Anticipatory Medications Template V1.3

Deployed to all GP Practices in 5 Hampshire CCGs March 2020 as part of the Palliative Care response to COVID19

The following pages illustrate the Anticipatory Medications Dose Calculation Worksheets developed over much of 2019 to sit alongside the Future Planning Template and SHFT/Solent Community Syringe Driver and PRN Administration Order sheets. In response to COVID-19 this work was completed over 2 weeks in March and all of the resources mentioned were distributed to all EMIS practices by ArdensQ and all SystmONE practices via Southampton and Portsmouth CCG IT departments. This work was completed by the release of clinical Palliative Medicine Consultant time by SHFT, Solent NHS Trust and Rowans Hospice, without any additional funding.

Introductory page from the EMIS template is shown in figure 1. Generally SystmONE Template views are used to illustrate contents. Both S1 and EMIS templates link to the same flowcharts held in the FuturePlanning.org.uk webpages.

Figure 1.0 - Introductory Page

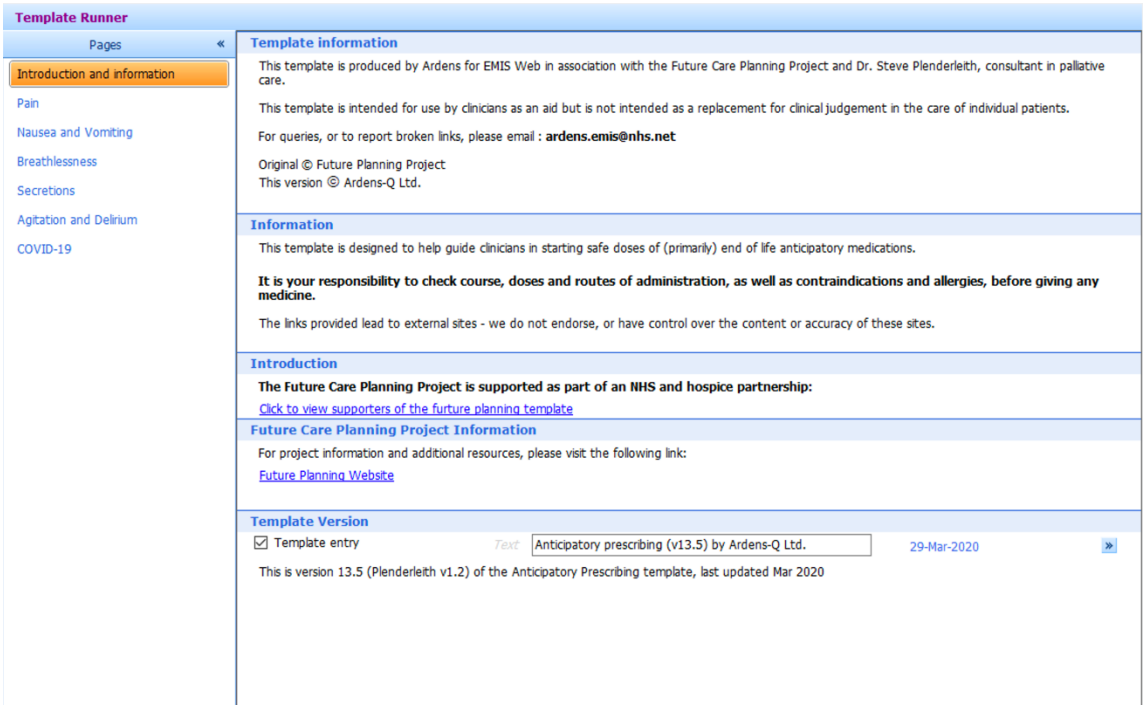
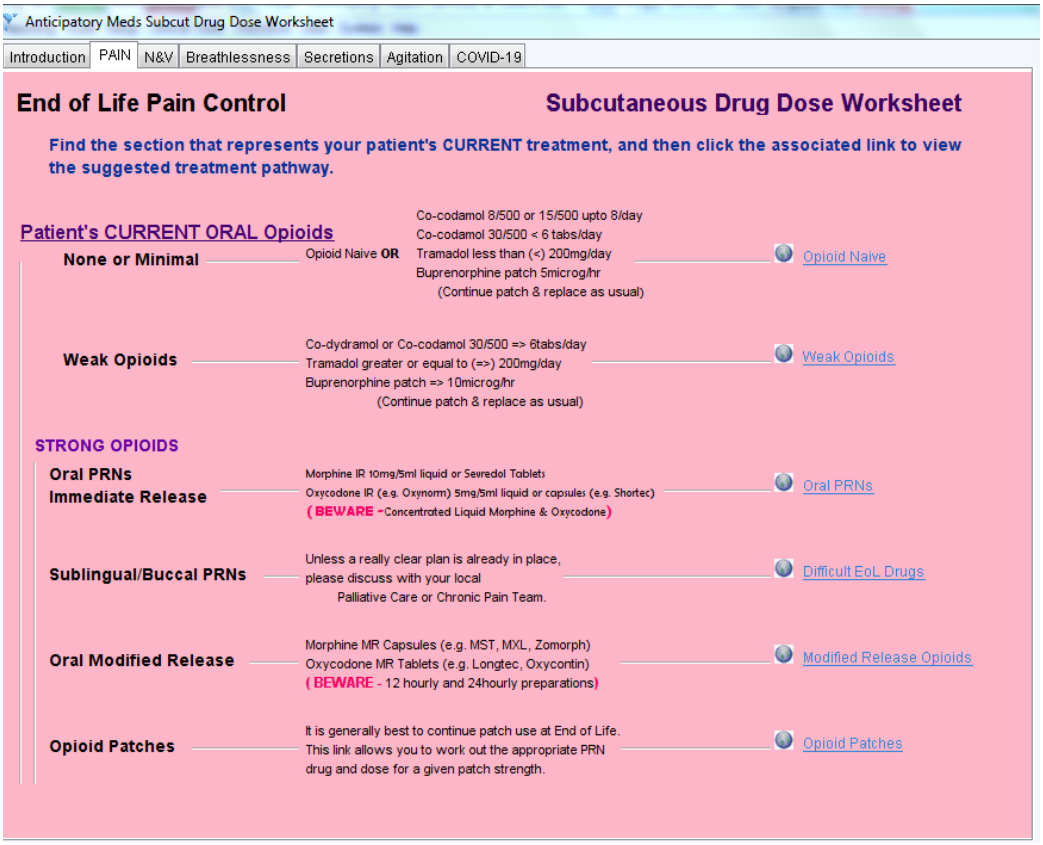
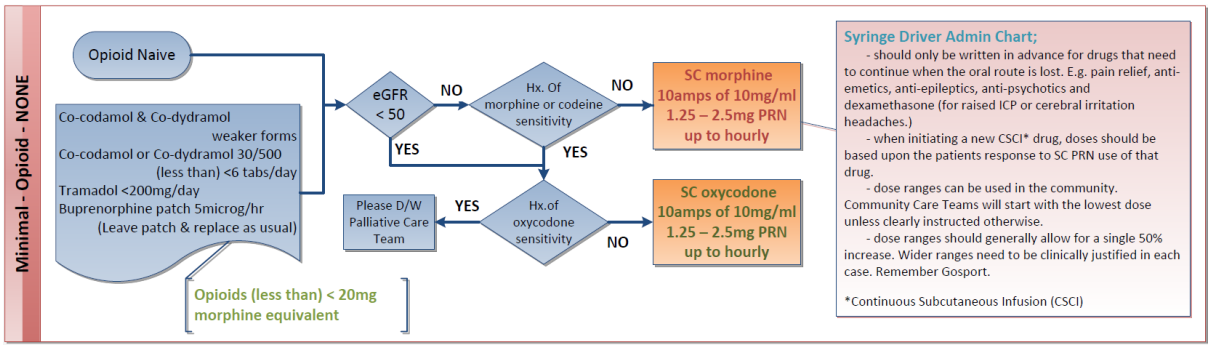
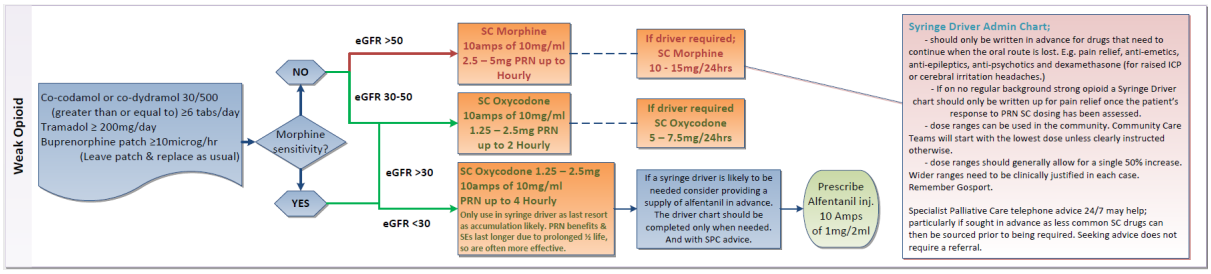
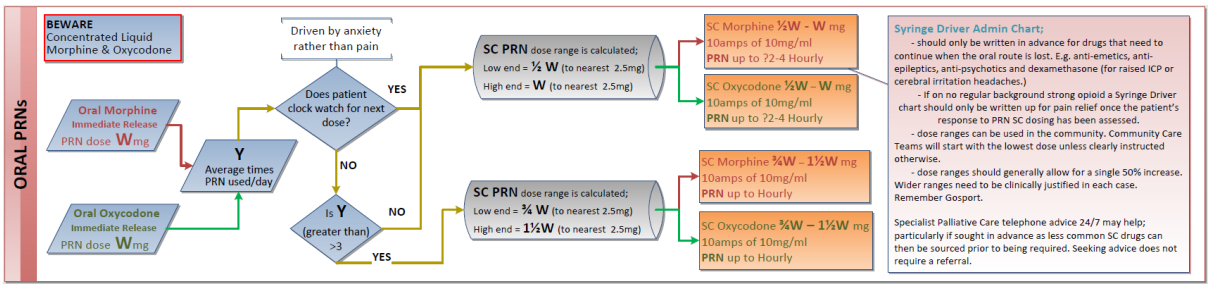


