible to dispose of any cytotoxic/cytostatic separately. If it is not possible to segregate then the whole assortment must be consigned as mixed hazardous and non-hazardous waste medicines |   |
| <b>Tablets / Capsules in a personal compliance box</b>            | For compliance boxes without inner disposable packaging there is no alternative but to empty the contents directly into a waste container. There is a duty of care to try to determine whether the compartments contain cytotoxic/cytostatic waste. If there is a possibility of such waste then the whole assortment must be consigned as mixed hazardous and non-hazardous waste medicines   |   |
| <b>Tablets / Capsules Prepared but not administered</b>           | Place in pharmaceutical waste container, however, if "contaminated" e.g. as a consequence of a patient spitting out, then place in the container for sharps contaminated with Pharmaceuticals, which is consigned as potentially infectious.   |   |
| <b>Unidentifiable medication - any form</b>                       | The whole assortment must be placed in a hazardous waste container.  |   |
| <b>Vaginal preparations e.g. pessaries</b>                        | Remove product from inert packaging and place in waste container   |   |

## Appendix B - Example list of cytotoxic and cytostatic drugs adapted\* from Safe Management of Healthcare Waste version 2.0 (May 2012)

| <b>New list of non-chemotherapy cytotoxic/cytostatic drugs</b>  |  |
|---|--|
| <b>Product approved name</b>  |  |
| Anastrozole   | Leuprorelin acetate                              |
| Azathioprine  | Medroxyprogesterone                              |
| Bicalutamide  | Megestrol  |
| Bacillus Calmette-Guérin Vaccine (BCG)*   | Menotropins                                      |
| Chloramphenicol – classified as a category 2A carcinogen and as such will include eye drops with a concentration of 0.1% (the legal threshold in waste legislation) | Mifepristone                                     |
| Ciclosporin   | Mycophenolate mofetil                            |
| Cidofovir   | Nafarelin  |
| Coal tar containing products  | Oestrogen containing products                    |
| Colchicine  | Oxytocin (including syntocinon and syntometrine) |
| Danazol   | Podophyllin                                      |
| Diethylstilbestrol  | Progesterone containing products                 |
| Dinoprostone  | Raloxifene                                       |
| Dithranol containing products   | Ribavarin  |
| Dutasteride   | Sirolimus  |
| Estradiol   | Streptozocin                                     |
| Exemestane  | Tacrolimus                                       |
| Finasteride   | Tamoxifen  |
| Flutamide   | Testosterone                                     |
| Ganciclovir   | Thalidomide                                      |
| Gonadotrophin, chorionic  | Toremifene                                       |
| Goserelin   | Trifluridine                                     |
| Interferon containing products (including peginterferon)  | Triptorelin                                      |
| Leflunomide   | Valganciclovir                                   |
| Letrozole   | Zidovudine                                       |

\*BCG is not on the published list but is included here following personal communication with DH

| <b>Cancer chemotherapy drugs</b> |                   |
|----------------------------------|-------------------|
| <b>Product approved name</b>     |                   |
| Aldesleukin                      | Gemcitabine       |
| Alemtuzumab                      | Gemtuzumab        |
| Amsacrine                        | Hydroxycarbamide  |
| Arsenic trioxide                 | Idarubicin        |
| Asparaginase                     | Ifosfamide        |
| Bleomycin                        | Imatinib mesylate |
| Bortezomib                       | Irinotecan        |
| Busulphan                        | Lomustine         |
| Capecitabine                     | Melphalan         |
| Carboplatin                      | Mercaptopurine    |
| Carmustine                       | Methotrexate      |
| Cetuximab                        | Mitomycin         |
| Chlorambucil                     | Mitotane          |
| Cisplatin                        | Mitoxantrone      |
| Cladribine                       | Oxaliplatin       |
| Cyclophosphamide                 | Paclitaxel        |
| Cytarabine                       | Pentamidine       |
| Dacarbazine                      | Pentostatin       |
| Dactinomycin                     | Procarbazine      |
| Daunorubicin                     | Raltitrexed       |
| Dasatinib                        | Rituximab         |
| Docetaxel                        | Temozolomide      |
| Doxorubicin                      | Thiotepa          |
| Epirubicin                       | Topotecan         |
| Estramustine                     | Trastuzumab       |
| Etoposide                        | Vidaradine        |
| Fludarabine                      | Vinblastine       |
| Fluorouracil                     | Vincristine       |

# Appendix C Summary of the Disposal of Pharmaceuticals

