

LABELLING OF INJECTABLE MEDICINES, FLUIDS AND LINES

1. AIM

To ensure injectable medicines, fluids and lines are labelled to prevent errors relating to incorrect route, incorrect patient or incorrect dose.

2. PATIENT

This local operating policy applies to all inpatient and outpatient services.

3. STAFF

All health professionals who prepare and/or administer injectable medicines and fluids, including but not limited to:

- Medical Officers
- Nursing Staff
- Midwifery Staff

4. EQUIPMENT

- NIMC
- NSW health fluid chart
- Anaesthetic chart
- Container label
- Line label

5. CLINICAL PRACTICE

All medicines and fluids removed from their original packaging must be identifiable.

All **containers** (e.g. bags/bottles, syringes, basins, jugs) containing injectable medicines must be labelled using the state standard pre-printed labels which are colour coded to indicate the route of administration.

All **lines and catheters** for administering injectable medicines must be labelled using the state standard pre-printed labels which are colour coded to indicate the route of administration.

All **burettes** containing injectable medicines must be labelled using the state standard pre-printed labels which are colour coded to indicate the route of administration.

There is to be no customisation or alteration to the standard NSW Health label set, however additional labelling may be used where required e.g. labelling of medications as cytotoxic; labelling of lines as heparin locked etc. Clarification should be sought from Pharmacy as to whether additional labelling is appropriate or required.

Colour- Coding to Indicate Route of Administration

Target tissue	Route of administration	Colour
Intra-arterial	Intra-arterial	Red
Intravenous	Intravenous	Blue
Neural tissue	Epidural / Intrathecal / Regional	Yellow
Subcutaneous tissue	Subcutaneous	Beige
Miscellaneous	Any other route not specified above	Pink

CLINICAL POLICIES, PROCEDURES & GUIDELINES

Approved by Quality & Patient Care Committee
17 May 2018

LABELLING OF INJECTABLE MEDICINES, FLUIDS AND LINES cont'd

5.1. Labelling of Containers (Bags/Bottles, Syringes and other containers)

General Principles

All bags, bottles or syringes which contain a medicine must be labelled.

Only one medicine should be prepared and labelled at a time. Each injectable medicine drawn up in a bag/bottle or syringe should be prepared and labelled as a single operation by the same person. Labelling must be applied to the container immediately after the medicine is prepared.

Any medicine that is not labelled must be discarded and re-prepared.

Fluid Bags and Bottles

All bags/bottles must be labelled immediately when an injectable medicine is added.

Bag/bottle additive labels should be placed on the **front** of the bag in a way that ensures that the name of the base fluid, batch number and expiry date remain visible.

Bag/bottle labels are available in 2 sizes. The larger size fits the 500mL - 1 litre bags/bottles, while the smaller label fits the 50mL and 100mL bags/bottles.

Fluid bags and bottles for infusion where no additional injectable medicines are added prior to administration, e.g. intravenous fluids or other pre-mixed and labelled solutions **do not** require additional labelling.

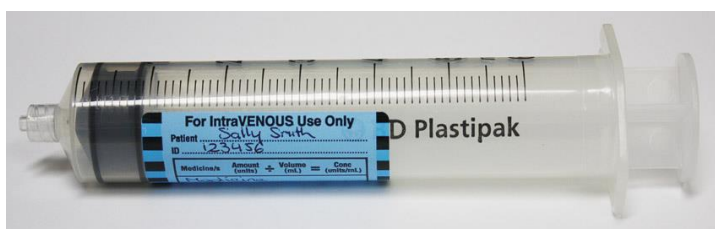
All premix solutions for pain management where no additional drugs are added must have an appropriate route label (epidural, intravenous) attached indicating patient name, date and time the bag was hung including the two checking clinicians signatures. The colour coded additive label will be used with a line strike through the box for adding drugs and the word premix written.

Syringes

All injectable medicines drawn up in a syringe should be labelled immediately using the state standard pre-printed labels which are colour coded to indicate the route of administration.

Labels should be placed parallel to the long axis of the syringe barrel with the top edge flush with (but not covering) the graduations (refer to Figure 1).