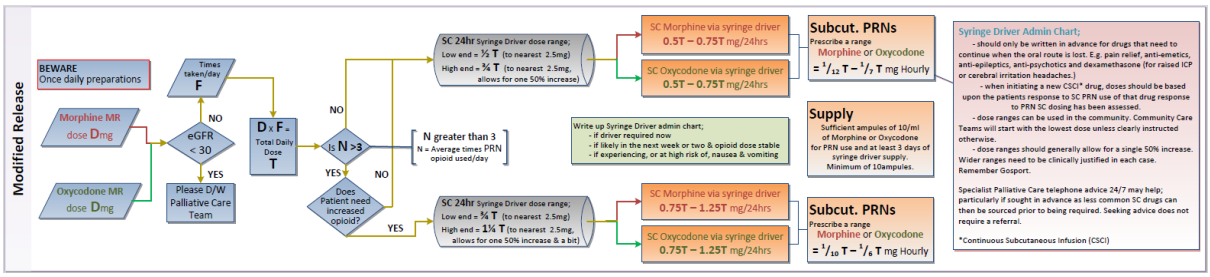
Figure 2.0 - Pain Control










Modified Release
BEWARE
Once daily preparations
Morphine MR
dose Dmg
Oxycodone MR
dose Dmg
Times taken/day
F
eGFR
< 30
NO
YES
Please D/W Palliative Care Team
D x F =
Total Daily Dose
T
Is N >3
NO
YES
Does Patient need increased opioid?
YES
NO
N greater than 3
N = Average times PRN opioid used/day
SC 24hr Syringe Driver dose range;
Low end = ½ T (to nearest 2.5mg)
High end = ¾ T (to nearest 2.5mg, allows for one 50% increase)
SC Morphine via syringe driver
0.5T – 0.75T mg/24hrs
SC Oxycodone via syringe driver
0.5T – 0.75T mg/24hrs
Subcut. PRNs
Prescribe a range
Morphine or Oxycodone
= 1/12 T – 1/7 T mg Hourly
Write up Syringe Driver admin chart;
- if driver required now
- if likely in the next week or two & opioid dose stable
- if experiencing, or at high risk of, nausea & vomiting
Supply
Sufficient ampules of 10/ml of Morphine or Oxycodone for PRN use and at least 3 days of syringe driver supply.
Minimum of 10ampules.
Syringe Driver Admin Chart;
- should only be written in advance for drugs that need to continue when the oral route is lost. E.g. pain relief, anti-emetics, anti-epileptics, anti-psychotics and dexamethasone (for raised ICP or cerebral irritation headaches.)
- when initiating a new CSCI* drug, doses should be based upon the patients response to SC PRN use of that drug response to PRN SC dosing has been assessed.
- dose ranges can be used in the community. Community Care Teams will start with the lowest dose unless clearly instructed otherwise.
- dose ranges should generally allow for a single 50% increase. Wider ranges need to be clinically justified in each case. Remember Gosport.
Specialist Palliative Care telephone advice 24/7 may help; particularly if sought in advance as less common SC drugs can then be sourced prior to being required. Seeking advice does not require a referral.
*Continuous Subcutaneous Infusion (CSCI)
SC 24hr Syringe Driver dose range;
Low end = ¾ T (to nearest 2.5mg)
High end = 1¼ T (to nearest 2.5mg, allows for one 50% increase & a bit)
SC Morphine via syringe driver
0.75T – 1.25T mg/24hrs
SC Oxycodone via syringe driver
0.75T – 1.25T mg/24hrs
Subcut. PRNs
Prescribe a range
Morphine or Oxycodone
= 1/10 T – 1/4 T mg Hourly

