

This information has been summarised to act as a guide for those administering IV medications at SIVUH only.

Drug	Reconstitution	Compatible Infusion Fluids	Administration Details	Comments
<b>Aciclovir 250mg</b> Brand: <i>Pfizer</i> License no: PA000822/215/001	Already in solution.  Dilute further before administration.	Sodium Chloride 0.9%	<b>Slow IV infusion over at least 1 hour.</b>  Doses of 250mg-500mg should be diluted with 100ml of Sodium Chloride 0.9%.  Doses of 500mg-1000mg should be diluted with 250ml Sodium Chloride 0.9%. Infusion concentrations should not exceed 5mg/ml (0.5%w/v).	Maintain adequate hydration for each patient. In obese patients, doses should be calculated using <b>adjusted body weight</b> . Discard if any visible turbidity or crystallisation appears in the solution before or during the infusion. Do <b>not</b> refrigerate. Shake to ensure thorough mixing.
<b>Amoxicillin 500mg</b> Brand: <i>Laboratoires Delbert</i> License no: PA23217/001/001	Add 10ml of WFI to each 500mg vial. Shake vigorously and administer immediately after reconstitution.  A transient pink colouration may or may not develop during reconstitution. Reconstituted solutions are normally colourless or a pale straw colour.	Sodium Chloride 0.9%	<b>Slow intravenous injection (doses up to 1g)</b> Administer by slow intravenous injection over 3 to 4 minutes.  <b>IV infusion (all doses)</b> Add 500mg dose to 50ml of infusion fluid. Add doses greater than 500mg to 100ml of infusion fluid. Administer over 20 to 30 minutes.	Monitor for convulsions in patients with impaired renal function or in those receiving high doses or in those with predisposing factors (e.g. epilepsy)
<b>Amphotericin Liposomal 50mg</b> Brand: <i>AmBisome</i> License no: PA2322/001/001	Add 12ml of WFI provided to each 50mg vial to give a 4mg per ml solution. Shake vigorously for at least 30 seconds immediately after the addition of water and ensure complete dispersion.  Withdraw the calculated volume of reconstituted <i>AmBisome</i> into a sterile syringe. Using the 5micron filter provided, instil the Amphotericin preparation into the sterile container with the correct amount of glucose infusion.	Glucose 5%	<b>Prior to administration of the first dose:</b> a test dose of 1mg should be administered slowly for up to 10 minutes and the patient carefully observed for 30 minutes after. If tolerated, the rest of the prescribed dose can be administered.  <b>IV infusion only.</b> Administer dose over 30-60 minutes and over 2 hours for dose greater than 5mg/kg/day. The volume for dilution depends on dose as the final concentration must be between 0.2-2mg/ml. IV line must be flushed with Glucose 5% before and after infusion. If this is not possible Amphotericin should be administered through a separate line.	Incompatible with saline, saline solutions or other drugs.  Do not use if there is any sign of precipitation.