Figure 1: Syringe label



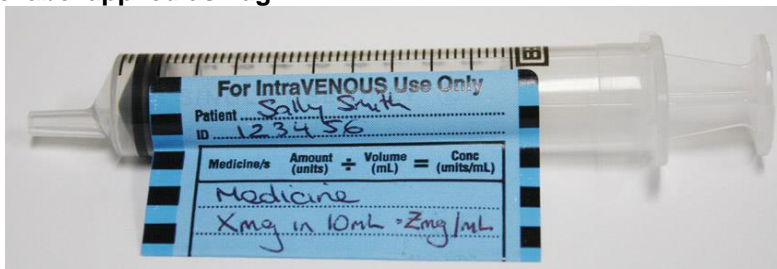
When application of the entire label to the syringe is not possible or practical, apply the label as a "flag" (refer to Figure 2) Smaller syringes used for neonatal infusions will be labelled by using a corner flag.

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Figure 2: Syringe label applied as flag



Syringes filled with normal saline to be used as a flush must be labelled with the pre-printed **0.9% sodium chloride** label (refer to Appendix 1).

If multiple syringes are required, they should be prepared, labelled and administered sequentially as independent operations. Medications to be administered via different routes must be prepared and administered separately.

Any unlabelled syringe containing a solution must be discarded.

Labelling is required if there is any chance that the syringe will leave the hands of the person preparing the medicine for use prior to administration. This includes placing the syringe in a kidney dish or other receptacle for transport to the patient's bedside.

Containers on a sterile field

All medicine containers including jugs, basins and syringes on a sterile field which contain medicine should be labelled. Labels used on the sterile field must be sterilised and a sterile marker must be used to complete the label details. Alternatively, pre-printed labels may be used on the sterile field (refer to Appendix 2).

The abbreviated container label may be used where patient identity has been established and other means of recording, labelling and preparation signatories are available (e.g. operating theatres).

Labelling of Lines

All patient lines used for administration of injectable medicines or fluids must be labelled with the state standard pre-printed labels to indicate the route. The labels are colour-coded according to the target tissue.

Labels should be applied near the injection port on the patient side. Labels should be placed so that they do not interfere with the administration of medications through the injection port and do not present an infection risk.

All patient lines **not** intended for administration of medicines or fluids (such as invasive monitoring lines) must also be labelled to indicate the route.

Administration lines dedicated for continuous infusions of medicines must be labelled to identify the active ingredient in the line using the state standard pre-printed "**Medicine**" label. Pre-printed sticky-tape labels indicating the drug name may also be used, provided they are colour-coded according to drug class (refer to Appendix 2).

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LABELLING OF INJECTABLE MEDICINES, FLUIDS AND LINES cont'd

Labelling of Locked Catheters

Catheters with a medicine insitu to “Lock” the catheter (e.g. Heparin – lock) must be labelled. The Label must include the active ingredient, date prepared, volume of lumen and final amount of medicine in units. The label must be placed on the catheter, close to the dressing but not impede the function of the dressing.

Labelling of Burettes

Burettes must be labelled immediately after an injectable medicine is added, using the state standard pre-printed label for burettes. This label is designed to be peeled off easily at the completion of the infusion.

Burette labels should be applied fully to the burette (not applied as a flag) and placed so that the text is upright and the burette graduations are not obscured.

5.2. Exemptions:

Labelling is not required when the preparation and bolus administration of a single medicine is one uninterrupted process, the syringe does not leave the hands of the person who prepared it (other than for hand hygiene) and the same person administers the medicine immediately. The ampoule is left in the kidney dish. If there is any interruption in the process the syringe is discarded and it will need to be prepared.

Labelling according to this local operating policy is not required when:

- Bolus medications are prepared in the patient’s home for immediate administration.
- The container (syringe or bag) is commercially prepared and pre-labelled.
- The medicine is prepared for use by Pharmacy and pre-labelled.
- Medicines are drawn up in syringes for use during anaesthesia. Injectable medicines for use during anaesthesia must comply with the Australia/New Zealand Standard which includes colour-coding according to drug class (refer to Appendix 2).

Not exempt

The medicine for immediate use in an emergency situation must be labelled as soon and humanly possible but the injection to the patient may occur first.

6. DOCUMENTATION

Refer to Appendix 1 for label types and ordering details.