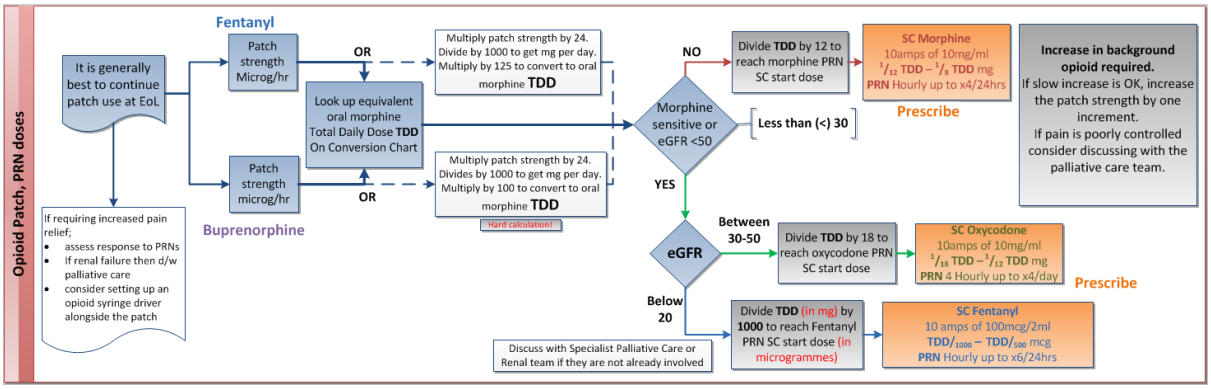
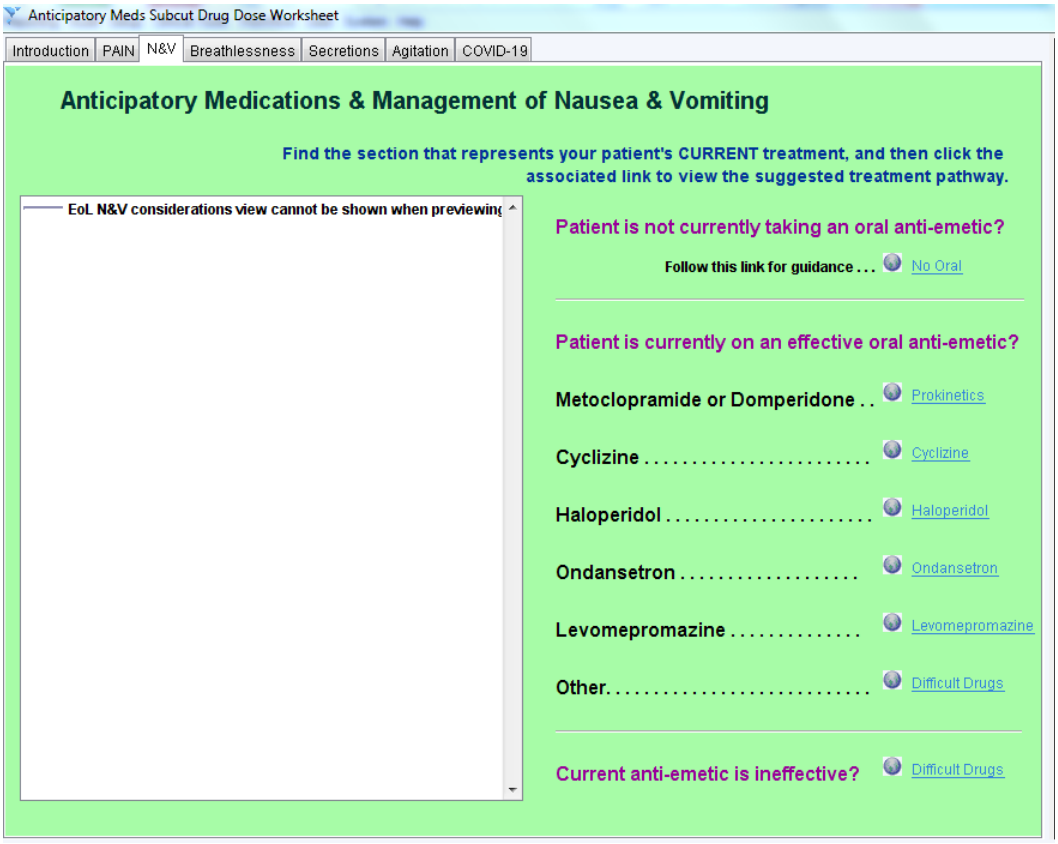
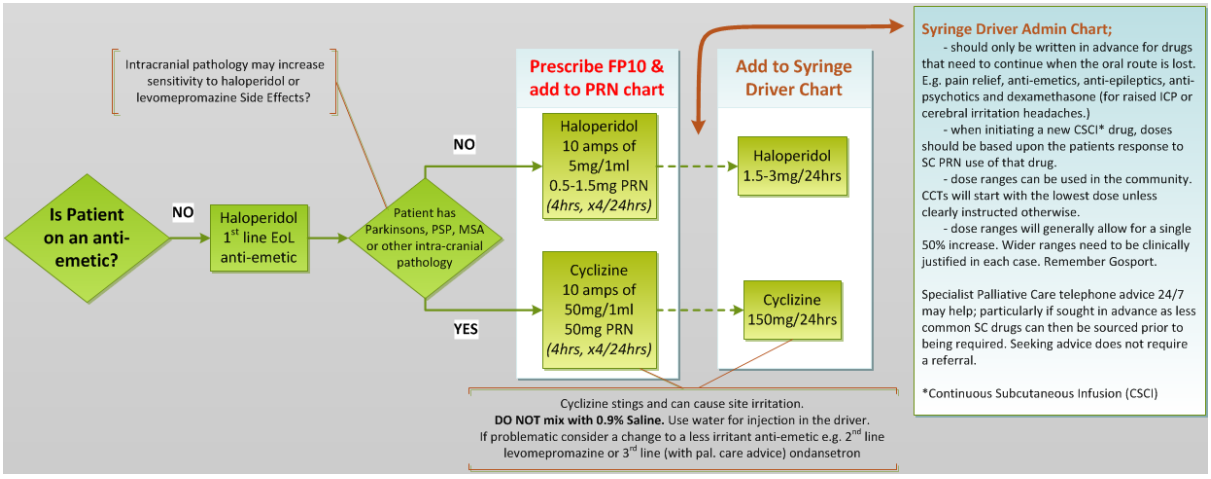
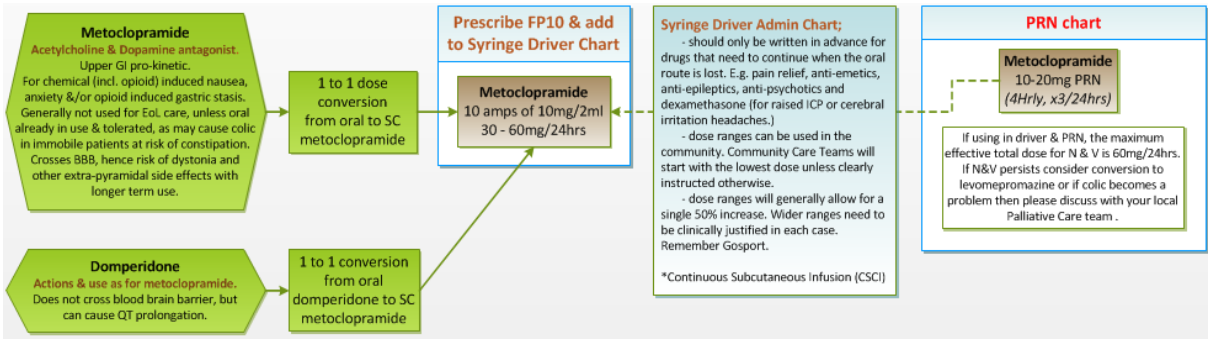
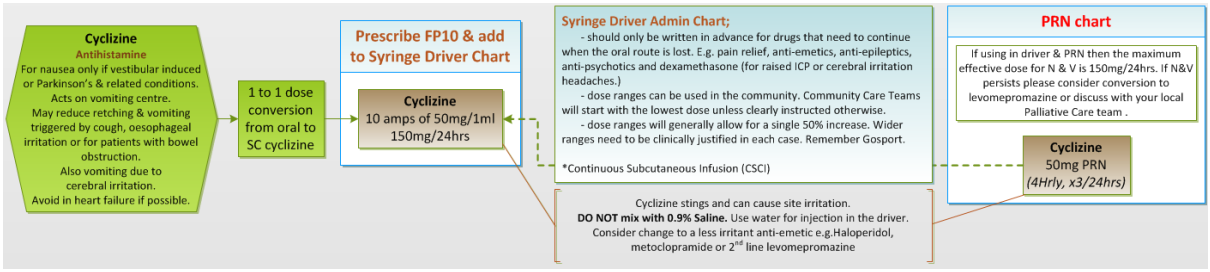