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<b>Anidulafungin</b> 100mg Brand: <i>Ecalta</i> License no: EU/1/07/416/002	Reconstitute each vial with 30ml WFI and allow to stand for up to 5 minutes.	Sodium Chloride 0.9% and Glucose 5%	<b>IV infusion:</b> Add 100mg (30ml) to 100ml of infusion fluid. Add 200mg (60ml) to 200ml of infusion fluid. Administer 100mg over at least 90 minutes and 200mg over at least 180 minutes. Maximum infusion rate of 1.1mg/min or 1.4ml/min of reconstituted and diluted solution as per instructions.	Discard the solution if any particular matter or discolouration is present.								
<b>Aztreonam 1g and 2g</b> Brand: <i>Azactam</i> License no: PA0002/052/002 (1g) PA0002/052/003 (2g)	<b>IV injection:</b> add 6-10mls WFI and shake well.  <b>Intermittent IV Infusion:</b> add 3ml WFI to 1g and 6ml WFI to 2g shake well. Dilute further before administration.	Sodium Chloride 0.9% and Glucose 5%	<b>IV injection:</b> give slowly over 3-5 minutes.  <b>Intermittent IV Infusion:</b> dilute each 1g in at least 50mls (e.g. 100ml for 2g) of compatible infusion fluid and infuse over 20-60 minutes.	Upon the addition of WFI to the aztreonam powder, the vial should be shaken immediately and vigorously								
<b>Benzylpenicillin</b> 600mg Brand: <i>Crystapen</i> License no: PA0126/313/001	Add 4-10mls WFI or Sodium Chloride 0.9% to each vial and use immediately	Sodium Chloride 0.9% and Glucose 5%	<b>IV injection:</b> give slowly at a rate not greater than 300mg/minute.  <b>Intermittent IV infusion:</b> dilute each required 600mg vial in 10ml WFI or Sodium Chloride 0.9%. Add the total required dose to 100mls of compatible infusion fluid and administer over 30-60 minutes.	For high doses give slowly to avoid electrolyte imbalance (2.8mmol of sodium per 1g benzylpenicillin sodium salt).								
<b>Caspofungin 50mg</b>  Brand: <i>Pinewood</i> License no: PA0281/246/001 (50mg)  <b>Only 50mg vials stocked in SIVUH</b>	Allow vial to reach room temperature.  Add 10.5ml WFI and mix gently to dissolve. <table border="1"> <thead> <tr> <th>Dose</th> <th>Volume of reconstituted caspofungin for transfer to intravenous bag</th> </tr> </thead> <tbody> <tr> <td>35mg</td> <td>7ml</td> </tr> <tr> <td>50mg</td> <td>10ml</td> </tr> <tr> <td>70mg</td> <td>14ml (use two 50mg vials)</td> </tr> </tbody> </table>	Dose	Volume of reconstituted caspofungin for transfer to intravenous bag	35mg	7ml	50mg	10ml	70mg	14ml (use two 50mg vials)	Sodium Chloride 0.9%	<b>IV infusion only:</b> dilute the required dose in 250mls of compatible infusion fluid and give over 60 minutes.  Doses of 50mg or less can go in 100mls if necessary.	Incompatible with glucose solutions.  Do not use if the final prepared solution is cloudy or has precipitated.
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<b>Cefotaxime 1g</b> Brand: <i>Claforan</i> License no: PA0540/037/003	Add 4ml WFI to 1g vial.	Sodium Chloride 0.9% and Glucose 5%	<b>IV injection:</b> give slowly over 3-5 minutes.  <b>IV infusion:</b> 1-2g diluted in 100ml of compatible infusion fluid and administered over 20-60 minutes.	Shake vial well to dissolve fully. When initially dissolved in the WFI, a straw-coloured solution is formed.
<b>Ceftazidime 1g and 2g</b> Brand: <i>Fortum, Pinewood and Wockhardt</i> License no: PA23311/001/002 (Fortum 1g) PA23311/001/003 (Fortum 2g) PA0281/224/002 (Pinewood)	Add 10mls WFI to 1g and 2g vials.  Add the WFI – this may be pulled in by vacuum, remove the syringe needle and shake the vial. CO <sub>2</sub> is released and a clear or light yellow to amber solution should be obtained in 1-2 minutes.	Sodium Chloride 0.9% and Glucose 5%	<b>IV injection:</b> After reconstitution invert the vial with the syringe plunger fully depressed. Insert the needle into the solution and withdraw the total volume of solution into the syringe, ensure the needle remains in solution. No further dilution required, give slowly over 3-5 minutes.  <b>IV infusion:</b> After reconstitution, once the product has dissolved, insert a second needle to relieve internal pressure in the vial. Withdraw the required dose and dilute further in a compatible infusion fluid of 50mls – 100mls and give over 20-30 minutes.	Solutions range in colour from light yellow to amber depending on concentration, diluents and storage conditions used.
<b>Ceftriaxone 1g</b> Brand: <i>Wockhardt, Pinewood and Medochemie</i> License no: PA0281/225/001	Add 10ml WFI to each 1g vial.	Sodium Chloride 0.9% and Glucose 5%	<b>IV injection:</b> give slowly over 5 minutes (only suitable for 1g dose).  <b>IV infusion:</b> add 1g or 2g dose to at least 40ml of compatible infusion fluid and give over at least 30 min.	See SPC for use with TPN and Calcium containing solutions.
<b>Cefuroxime 250mg, 750mg, 1.5g</b> Brand: <i>GSK, Fresenius</i> License no: PA2059/006/001 (750mg) PA2059/006/002 (1.5g)	Add 2ml WFI to 250mg vial. Add 6ml WFI to 750mg vial. Add 15ml WFI to 1.5g vial.	Sodium Chloride 0.9% and Glucose 5%	<b>IV injection:</b> give slowly over 3-5 minutes.  <b>IV infusion:</b> dilute reconstituted solution in 50-100ml of compatible infusion fluid and administer over 30-60 minutes.	

