**General Principles of Heart Failure Management During COVID-19**

This guidance has been developed by cardiology specialists in primary and secondary care to support primary care practitioners in their management of heart failure patients during the COVID-19 pandemic. Borough teams in South East London may differ in their local implementation of this guidance, considering current remote management flexibilities and monitoring abilities.

**All heart failure (HF) patients are at high risk should they contract COVID-19 and should be advised to stringently self-isolate; a proportion of HF patients will be in the very high-risk group and should be advised to shield:**

[https://www.nhs.uk/conditions/coronavirus-covid-19/people-at-higher-risk-from-coronavirus/whos-at-higher-risk-from-coronavirus/](https://scanmail.trustwave.com/?c=8248&d=m4Wx3iGNyEcTm5-SC5jXAuUvbEotaIwcNZ4xcozPvQ&u=https%3a%2f%2fwww%2enhs%2euk%2fconditions%2fcoronavirus-covid-19%2fpeople-at-higher-risk-from-coronavirus%2fwhos-at-higher-risk-from-coronavirus%2f)

**Extremely vulnerable or high-risk patients include:** Patients with a hospital admission for HF in the previous 12 months, a new HF diagnosis within the last 3 months, and HF patients with significant co-morbidities.

Support for patients and carers: <https://pumpingmarvellous.org/heart-failure-advice-leaflet-for-patients-during-covid-19/>

**PRINCIPLES:**

1. **Patients under the community HF team will continue to be reviewed by the specialists who will monitor therapy and blood test results.** Patients and practitioners may contact the HF team as usual (see contact details at the end of this document)
2. **Patients recently discharged from hospital following an admission for acute HF will be reviewed by HF teams:** within 2 weeks of discharge
3. **For new diagnoses of heart failure refer to the HF teams** (BNP of 400 to 2000 ng/L will be reviewed remotely; BNP above 2000ng/L refer to rapid access HF assessment clinics to avoid hospital admission)
4. **For established HF patients:** Avoid changing medications that require renal function monitoring, but do not stop prognostic medications
5. **Treat symptoms of fluid overload with diuretics**

**MANAGEMENT OF HEART FAILURE DURING COVID-19:**

1. **Acute decompensation of chronic heart failure**
* **Signs and symptoms of fluid overload**

Increasing breathlessness, orthopnoea, and/or nocturnal dyspnoea

Increasing peripheral or abdominal oedema, raised JVP, and/or rapid weight gain

Weight ↑ >1.5kg above dry weight and rapid weight gain over 2 to 3 days

* **Managing fluid overload/ breathlessness**

Up-titrate loop diuretics to provide symptomatic relief**.** Increase furosemide by 40-80mg daily or bumetanide by 1-2mg daily (maximum daily doses are furosemide 160mg daily and bumetanide 5mg daily in split doses); aim for 0.5-1kg weight loss per day (*see SEL CHF guidance link below*). Monitor blood pressure (BP) and daily bodyweights - patients may record these if at home (GP or local HF team to assess this). Review within 3 days and increase or reduce dose as clinically appropriate. Check U&Es if prolonged high doses of loop diuretics (eg. Bumetanide 2mg BD and Furosemide 80mg BD over 7 days).

See SEL CHF guidance link: <https://www.lambethccg.nhs.uk/news-and-publications/meeting-papers/south-east-london-area-prescribing-committee/Documents/Cardiovascular%20Disease%20Guidelines/HEART%20FAILURE%20Pharmacological%20management%20June%202017.pdf>.

**When to seek advice or refer patients to the HF community team?** (*contact details below*)

* **Management of fluid overload:** significant on-going symptoms despite increased oral loop diuretic doses. In those unresponsive to increasing doses of loop diuretics, a thiazide diuretic such as bendroflumethiazide or metolazone (unlicensed) may be added, and this will be prescribed and reviewed by the HF team
* **Poorly controlled blood pressure despite optimising medications**
* **Symptomatic hypotension (with fluid overload)**
* **Patients non-adherent to treatment**

**When would an emergency admission be required?**

* **If evidence of decompensation** non-responsive to above management strategies (warning signs include reduced urine output, fatigue and confusion)
* **If evidence of ventricular arrythmias** (chest pain, palpitations, dizziness- *usually confirmed by an ECG)*
1. **Managing Stable Chronic Heart Failure Patients**
* **Continue standard prognostic medication** where prescribed (ACEI / ARB, beta-blockers and spironolactone) There is no robust evidence to suggest that ACEI and ARB medications adversely affect COVID-19 outcomes and therefore these should not be stopped unless side effects, U&Es or blood pressure dictates this. MHRA: <https://www.gov.uk/government/news/coronavirus-covid-19-and-high-blood-pressure-medication>
* **Avoid initiating or uptitrating** ACEI/ARB, spironolactone/eplerenone and sacubitril/valsartan (Entresto®) as these require blood tests for renal monitoring.
* **To manage fluid overload in known HF patients, diuretics should be up-titrated to control symptoms -** Monitor blood pressure (BP) and daily bodyweight - patients may record these. Recommended blood pressure monitors: <https://bihsoc.org/bp-monitors/for-home-use/>
* **Encourage patients to remain active at home:** Light activities and sitting upright if possible

<https://www.nhs.uk/live-well/exercise/physical-activity-guidelines-older-adults/>

1. **Other Issues**
* **Managing hypertension in HF patients**

Where possible optimise prognostic heart failure medications – for example, titrate beta-blocker to optimal or maximum tolerated dose: check BP, heart rate (*aim is 50 to 60 bpm in HF*) and symptoms with each dose titration.