Opioid Patch, PRN doses
Fentanyl
It is generally best to continue patch use at EoL
Patch strength Microg/hr
OR
Multiply patch strength by 24. Divide by 1000 to get mg per day. Multiply by 125 to convert to oral morphine TDD
Look up equivalent oral morphine Total Daily Dose TDD On Conversion Chart
Patch strength microg/hr
OR
Multiply patch strength by 24. Divides by 1000 to get mg per day. Multiply by 100 to convert to oral morphine TDD
Hard calculation!
Buprenorphine
If requiring increased pain relief;
assess response to PRNs
If renal failure then d/w palliative care
consider setting up an opioid syringe driver alongside the patch
Morphine sensitive or eGFR <50
NO
Divide TDD by 12 to reach morphine PRN SC start dose
SC Morphine
10amps of 10mg/ml
1/12 TDD – 1/8 TDD mg
PRN Hourly up to x4/24hrs
Prescribe
Less than (<) 30
YES
eGFR
Between 30-50
Divide TDD by 18 to reach oxycodone PRN SC start dose
SC Oxycodone
10amps of 10mg/ml
1/18 TDD – 1/12 TDD mg
PRN 4 Hourly up to x4/day
Prescribe
Below 20
Divide TDD (in mg) by 1000 to reach Fentanyl PRN SC start dose (in microgrammes)
SC Fentanyl
10 amps of 100mcg/2ml
TDD/1000 – TDD/500 mcg
PRN Hourly up to x6/24hrs
Discuss with Specialist Palliative Care or Renal team if they are not already involved
Increase in background opioid required.
If slow increase is OK, increase the patch strength by one increment.
If pain is poorly controlled consider discussing with the palliative care team.