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<b>Ciprofloxacin</b> 200mg in 100ml 400mg in 200ml Brand: <i>DEMO</i> License no: PA1122/005/001	Already in solution.	N/A	<b>IV infusion:</b> Administer 200mg over 30 minutes and 400mg over 60 minutes.	Keep in original container to protect from light until required for use.
<b>Clarithromycin</b> 500mg Brand: <i>Mylan</i> License no: PA2010/004/003	Add 10ml WFI to 500mg vial.	Sodium Chloride 0.9% and Glucose 5%	<b>IV infusion:</b> Add vial to 250ml of compatible infusion fluid and administer over 60 minutes into large proximal vein.	<b>Not to be administered as a bolus.</b>  Caution due to a number of interactions - see SPC for full detail. Monitor injection site for inflammation or phlebitis.
<b>Clindamycin 600mg</b> in 4ml Brand: <i>Dalacin C, Fresenius Kabi</i> License no: PA0822/120/003 (600mg)	Already in solution, must be further diluted before administration.	Sodium Chloride 0.9% and Glucose 5%	<b>IV infusion only:</b> doses under 900mg may be given in 50ml and doses of 900mg or more in 100ml of suitable infusion fluid. Give at rate not exceeding 30mg/min.	Do not use in patients with diarrhoea or intestinal inflammatory disease.
<b>Co-Amoxiclav</b> Amoxicillin/clavulanic acid 600mg & 1.2g vials Brand: <i>Co-amoxiclav Istituto Biochimico Italiano G. Lorenzini</i> License no: PA2220/002/002	Add 10ml WFI to 600mg vials. Add 20ml WFI to 1.2g vials for immediate use.	Sodium Chloride 0.9%	<b>IV injection:</b> give slowly over 3-4 minutes.  <b>IV infusion:</b> dilute 600mg in 50ml and 1.2g in 100ml of compatible infusion fluid and administer over 30-40 minutes.	Administer within 15 minutes of reconstitution.  Each 600mg vial contains 500mg Amoxicillin & 100mg Clavulanic acid. Each 1.2g vial contains 1g Amoxicillin & 200mg Clavulanic acid.

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<b>Co-trimoxazole</b> 480mg/5ml Brand: <i>Septin</i> License no: PA1691/010/005	Already in solution.  Further dilute before IV administration.	Sodium Chloride 0.9% and Glucose 5%	<b>Intermittent IV Infusion:</b> dilute in compatible infusion fluid as follows 1 amp (480mg/5ml) in 125mls, 2 amps (960mg/10ml) in 250ml, 3amps (1440mg/15mls) in 500mls.  Dilute immediately before use and administer over 60 to 90 minutes.	<b>Oral route is preferred as almost complete absorption orally. In fluid restricted patients</b> each 5ml amp may be diluted with 75ml of Glucose 5% and administered over a maximum of 60 minutes. Other diluents should not be used. Monitor the infusion carefully and discard if it becomes cloudy or if crystals form.
<b>Daptomycin 350mg &amp; 500mg</b> Brand: <i>Cubicin</i> License no: EU/1/05/328/002 (350mg) EU/1/05/328/004 (500mg)	Add 7ml Sodium Chloride 0.9% to 350mg vial and 10ml to 500mg vial.  See comments for detailed description for reconstitution.	Sodium Chloride 0.9% ( <b>ONLY</b> )	<b>IV injection:</b> give slowly over 2 minutes.  <b>Intermittent IV infusion:</b> dilute required dose in 50mls of Sodium Chloride 0.9% and administer over 30 minutes.	Can interfere with assay for prothrombin time and INR take blood sample immediately before dose. Monitor creatinine phosphokinase before and weekly during treatment. Inject the diluent slowly down the side of the vial. Rotate the vial to completely wet the powder and allow to stand for 10 minutes. Gently swirl the vial for a few minutes to obtain a clear reconstituted solution. Do not shake as this will cause foaming of the product.
<b>Ertapenem 1g</b> Brand: <i>Invanz</i> License no: EU/1/02/216/001	Add 10ml WFI (or Sodium Chloride 0.9%) to 1g vial. Shake well to dissolve.	Sodium Chloride 0.9%	<b>IV infusion:</b> immediately transfer contents of the reconstituted vial to a 50ml Sodium Chloride 0.9% bag. Infuse over 30 minutes.	