7. EDUCATIONAL NOTES

Nil

8. RELATED POLICIES/ PROCEDURES/ CLINICAL PRACTICE LOP

Medications- Administration

9. RISK RATING

Low- review in 5 years

10. NSQHSS

Standard 4- Medication Safety

CLINICAL POLICIES, PROCEDURES & GUIDELINES

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LABELLING OF INJECTABLE MEDICINES, FLUIDS AND LINES cont'd

11. REFERENCES

- NSW Health Policy Directive 2013_043. Medication Handling in NSW Public Health Facilities.
- NSW Health Policy Directive 2012_007. Labelling of Injectable Medicines, Fluids and Lines.
- User-applied labels for use on syringes containing drugs used during anaesthesia (AS/NZS 4375:1996). Sydney: Standards Australia International Pty Ltd, 1996.
- International Organization for Standardization. Anaesthetic and respiratory equipment – User-applied labels for syringes containing drugs used during anaesthesia – Colours, design and performance. 1st edition. ISO 26825:2008(E). Geneva: ISO, 2008

REVISION & APPROVAL HISTORY

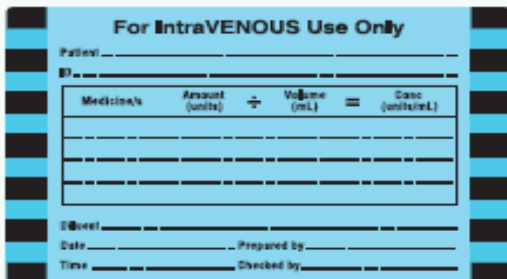
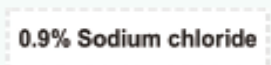
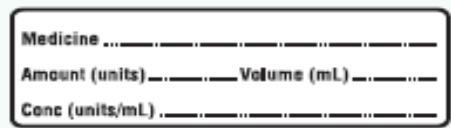
Reviewed and endorsed Therapeutic & Drug Utilisation Committee 11/4/18
Approved Quality & Patient Car Committee 4/2/16
Reviewed and endorsed Therapeutic & Drug Utilisation Committee 8/12/15
Approved Quality & Patient Safety Committee 21/6/12

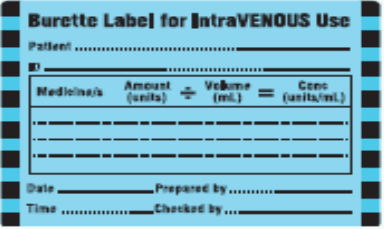




FOR REVIEW : MAY 2020

Labelling Recommendations

Table 1: Labelling requirements for containers (e.g. bags, syringes, basins and jugs) and conduits (e.g. lines, catheters and burettes).

Minimum requirements for user-applied labelling of injectable medicine containers and conduits where the contents can no longer be identified by the original packaging.

WHAT SHOULD BE LABELLED	LABEL INCLUSIONS	SAMPLE LABEL (NOT TO SCALE) (See Appendix 1: Label Guide and Specifications for full complement of available labels)	LABEL PLACEMENT
Containers			
<p>Bags and bottles for infusion where injectable medicines are added in the clinical area prior to administration</p> <p>Syringes for bolus use or infusion filled by drawing up injectable medicine/s from the manufacturer's original container in the clinical area prior to administration</p>	<ul style="list-style-type: none"> > Patient name (given name and family name) > Patient identifier (ID), e.g. URN, MRN > Active ingredient/s (medicine/s) added to the bag or syringe > Amount of medicine/s added (including units) > Volume of fluid (mL) - total in bag or syringe > Concentration (units/mL) > Diluent (for syringes) > Date and time prepared > Prepared by (<i>signature</i>) > Checked by (<i>signature</i>) > Route of administration (where not specified by wording and colour) 	 <p>Label available in two sizes: 100 x 60mm and 60 x 50mm</p>	<p>Fluid bags and bottles</p> <ul style="list-style-type: none"> > Place on front of container. Ensure fluid, batch number and expiry date remain visible.⁶⁴ <p>Syringes</p> <ul style="list-style-type: none"> > Place parallel to the long axis of the syringe barrel with the top edge of the label flush with (but not covering) the graduations.^{7,64} > Choose label size and placement to ensure label content is visible on a syringe in a syringe driver or pump > Consider flagging labels on small syringes.
<p>Fluid bags and bottles for infusion where no additional injectable medicines are added prior to administration, e.g. intravenous fluids (e.g. 0.9% sodium chloride, 5% glucose), pre-mixed solutions (e.g. potassium, heparin infusions) and peritoneal dialysis fluids DO NOT require additional labelling.</p> <p>Syringes pre-filled for bolus use or infusion labelled by manufacturer or hospital pharmacy DO NOT require additional labelling.</p>			
<p>Syringes containing 0.9% sodium chloride for the purpose of flushing a line</p>	<ul style="list-style-type: none"> > Pre-printed 0.9% sodium chloride label 		<p>Place parallel to the long axis of the syringe barrel with the top edge of the label flush with (but not covering) the graduations.^{7,64}</p>
<p>Containers (e.g. basins, jugs and syringes) on the sterile field where patient identity is established and other means of recording, labelling and preparation signatories are available (e.g. operating rooms).</p>	<ul style="list-style-type: none"> > Active ingredient/s (medicine/s) added to the container > Amount of medicine/s added (including units) > Volume of fluid (mL) – total in container > Concentration (units/mL) 		<ul style="list-style-type: none"> > Use 'peel-off' labels > Avoid graduations > Avoid pouring spout
<p>In all other circumstances, package and sterilise appropriate container/conduit labels for use on the sterile field.</p>			