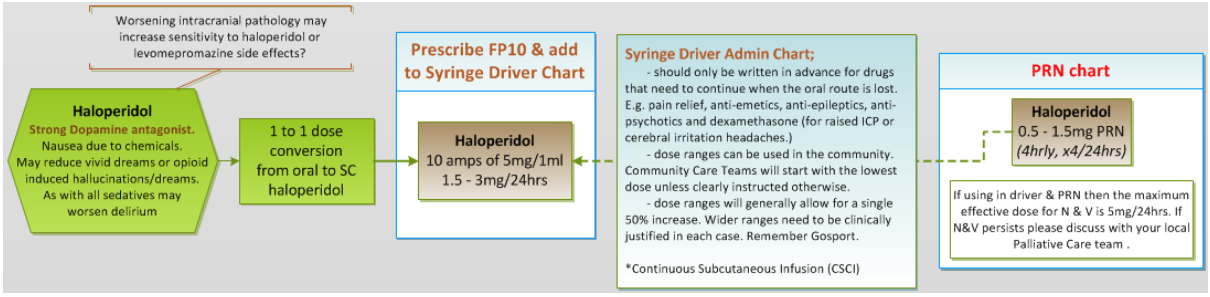
Figure 3.0 - Anti-emetics

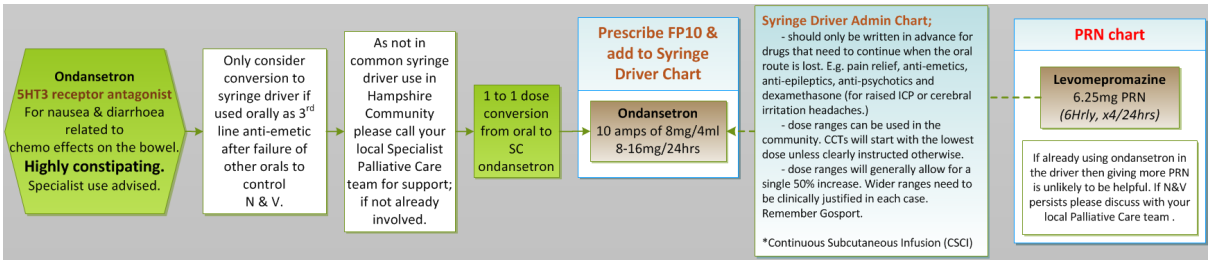







Cyclizine
Antihistamine
For nausea only if vestibular induced or Parkinson's & related conditions.
Acts on vomiting centre.
May reduce retching & vomiting triggered by cough, oesophageal irritation or for patients with bowel obstruction.
Also vomiting due to cerebral irritation.
Avoid in heart failure if possible.
1 to 1 dose conversion from oral to SC cyclizine
Prescribe FP10 & add to Syringe Driver Chart
Cyclizine
10 amps of 50mg/1ml
150mg/24hrs
Syringe Driver Admin Chart;
- should only be written in advance for drugs that need to continue when the oral route is lost. E.g. pain relief, anti-emetics, anti-epileptics, anti-psychotics and dexamethasone (for raised ICP or cerebral irritation headaches.)
- dose ranges can be used in the community. Community Care Teams will start with the lowest dose unless clearly instructed otherwise.
- dose ranges will generally allow for a single 50% increase. Wider ranges need to be clinically justified in each case. Remember Gosport.
*Continuous Subcutaneous Infusion (CSCI)
Cyclizine stings and can cause site irritation.
DO NOT mix with 0.9% Saline. Use water for injection in the driver.
Consider change to a less irritant anti-emetic e.g.Haloperidol, metoclopramide or 2nd line levomepromazine
PRN chart
If using in driver & PRN then the maximum effective dose for N & V is 150mg/24hrs. If N&V persists please consider conversion to levomepromazine or discuss with your local Palliative Care team .
Cyclizine
50mg PRN
(4Hrly, x3/24hrs)


Worsening intracranial pathology may increase sensitivity to haloperidol or levomepromazine side effects?
Haloperidol
Strong Dopamine antagonist.
Nausea due to chemicals.
May reduce vivid dreams or opioid induced hallucinations/dreams.
As with all sedatives may worsen delirium
1 to 1 dose conversion from oral to SC haloperidol
Prescribe FP10 & add to Syringe Driver Chart
Haloperidol
10 amps of 5mg/1ml
1.5 - 3mg/24hrs
Syringe Driver Admin Chart;
- should only be written in advance for drugs that need to continue when the oral route is lost. E.g. pain relief, anti-emetics, anti-epileptics, anti-psychotics and dexamethasone (for raised ICP or cerebral irritation headaches.)
- dose ranges can be used in the community. Community Care Teams will start with the lowest dose unless clearly instructed otherwise.
- dose ranges will generally allow for a single 50% increase. Wider ranges need to be clinically justified in each case. Remember Gosport.
*Continuous Subcutaneous Infusion (CSCI)
PRN chart
Haloperidol
0.5 - 1.5mg PRN
(4hrly, x4/24hrs)
If using in driver & PRN then the maximum effective dose for N & V is 5mg/24hrs. If N&V persists please discuss with your local Palliative Care team .


Ondansetron
5HT3 receptor antagonist
For nausea & diarrhoea related to chemo effects on the bowel.
Highly constipating.
Specialist use advised.
Only consider conversion to syringe driver if used orally as 3rd line anti-emetic after failure of other orals to control N & V.
As not in common syringe driver use in Hampshire Community please call your local Specialist Palliative Care team for support; if not already involved.
1 to 1 dose conversion from oral to SC ondansetron
Prescribe FP10 & add to Syringe Driver Chart
Ondansetron
10 amps of 8mg/4ml
8-16mg/24hrs
Syringe Driver Admin Chart;
- should only be written in advance for drugs that need to continue when the oral route is lost. E.g. pain relief, anti-emetics, anti-epileptics, anti-psychotics and dexamethasone (for raised ICP or cerebral irritation headaches.)
- dose ranges can be used in the community. CCTs will start with the lowest dose unless clearly instructed otherwise.
- dose ranges will generally allow for a single 50% increase. Wider ranges need to be clinically justified in each case. Remember Gosport.
*Continuous Subcutaneous Infusion (CSCI)
PRN chart
Levomepromazine
6.25mg PRN
(6Hrly, x4/24hrs)
If already using ondansetron in the driver then giving more PRN is unlikely to be helpful. If N&V persists please discuss with your local Palliative Care team .

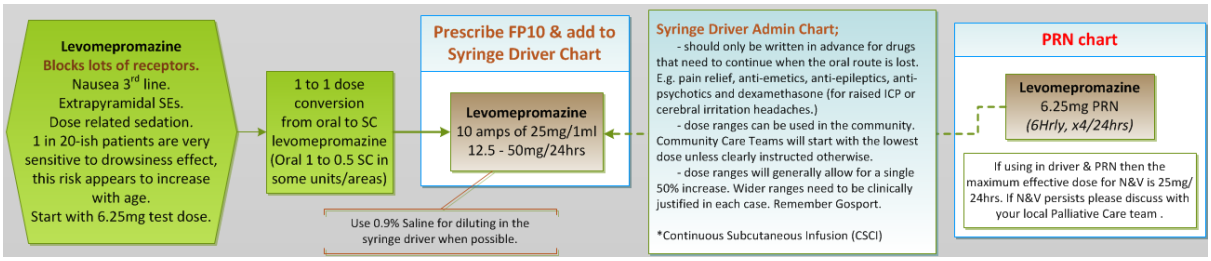

Levomepromazine
Blocks lots of receptors.
Nausea 3rd line.
Extrapyramidal SEs.
Dose related sedation.
1 in 20-ish patients are very sensitive to drowsiness effect, this risk appears to increase with age.
Start with 6.25mg test dose.
1 to 1 dose conversion from oral to SC levomepromazine (Oral 1 to 0.5 SC in some units/areas)
Prescribe FP10 & add to Syringe Driver Chart
Levomepromazine
10 amps of 25mg/1ml
12.5 - 50mg/24hrs
Use 0.9% Saline for diluting in the syringe driver when possible.
Syringe Driver Admin Chart;
- should only be written in advance for drugs that need to continue when the oral route is lost. E.g. pain relief, anti-emetics, anti-epileptics, anti-psychotics and dexamethasone (for raised ICP or cerebral irritation headaches.)
- dose ranges can be used in the community. Community Care Teams will start with the lowest dose unless clearly instructed otherwise.
- dose ranges will generally allow for a single 50% increase. Wider ranges need to be clinically justified in each case. Remember Gosport.
*Continuous Subcutaneous Infusion (CSCI)
PRN chart
Levomepromazine
6.25mg PRN
(6Hrly, x4/24hrs)
If using in driver & PRN then the maximum effective dose for N&V is 25mg/24hrs. If N&V persists please discuss with your local Palliative Care team .