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<b>Flucloxacillin</b> <b>500mg</b> Brand: <i>Wockhardt</i> License no: PL29831/0092 <b>1g</b> Brand: <i>Actavis</i> License no: PA1380/11/7 <b>2g</b> Brand: <i>Teva</i> License no: PA1986/111/004	Add 10mls of WFI to 500mg vial. Add 20mls of WFI to 1g vial. Add 40mls of WFI to 2g vial.	Sodium Chloride 0.9% and Glucose 5%	<b>IV injection:</b> 500mg and 1g: give slowly over 3-4 minutes. 2g: give slowly over 6 - 8 minutes.  <b>Intermittent IV infusion (preferred for doses over 1g):</b> dilute in 100mls of compatible infusion fluid and give over 30 minutes.	
<b>Fluconazole 200mg</b> in 100mls Brand: <i>BBraun</i> License no: PA0736/030/001	Already in solution.	N/A	<b>Intermittent IV infusion:</b> Each 200mg (100mls) should be infused over 10-20 minutes. Max infusion rate: 20mg per minute.	The infusion may be unsuitable for patients on a low sodium diet.
<b>Fosfomycin 4g</b> in 100ml Brand: <i>Fomicyt</i> License no: PA1972/001/001	Shake the vial prior to the reconstitution to loosen up the powder. Add 20ml of WFI (or Glucose 5%) to 4g vial.  Shake well to dissolve.	Glucose 5%	<b>Intermittent IV infusion:</b> Further dilute with 80ml of glucose 5% prior to infusion, administer over at least 30 minutes.	A slight degree of warming occurs when the powder is dissolved. The reconstituted solution is clear and colourless to slightly yellowish.
<b>Gentamicin</b> 80mg/2ml Brand: <i>Genticin</i> <i>Amdipharm</i> <i>Pinewood</i> License no: PA1142/013/001	Already in solution.	Sodium Chloride 0.9% and Glucose 5%	<b>IV injection: (not suitable for once daily dosing)</b> give slowly over at least 3 minutes.  <b>Intermittent IV infusion:</b> Dilute to 100ml of compatible infusion fluid and administer over 20 minutes.	Monitor plasma concentrations and renal function-dose adjustments required in renal impairment.
<b>Levofloxacin 500mg</b> Brand: <i>Fresenius</i> License no: PA2059/010/002	Already in solution.	N/A	<b>Intermittent IV infusion:</b> over 60 minutes.	