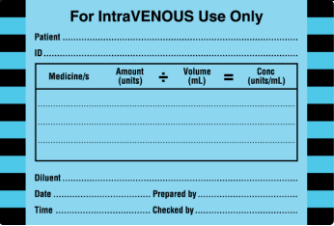
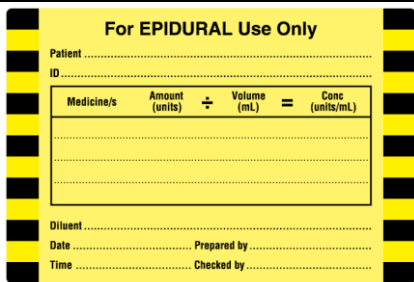
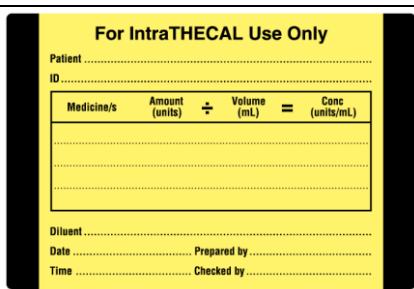
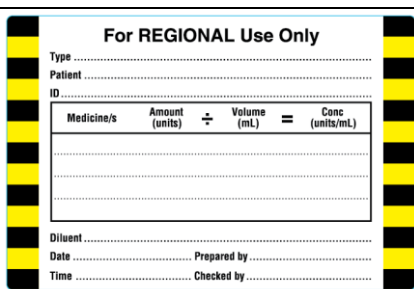
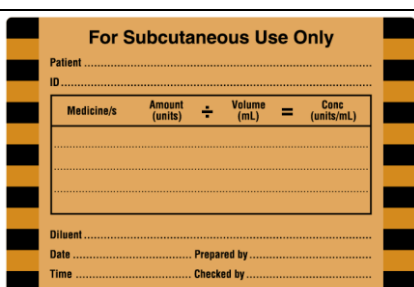
Conduits		
<p>Burettes</p>	<ul style="list-style-type: none"> > The wording "Burette Label for IntraVENOUS Use" > Patient name (given name and family name) > Patient ID e.g. URN or MRN > Active ingredient (medicine) added to burette > Amount of medicine added (including units) > Volume of fluid added to the burette (mL) > Concentration (units/mL) > Date and time prepared > Prepared by (<i>signature</i>) > Checked by (<i>signature</i>) 	<div style="display: flex; align-items: center;"> <div style="flex: 1;">  <p>Burette Label for IntraVENOUS Use</p> <p>Patient</p> <p>Medicine/s Amount (units) Volume (mL) = Conc (units/mL)</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>Date Prepared by</p> <p>Time Checked by</p> </div> <div style="flex: 1; padding-left: 20px;"> <ul style="list-style-type: none"> > Use 'peel-off' labels reserved for use on burettes ONLY > A new label is required for each medicine administration > Remove obsolete label before applying new label > Do not obscure the burette graduations with the label > Place label so that text is upright </div> </div>
<p>Administration lines</p> <p>This includes extension lines and giving sets used to deliver fluids and/or medicines into a patient by any parenteral route.</p>	<ul style="list-style-type: none"> > Route > Line change due <ul style="list-style-type: none"> > Active ingredient (medicine) for dedicated CONTINUOUS infusions 	<div style="display: flex; align-items: center;"> <div style="flex: 1;">  <p>Subcutaneous Subcutaneous</p> <p>Line change due</p> </div> <div style="flex: 1; padding-left: 20px;"> <ul style="list-style-type: none"> > Label near the injection port on the patient side </div> </div> <div style="display: flex; align-items: center;"> <div style="flex: 1;">  <p>Medicine Medicine</p> </div> <div style="flex: 1; padding-left: 20px;"> <ul style="list-style-type: none"> > Label near the injection port on the patient side in addition and adjacent to the line route label </div> </div>
<p>Catheters</p>	<ul style="list-style-type: none"> > Route > Line change due 	<div style="display: flex; align-items: center;"> <div style="flex: 1;">  <p>EPIDURAL EPIDURAL</p> <p>Line change due</p> </div> <div style="flex: 1; padding-left: 20px;"> <ul style="list-style-type: none"> > Label near the injection port on the patient side </div> </div>
<p>Invasive monitoring lines</p>	<ul style="list-style-type: none"> > Route > Line change due 	<div style="display: flex; align-items: center;"> <div style="flex: 1;">  <p>Intra-ARTERIAL Intra-ARTERIAL</p> <p>Line change due</p> </div> <div style="flex: 1; padding-left: 20px;"> <ul style="list-style-type: none"> > Label near the port on the patient side </div> </div>