Figure 4.0 - Breathlessness

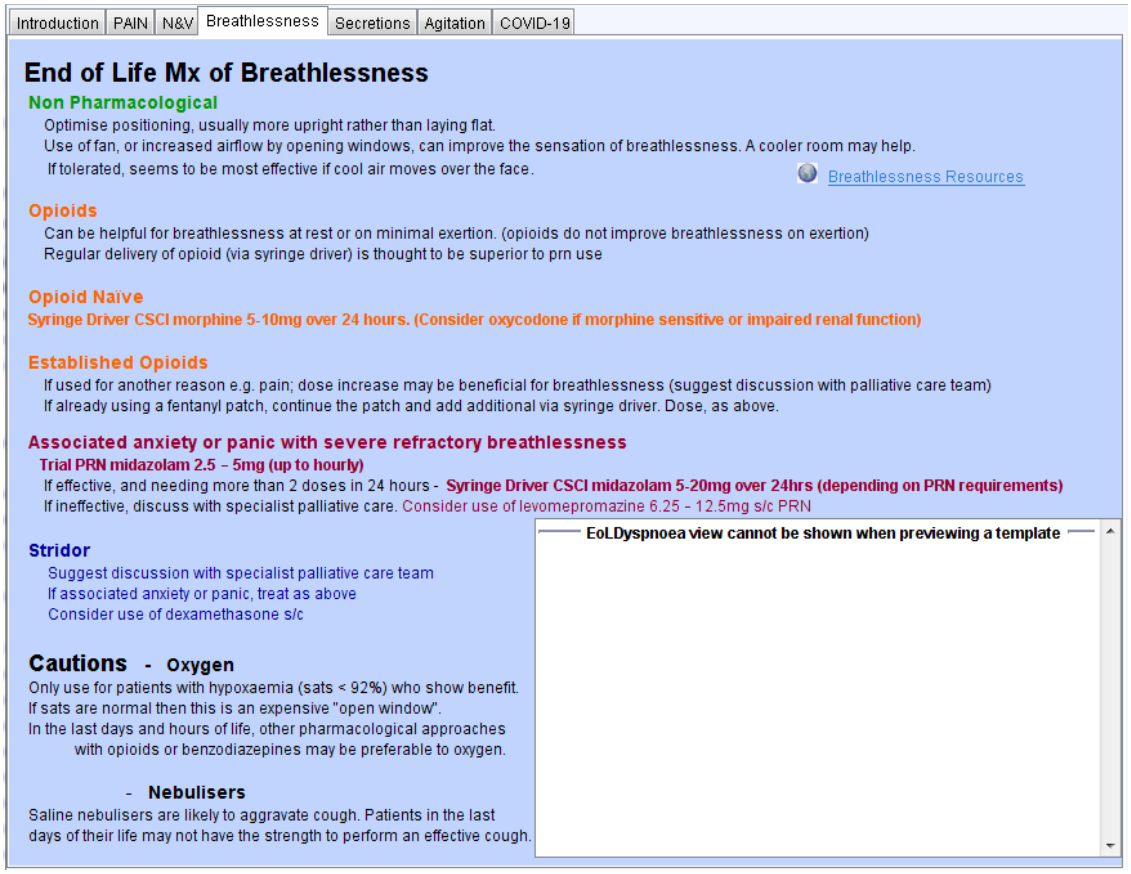
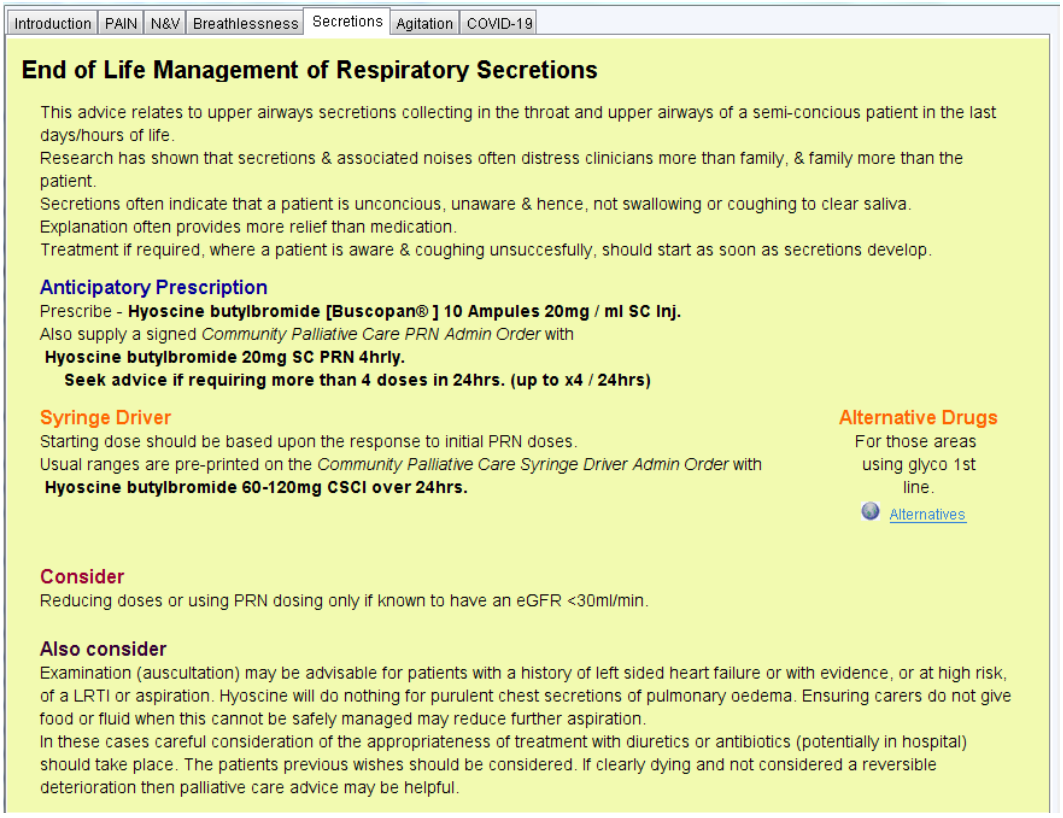


Figure 5.0 - Respiratory Secretions



www.futureplanning.org.uk/EoLSecretions

Figure 6.0 - Agitation

Introduction | PAIN | N&V | Breathlessness | Secretions | Agitation | COVID-19

End of Life Management of Agitation, Delirium & Anxiety

First - Establish patient is dying, rather than this being a reversible cause of hyperactive delirium:

Does the previous illness trajectory fit this deterioration? If not, consider;

- Medication side effects (opioid toxicity, anticholinergics, benzodiazepines)
- Brain tumour/ metastases - missed steroids, raised ICP or subclinical constant seizures
- New Fluid and electrolyte disturbances (dehydration, hypercalcaemia, hyponatraemia)
- Metabolic disorders (hyperthyroidism, hyperglycaemia)

Second - Where possible, aim to reverse any potential causes of agitation, delirium or anxiety.