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<b>Linezolid</b> 600mg/300ml Brand: <i>Krka</i> License no: PA1347/057/002	Already in solution.	N/A	<b>Intermittent IV infusion:</b> over 30-120 minutes.	Remove overwrap only when ready for use, check for leaks.  Monitor FBC including platelet count weekly.  Approximately 100% bioavailability so should be given orally where possible.
<b>Meropenem 500mg &amp; 1g</b> Brand: <i>Fresenius</i> License no: PA2059/012/001 (500mg) PA2059/012/002 (1g)	Add 10ml WFI to 500mg vial.  Add 20ml WFI to the 1g vial.	Sodium Chloride 0.9% and Glucose 5%	<b>IV injection:</b> Doses up to 1g can be given slowly over at least 5 minutes.  <b>Intermittent IV infusion:</b> dilute in compatible infusion fluid, conc should not exceed 20mg/ml, administer over 15-30 mins. Use 50-250ml bag i.e. 500mg in 50ml, 1g in min 50ml, 2g in min 100ml.	The solution should be shaken before use.
<b>Metronidazole</b> 5mg/ml 100ml Brand: <i>Braun</i> License no: PA0736/002/001	Already in solution.	N/A	<b>Intermittent IV infusion:</b> can be administered over not less than 20 minutes but usually over 1 hour.	Maximum infusion rate is 5ml/min.  Should not be given as an IV push.
<b>Piperacillin-tazobactam</b> 4.5g Brand: <i>Mylan</i> License no: PA0577/204/002	Add 20ml WFI or Sodium Chloride 0.9% or Glucose 5% to 4.5g and <b>shake strongly</b> until dissolved.	Sodium Chloride 0.9% and Glucose 5%	<b>Intermittent IV infusion:</b> The reconstituted solution should be further diluted to the desired volume of 50ml to 150ml of compatible infusion fluid. Give over 30 minutes.	During reconstitution the vial should be shaken strongly for 1 to 2 minutes or until dissolved.

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<b>Teicoplanin</b> 200mg & 400mg Brand: <i>Targocid</i> License no: PA0540/021/001 (200mg) PA0540/021/002 (400mg)	Add the entire contents of the diluent provided slowly and roll the vial gently until dissolved. Do not shake. If foam forms allow to stand for 15 minutes until foam subsides 3ml of reconstituted solution will provide 200mg/400mg dose.	Sodium Chloride 0.9% and Glucose 5%	<b>IV injection:</b> give slowly over 3-5 minutes.  <b>Intermittent IV infusion:</b> dilute in 50-100ml of compatible infusion fluid and administer over 30 minutes.	Teicoplanin should be administered with caution to patients with known hypersensitivity to vancomycin since cross reactivity may occur <b>N.B.</b> there is a calculated excess in each vial – withdraw 3ml from either 200mg or 400mg vial to obtain dose of 200mg or 400mg.
<b>Tigecycline</b> 50mg Brands: <i>Tygacil</i> License no: EU/1/06/336/001	Add 5.3ml of infusion fluid (NS or G5) and swirl gently to dissolve, to give a concentration of 10mg/ml.  Withdraw 5ml (50mg) from the vial.	Sodium Chloride 0.9% and Glucose 5%	<b>Intermittent IV infusion:</b> dilute required dose in 100ml of infusion fluid and administer over 30-60 minutes.	If infusion line is being used for other active substances it must be flushed with NS or G5 before and after infusion. The reconstituted solution should be yellow to orange in colour; if not, the solution should be discarded. Reconstituted solution should be used immediately.
<b>Vancomycin</b> 500mg & 1g Brand: <i>Mylan</i> License no: PA0577/163/001 (500mg) PA0577/163/002 (1g)	Add 10ml WFI to 500mg vial. Add 20ml WFI to 1g vial.	Sodium Chloride 0.9% and Glucose 5%	<b>Intermittent IV infusion:</b> dilute each 500mg in at least 100ml of compatible infusion fluid and administer at a rate not faster than 10mg/min to avoid rapid infusion-related reactions including 'red-man' syndrome.	Avoid extravasation as it may cause tissue necrosis.



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<b>Voriconazole 200mg</b> Brand: <i>Fresenius Kabi</i> License no: PA2059/020/001	Add 19ml WFI to each vial to produce a solution of 10mg/ml solution. Extract 20ml for a 200mg dose. Dilute further prior to administration.	Sodium Chloride 0.9% and Glucose 5%	<b>Intermittent IV infusion</b> Further dilute dose in a compatible infusion fluid to a concentration between 0.5-5mg/ml; For example; if required dose is between 50-500mg dilute to 100ml, if required dose is 501mg dilute to 250ml.  Administer over 60 to 180 minutes at a rate not exceeding 3mg/kg/hour.	Discard vial if vacuum does not pull diluent into the vial.