



# Supply Disruption Alert

SDA/2020/005

Issued: 22 April 2020

Renal Replacement Therapy in Critical Care: Severe Disruption to the Supply of Kits and Fluids to Perform Continuous Vein to Vein Haemofiltration including Haemodiafiltration (CVVH and CVVHD)

## Summary

Baxter Health Care Limited, Fresenius Medical Care (UK) Ltd and B Braun Medical Ltd, have reported that there are now limited supplies of Haemofiltration sets and fluids in the system. These three suppliers constitute 70% of the NHS market. However, it must be stressed that sets in particular, and probably fluids, are not interchangeable between different manufacturer's equipment. The model in the UK is largely that individual critical care units rely on one CVVH (D) manufacturer. The current supply issues are due to the recent increase in demand during the Covid-19 Pandemic. Tables 1 and 2 below identify specific fluids and sets affected where the lack of supply will disrupt care.

- The clinical presentation of Covid-19 patients admitted to critical care suggests that there is a higher than usual demand for Renal Replacement Therapy (RRT) in patients where viral disease is the reason for admission. Intensive Care National Audit and Research Centre (ICNARC) are reporting that 28.8% of patients requiring advanced respiratory support also require RRT (17<sup>th</sup> April 2020 ICNARC)
- Patients appear to have a hyper coagulopathy that is causing CVVH(D) sets to clot, both before the filter and within the filter. The manufacturers measure usual filter life as approximately 72 hours, whereas filters can become clotted after several hours of use. This has led to a global excessive demand for consumables
- Hospitals and Trusts should respond by:
  - implementing the actions below to minimise the use of consumables;
  - fully utilising haemodialysis facilities; and
  - offering equipment to other organisations with greater demand.

## Supply Affected

Baxter Health Care Limited	Number	Description
Prismaflex ST150 Set	107640	Kit
Prismaflex M100 Set	106697	Kit
Prismaflex ST100 Set	107636	Kit
Prismasol 4	112565	Fluid
Prismocal B22	114108C	Fluid
Hemosol BO	114339	Fluid
Prismocitrate 18/0	115653C	Fluid
Phoxilium	113637	Fluid
5 L Effluent Bags	114423	Effluent waste bags

<b>Fresenius Medical Care (UK) Ltd</b>	<b>Number</b>	<b>Description</b>
Adapters	5016881	Adapter Hansen male / luer lock male
Adapters	5016891	Adapter HF female / Luer-Lock male
Adapters	F00008114	Adapter Calcium SecuNect / LL
Calrecia	F00006486	Calrecia, Calcium chloride 100 mmol/l, LC
Citrate	F00008029	4% Citrate solution SafeLock 1.5 L, LC 1
Dialysate	9689201	Ci-Ca Dialysate K2, 5000 ML
Dialysate	F00000431	Ci-Ca Dialysate K4, 5000 mL
Dialysate	F00001624	Ci-Ca Dialysate K2 Plus, 5000ML
Dialysate	F00001625	Ci-Ca Dialysate K4 Plus, 5000ML
MultiBic	F00007434	MultiBic potassium-free, 24 months, LC 3
MultiBic	F00007435	MultiBic 2mmo/l K+, 24 months, LC 3
MultiBic	F00007437	MultiBic 4 mol/l K+, 24 months, LC 3
MultiFiltrate Kits	5039011	MultiFiltrate - Kit Ci-Ca CVVHD 1000
MultiFiltrate Kits	F00001172	MultiFiltrate - Kit Ci-Ca CVVHD EMiC2
MultiFiltrate Kits	5038931	MultiFiltrate - Kit 4 CVVHDF 600
MultiFiltrate Kits	5039031	MultiFiltrate - Kit 5 pre-post CVVH 600
MultiFiltrate Kits	F00000215	MultiFiltrate - Kit 16 MPS P2dry
MultiFiltratePRO Kits	F00000462	MultiFiltratePRO-Kit Ci-Ca HD EMiC2
MultiFiltratePRO Kits	F00000463	MultiFiltratePRO-Kit Ci-Ca HD 1000
MultiFiltratePRO Kits	F00000461	MultiFiltratePRO-Kit HDF 1000
Other	9000711	Injectomat-syringe 50 ml
Other	F00006557	Smartbag CA 211.5 (4.2Lx2)
Other	5019151	Pressure Measurement Line 60 CM
Other	5046131	Dispenser 2 ways HF Female/4 ways HF Male
Waste Bag	5029011	Filtratbeutel / Filtrate Bag 10 L
Waste Bag	5029031	Filtrate Bag Single-Use 10 LT.