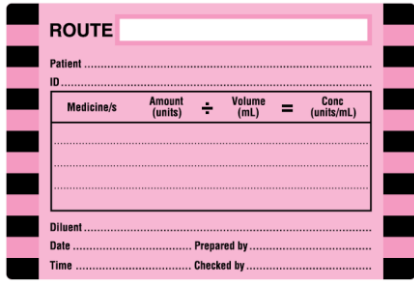

Appendix 1: Labels for Injectable Medicines, Fluids and Lines

Container Labels

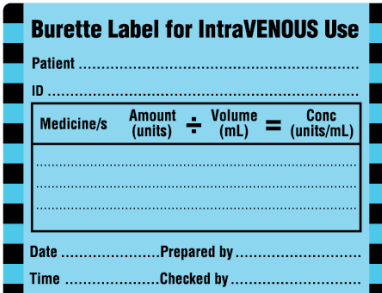
(not actual size)

Salmat ordering code




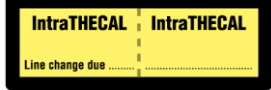




<p>Intravenous Label</p> <p>Large 100 x 60 mm For bags & large syringes (eg 50mL)</p> <p>Small 60 x 50mm For syringes and small bags (eg 50mL and 100mL)</p>	 <p>For IntraVENOUS Use Only</p> <p>Patient ID</p> <table border="1"> <thead> <tr> <th>Medicine/s</th> <th>Amount (units)</th> <th>÷</th> <th>Volume (mL)</th> <th>=</th> <th>Conc (units/mL)</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>Diluent</p> <p>Date Prepared by</p> <p>Time Checked by</p>	Medicine/s	Amount (units)	÷	Volume (mL)	=	Conc (units/mL)																			<p>Large: NH601053</p> <p>Small: NH601054</p>
Medicine/s	Amount (units)	÷	Volume (mL)	=	Conc (units/mL)																					
<p>Epidural Label</p> <p>Large 100 x 60 mm For bags & large syringes (eg 50mL)</p> <p>Small 60 x 50mm For syringes and small bags (eg 50mL and 100mL)</p>	 <p>For EPIDURAL Use Only</p> <p>Patient ID</p> <table border="1"> <thead> <tr> <th>Medicine/s</th> <th>Amount (units)</th> <th>÷</th> <th>Volume (mL)</th> <th>=</th> <th>Conc (units/mL)</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>Diluent</p> <p>Date Prepared by</p> <p>Time Checked by</p>	Medicine/s	Amount (units)	÷	Volume (mL)	=	Conc (units/mL)																			<p>Large: NH601057</p> <p>Small: NH601058</p>
Medicine/s	Amount (units)	÷	Volume (mL)	=	Conc (units/mL)																					
<p>Intrathecal Label</p> <p>Large 100 x 60 mm For bags & large syringes (eg 50mL)</p> <p>Small 60 x 50mm For syringes and small bags (eg 50mL and 100mL)</p>	 <p>For IntraTHECAL Use Only</p> <p>Patient ID</p> <table border="1"> <thead> <tr> <th>Medicine/s</th> <th>Amount (units)</th> <th>÷</th> <th>Volume (mL)</th> <th>=</th> <th>Conc (units/mL)</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>Diluent</p> <p>Date Prepared by</p> <p>Time Checked by</p>	Medicine/s	Amount (units)	÷	Volume (mL)	=	Conc (units/mL)																			<p>Large: NH601050</p> <p>Small: NH601051</p>
Medicine/s	Amount (units)	÷	Volume (mL)	=	Conc (units/mL)																					
<p>Regional Label</p> <p>Large 100 x 60 mm For bags & large syringes (eg 50mL)</p> <p>Small 60 x 50mm For syringes and small bags (eg 50mL and 100mL)</p>	 <p>For REGIONAL Use Only</p> <p>Type</p> <p>Patient ID</p> <table border="1"> <thead> <tr> <th>Medicine/s</th> <th>Amount (units)</th> <th>÷</th> <th>Volume (mL)</th> <th>=</th> <th>Conc (units/mL)</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>Diluent</p> <p>Date Prepared by</p> <p>Time Checked by</p>	Medicine/s	Amount (units)	÷	Volume (mL)	=	Conc (units/mL)																			<p>Large: NH601063</p> <p>Small: NH601064</p>
Medicine/s	Amount (units)	÷	Volume (mL)	=	Conc (units/mL)																					
<p>Subcutaneous Label</p> <p>Large 100 x 60 mm For bags & large syringes (eg 50mL)</p> <p>Small 60 x 50mm For syringes and small bags (eg 50mL and 100mL)</p>	 <p>For Subcutaneous Use Only</p> <p>Patient ID</p> <table border="1"> <thead> <tr> <th>Medicine/s</th> <th>Amount (units)</th> <th>÷</th> <th>Volume (mL)</th> <th>=</th> <th>Conc (units/mL)</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>Diluent</p> <p>Date Prepared by</p> <p>Time Checked by</p>	Medicine/s	Amount (units)	÷	Volume (mL)	=	Conc (units/mL)																			<p>Large: NH601060</p> <p>Small: NH601061</p>
Medicine/s	Amount (units)	÷	Volume (mL)	=	Conc (units/mL)																					