If BP remains > 140/90mmHg; add amlodipine 5mg daily and increase to 10mg daily after 2 weeks if tolerated.

If BP still > 140/90mmHg; consider hydralazine 25mg three times a day (TDS) in HFrEF patients with renal impairment and/or Afro-Caribbean patients. Consider spironolactone 25mg daily if renal function and potassium (U&Es) can be checked within 2 weeks. Contact HF team for advice.

* **Managing hypotension (symptomatic low BP, with systolic BP<100mmHg)**

Assess volume status (weight trend, symptoms of breathlessness/fluid overload/dehydration).

Ensure a suitable fluid intake. Counsel patient to avoid abrupt postural changes.

**Symptomatic hypotension in the setting of dehydration**

Dehydration symptoms include weight ↓ >1.5kg below dry weight over 2 to 3 days, symptoms of thirst, dizziness, or feeling washed out.

If symptoms allow, and if the patient is dry and not fluid overloaded - withhold one to three diuretic doses and seek advice (maintenance doses may then be reduced by one increment) [*see SEL CHF guidance diuretics flow chart*].

**Symptomatic hypotension in the setting of fluid overload**

Review or stop antihypertensives. Contact HF team for advice.

* **Acute Kidney Injury**

<https://www.nice.org.uk/guidance/ng148/resources/acute-kidney-injury-prevention-detection-and-management-pdf-66141786535621>

COVID-19 guideline: acute kidney injury, May 2020: <https://www.nice.org.uk/guidance/ng175/resources/visual-summary-pdf-8719215805>

AKI toolkit: <https://www.rcgp.org.uk/aki>

Please note: If withholding ACEI/ARB for AKI, ensure re-initiation and uptitration of ACEI/ARB in HF patients when renal function improves. Consult HF team for advice.

1. **End of life care:** See SEL COVID Palliative Care Guidance (<http://gp.selondonccg.nhs.uk/#palliative>)

Other end of life considerations for HF patients include:

* + **Device deactivation:** See “ How to deactivate ICDs” at <http://gp.selondonccg.nhs.uk/#cardiology>
	+ **Symptom management:** Suitability for subcutaneous (SC) diuretics discussed with palliative care team
	+ **Seek advice from Palliative care team:** Local contact details at [**http://gp.selondonccg.nhs.uk/#palliative**](http://gp.selondonccg.nhs.uk/#palliative)
	+ **Communicate advanced care plans** on co-ordinate my care (CMC)

**HEART FAILURE TEAM CONTACTS:**

* **Community HF Nursing Team in Lambeth & Southwark:**

**GSTT:** [**https://www.guysandstthomas.nhs.uk/our-services/community-heart-failure/overview.aspx**](https://www.guysandstthomas.nhs.uk/our-services/community-heart-failure/overview.aspx)or for referrals email:gst-tr.KHPcommunityHF@nhs.net or Telephone 020 3049 4652

**Referrals for Medical Review or Advice about individual patients:** Please use the current advice and guidance channels including eRS Advice and guidance for written communication or Consultant Connect to speak to a senior clinician immediately.

**ERS Referrals:** Please contact us through advice and guidance before making a referral. Our consultants are vetting all heart failure referrals as usual. We will contact urgent patients but are not currently booking routine patients and so there may be a significant delay before seeing your patient. Please consider this before referral as our capacity to see new patients is limited, and please warn patients they may not be seen immediately.

**Consultant Connect:** For Urgent Cardiology advice via the practice specific telephone number.

**For advice regarding a specific patient under a specific Consultant:** Please email your enquiry stating the name of the Consultant you wish to contact to: **gst-tr.cardiology@nhs.net**

* **KCH Denmark Hill:** Kings College HF service contact details: kch-tr.hfu@nhs.net and for HF nurses:

kch-tr.kingsheartfailurenurse@nhs.net Telephone: 0203 299 4860 and for referrals – ERS Referrals

* **Princess Royal Hospital, KCH**: contact is kch-tr.PRUHheartfailurenurses@nhs.net and then calls/emails are triaged to either Doctor or nurse. Use Consultant Connect for advice and guidance.

* **Bromley HF team:** Integrated HF team Bromley Telephone: 07971 484508

Email: kch-tr.br-bromleyintegratedheartfailurenurses@nhs.net

* **Bexley HF team:** Bexley patients with raised BNP of 400-2000ng/L should be referred to PML Bexley community non- invasive diagnostic service for echocardiogram and to the Bexley Cardiologist.

For acute Heart Failure contact GSTT: alexander.terry@gstt.nhs.uk .

For community HF referrals contact the Oxleas team: oxl-tr.Cardiac@nhs.net

* **Greenwich HF team:** Greenwich patients with raised BNP of 400 to 2000 ng/L should be referred to the Local Trust for Echocardiogram.

For acute contact QEH Cardiology: Tel. 0208 836 4350 Monday to Friday between the hours of 9-5pm.

For community contact Greenwich Oxleas HF team: Tel. 020 8319 7060. Email: oxl-tr.Cardiac @nhs.net**.**

Referral form available at: <http://oxleas.nhs.uk/services/service/support-for-cardiac-conditions/referral/?p=/gps-referrers/gp-community-health-services/gp-chs-greenwich/>.

Cardiac team email for referrals is: oxl-tr.Cardiac@nhs.net

* **Lewisham HF team:** Telephone (Mon, Tue and Thurs): 020 3049 3473 or email: lh.commuhfreferrals@nhs.net