- have long term oral sedatives been replaced? - e.g. anti-psychotics, BDZs, anti-epileptics? Consider seeking advice.

If unable to communicate, consider;

- pain. Ongoing but poorly controlled due to reduced oral meds. New due to pressure areas, stiffness, etc.
- a full bladder or distress from not being able to get to the toilet - catheter or pads & re-assure.
- loaded & uncomfortable bowels - though appears unfair, an enema/suppositories will help.
- thirst is unusual, having a dry mouth is not. Allow sips if able, wet and clean the mouth & tongue.
- psychological or spiritual distress. A chaplain, imam, relative or friend may be better than a drug.
- disturbance. Sometimes families have to be guided to give the patient some space/quiet/time.

Third - Support & education of family members/ carers around non-pharmacological management.

Carers leaflet for printing.

Fourth - Medication

- **if eGFR 30 or less. Start with half PRN doses, expect prolonged duration of action & avoid syringe driver, if possible.**

Or **Select link to view suggested medications.** Agitation

Anticipatory Medications Only for Agitation, Delirium & Anxiety **Also select link.**

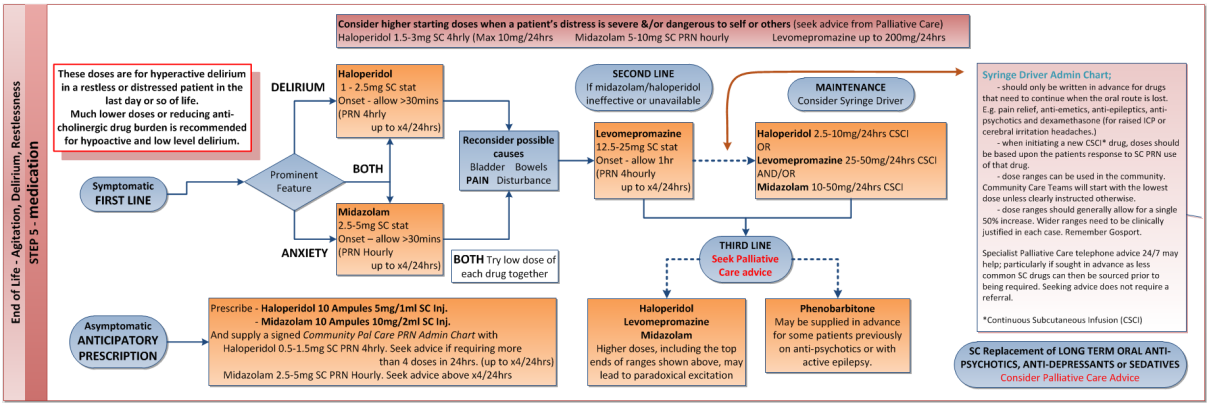
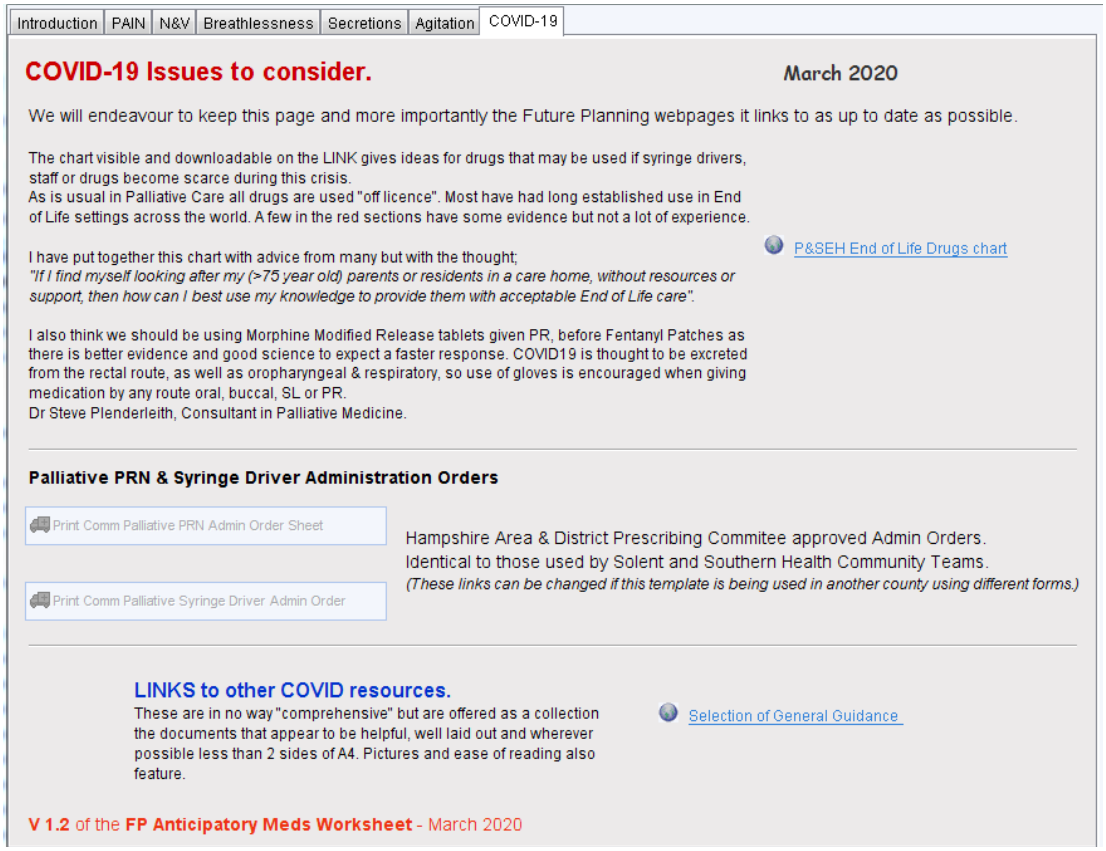
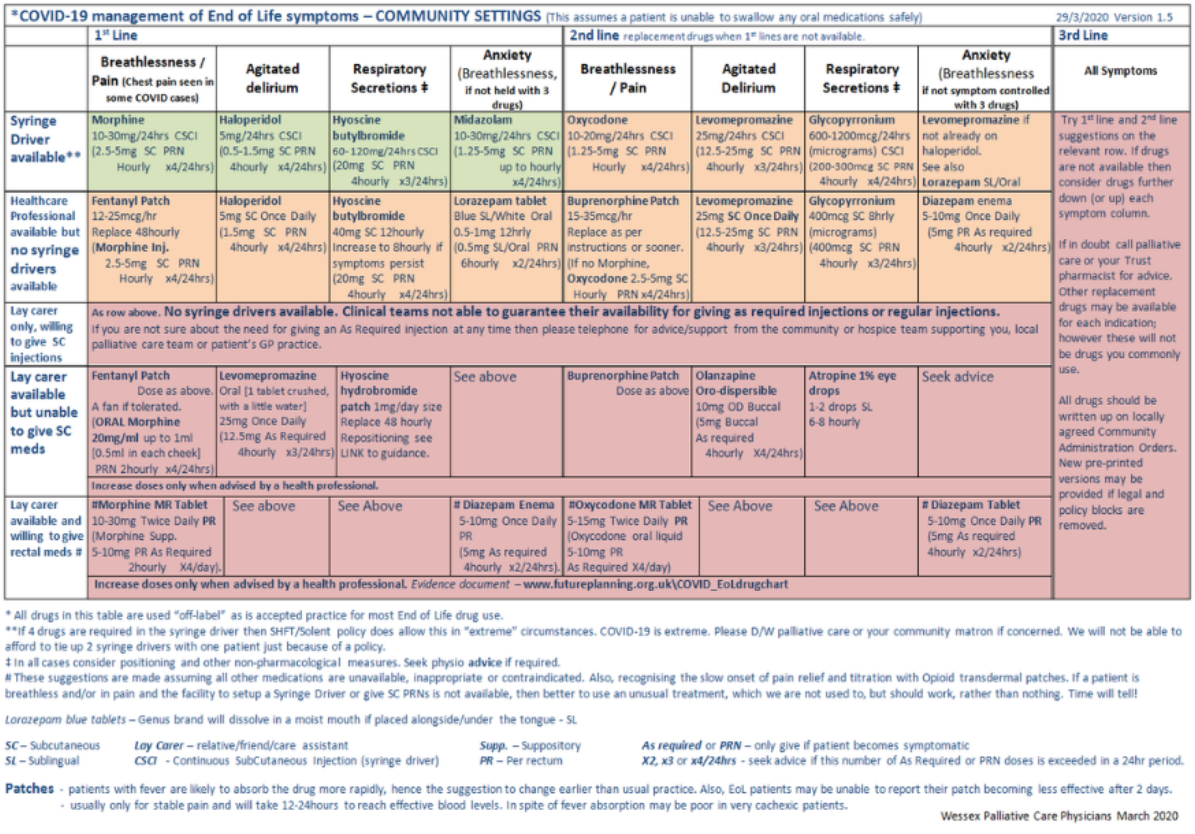