<p>Miscellaneous Label</p> <p>Large 100 x 60 mm For bags & large syringes (eg 50mL)</p> <p>Small 60 x 50mm For syringes and small bags (eg 50mL and 100mL)</p>		<p>Large: NH601066</p> <p>Small: NH601067</p>
<p>Abbreviated Container Label (for use on sterile field)</p>		<p>NH601072</p>

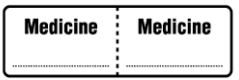
Intravenous Burette Label

<p>Designed to peel-off after use</p>		<p>NH601056</p>
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Line Labels

<p>Intravenous Line Label</p>		<p>NH601055</p>
<p>Central Venous Line Label</p>		<p>NH601069</p>
<p>Intra-Arterial Line Label</p>		<p>NH601070</p>
<p>Intrathecal Line Label</p>		<p>NH601052</p>
<p>Epidural Line Label</p>		<p>NH601059</p>
<p>Regional Line Label</p>		<p>NH601065</p>
<p>Subcutaneous Line Label</p>		<p>NH601062</p>
<p>Miscellaneous Line Label</p>		<p>NH601068</p>

Medicine Label for Continuous Infusion Line

To indicate contents of a continuous infusion line		NH601073
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Normal Saline Flush Label

To label a syringe containing a normal saline flush		NH601071
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Appendix 2: AS/NZ Standard 4375 Labels for Use on Syringes Containing Drugs Used During Anaesthesia.

Anaesthetic Syringe Labels				
Thiopentone mg/mL A1	Methohexitone mg/mL A2	Propofol mg/mL A3	Ketamine mg/mL A4	Diazepam mg/mL A5
Midazolam mg/mL A6	Flumazenil mg/mL A7	Suxamethonium mg/mL A8	d-tubocurare mg/mL A9	Rocuronium mg/mL A10
mg/mL A11	Atracurium mg/mL A12	Vecuronium mg/mL A13	Neostigmine mg/mL A14	Edrophonium mg/mL A15
Physostigmine mg/mL A16	Morphine mg/mL A17	Fentanyl micrograms/mL A18	Pethidine micrograms/mL A19	Naloxone mg/mL A20
Haloperidol mg/mL A21	Chlorpromazine mg/mL A22	Droperidol mg/mL A23	Metoclopramide mg/mL A24	Adrenaline mg/mL A25
Ephedrine mg/mL A26	Phenylephrine mg/mL A27	Metaraminol mg/mL A28	Trimetaphan mg/mL A29	Nitroprusside mg/mL A30
Nitroglycerine mg/mL A31	Phentolamine mg/mL A32	Hydrallazine mg/mL A33	Atropine mg/mL A34	Glycopyrolate mg/mL A35
Procaine mg/mL A36	Lignocaine mg/mL A37	Bupivacaine mg/mL A38	Oxytocin mg/mL A39	Heparin mg/mL A40