<b>B. Braun Medical Ltd</b>	<b>Number</b>
Omniset L	7211367
Omniset	7211370
Omnibag	7211065
Duosol 0K	8911
Duosol 4K	4461
Calcium free	4580
Citrasol	601023

## Action

### Clinical Teams Should:

- support the transfer of excess stock to other units where requested in response to local demand and supply issues;
- support the accurate completion of the daily sit rep data as this will be required for the distribution of stock;
- support the use of other forms of RRT to reduce the reliance upon CVVH(D) as described in the reference. <https://www.england.nhs.uk/coronavirus/secondary-care/other-resources/specialty-guides/>;
- use systemic anticoagulation, unless there are contraindications to that approach, in order to prolong the life of sets - CVVH sets should be used for 24-48 hours. If the supply of machines allows, the use of the set may continue longer up to the recommended time permitted;
- consider redistribution of CVVH equipment to units where there is a requirement for additional RRT capacity and a lack of alternatives;
- plan alternative RRT management including Sustained Low Efficiency Dialysis (SLED), Haemodialysis HD and/or Peritoneal Dialysis (PD) in conjunction with renal services - in some cases patients may need ITU to ITU transfer for RRT following discussion with clinical leads for the units;
- facilitate the transfer of patients from critical care to renal services when fit to do so and where there is a need for ongoing RRT or specialised renal care - ensuring current guidance on caring for critically ill patients in relation to Covid-19 is considered (see supporting information);
- review staffing plans where renal nurses have been reassigned away from renal units so that experienced nursing capacity can be available;
- consider local management options to decrease waste locally; and
- refer to the guidance published on the NHS England website for speciality guides in response to the pandemic <https://www.england.nhs.uk/coronavirus/secondary-care/other-resources/specialty-guides/>;

### Regional/NHS Boards and National Procurement and Pharmacy leads should:

- work with hospitals and Trusts who have stock holding beyond projected their demand to re-distribute this stock across their region;
- support any recently introduced local stock sharing scheme between hospitals as detailed in recent communications - details can be obtained from local commissioning leads for critical care and renal networks and regional incident cells; and
- inform trusts that further advice will be shared in the coming weeks regarding ongoing supply management.

### Supply Procurement and Pharmacy leads should:

- ensure consumable requests are based upon actual numbers of patients as detailed within the incident sit rep published daily to ensure no over ordering;
- support and facilitate the transfer of stock to other critical care units based upon local sit rep reports and anticipated stock levels; and
- ensure stock levels of systemic anticoagulants (e.g. unfractionated heparin) are monitored and adequate for the anticipated increased requirement.

### Deadlines for actions

- Actions underway: on receipt of this alert.
- Actions complete: as soon as possible.

## Supporting Information

More detailed information on the management of patients in critical care with Covid 19 infection can be found at the following locations:

<https://www.england.nhs.uk/coronavirus/secondary-care/other-resources/specialty-guides/>

<https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/04/C0299-acute-kidney-injury-in-hospitalised-patients-with-covid-19-outside-icu.pdf>

<https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/04/C0298-speciality-guide-clinical-guide-for-renal-replacement-therapy-options-in-critical-care-v1.1.pdf>

## Distribution

CAS and SABS (NI) liaison officers for onward distribution to all relevant staff including:

NHS Trusts

NHS boards in Scotland and Wales

Regional Directors of Commissioning

Regional Medical Directors

Regional Chief Pharmacists

Lead/senior pharmacists

CAS and SABS (NI) liaison officers for onward distribution to all relevant staff including:

- Adult intensive care units
- Anaesthesia, directors of
- Anaesthetic medical staff
- Anaesthetic nursing staff
- Anaesthetists
- Cardiothoracic departments
- Chief pharmacists
- Clinical governance leads
- Clinical Procurement Specialists
- Hospital pharmacies
- Hospital pharmacists
- Intensive care medical staff/paediatrics
- Intensive care nursing staff (adult)
- Intensive care nursing staff (paediatric)
- Intensive care units
- Intensive care, directors of
- Intensive care, directors of
- Paediatric intensive care units
- Paediatric medicine, directors of
- Pharmaceutical advisors
- Pharmacists
- Purchasing managers
- Renal Physicians
- Renal Nurses Haemodialysis
- Renal Unit Managers
- Renal Nurses Peritoneal Dialysis
- Renal Technicians
- Theatre managers
- Theatre nurses
- Trust Covid-19 lead(s)

**Independent distribution**

Establishments registered with the Care Quality Commission (CQC) (England only)  
Hospitals in the independent sector (All nations)

## Enquiries

**England**

Enquiries from NHS Trusts in England should in the first instance be directed to your trust procurement team who will escalate issues to the Regional Pharmacy Procurement Specialist and national teams if required.

**Scotland**

[NSS.NHSSMedicineShortages@nhs.net](mailto:NSS.NHSSMedicineShortages@nhs.net)

**Wales**

[MedicinesShortages@gov.wales](mailto:MedicinesShortages@gov.wales)

**Northern Ireland**

[Noel.dunn@northerntrust.hscni.net](mailto:Noel.dunn@northerntrust.hscni.net)

All other organisations should send enquiries about this notice to the DHSC Supply Resilience Team, quoting reference number **SDA/2020/005**

Email: [supplyresiliencemd@dhsc.gov.uk](mailto:supplyresiliencemd@dhsc.gov.uk)