Figure 7.0 – COVID-19





***COVID-19 management of End of Life symptoms – COMMUNITY SETTINGS** (This assumes a patient is unable to swallow any oral medications safely) 29/3/2020 Version 1.5

	1st Line				2nd line replacement drugs when 1st lines are not available.				3rd Line
	Breathlessness / Pain (Chest pain seen in some COVID cases)	**Agitated delirium**	**Respiratory Secretions ‡**	**Anxiety** (Breathlessness, if not held with 3 drugs)	**Breathlessness / Pain**	**Agitated Delirium**	**Respiratory Secretions ‡**	**Anxiety** (Breathlessness if not symptom controlled with 3 drugs)	**All Symptoms**
Syringe Driver available**	**Morphine** 10-30mg/24hrs CSCI (2.5-5mg SC PRN Hourly x4/24hrs)	**Haloperidol** 5mg/24hrs CSCI (0.5-1.5mg SC PRN 4hourly x4/24hrs)	**Hyoscine butylbromide** 60-120mg/24hrs CSCI (20mg SC PRN 4hourly x3/24hrs)	**Midazolam** 10-30mg/24hrs CSCI (1.25-5mg SC PRN up to hourly x4/24hrs)	**Oxycodone** 10-20mg/24hrs CSCI (1.25-5mg SC PRN Hourly x4/24hrs)	**Levomepromazine** 25mg/24hrs CSCI (12.5-25mg SC PRN 4hourly x3/24hrs)	**Glycopyrronium** 600-1200mcg/24hrs (micrograms) CSCI (200-300mcg SC PRN 4hourly x4/24hrs)	**Levomepromazine** if not already on haloperidol. See also **Lorazepam** SL/Oral	Try 1st line and 2nd line suggestions on the relevant row. If drugs are not available then consider drugs further down (or up) each symptom column. If in doubt call palliative care or your Trust pharmacist for advice. Other replacement drugs may be available for each indication; however these will not be drugs you commonly use. All drugs should be written up on locally agreed Community Administration Orders. New pre-printed versions may be provided if legal and policy blocks are removed.
Healthcare Professional available but no syringe drivers available	**Fentanyl Patch** 12-25mcg/hr Replace 48hourly (**Morphine Inj.** 2.5-5mg SC PRN Hourly x4/24hrs)	**Haloperidol** 5mg SC Once Daily (1.5mg SC PRN 4hourly x4/24hrs)	**Hyoscine butylbromide** 40mg SC 12hourly Increase to 8hourly if symptoms persist (20mg SC PRN 4hourly x4/24hrs)	**Lorazepam tablet** Blue SL/White Oral 0.5-1mg 12hrly (0.5mg SL/Oral PRN 6hourly x2/24hrs)	**Buprenorphine Patch** 15-35mcg/hr Replace as per instructions or sooner. (If no Morphine, **Oxycodone** 2.5-5mg SC Hourly PRN x4/24hrs)	**Levomepromazine** 25mg **SC Once Daily** (12.5-25mg SC PRN 4hourly x3/24hrs)	**Glycopyrronium** 400mcg SC 8hrly (micrograms) (400mcg SC PRN 4hourly x3/24hrs)	**Diazepam** enema 5-10mg Once Daily (5mg PR As required 4hourly x2/24hrs)	
Lay carer only, willing to give SC injections	As row above. **No syringe drivers available. Clinical teams not able to guarantee their availability for giving as required injections or regular injections.** If you are not sure about the need for giving an As Required injection at any time then please telephone for advice/support from the community or hospice team supporting you, local palliative care team or patient's GP practice.								
Lay carer available but unable to give SC meds	**Fentanyl Patch** Dose as above. A fan if tolerated. (**ORAL Morphine 20mg/ml** up to 1ml [0.5ml in each cheek] PRN 2hourly x4/24hrs)	**Levomepromazine** Oral [1 tablet crushed, with a little water] 25mg Once Daily (12.5mg As Required 4hourly x3/24hrs)	**Hyoscine hydrobromide patch** 1mg/day size Replace 48 hourly Repositioning see LINK to guidance.	See above	**Buprenorphine Patch** Dose as above	**Olanzapine Oro-dispersible** 10mg OD Buccal (5mg Buccal As required 4hourly X4/24hrs)	**Atropine 1% eye drops** 1-2 drops SL 6-8 hourly	Seek advice	
	Increase doses only when advised by a health professional.								
Lay carer available and willing to give rectal meds #	**#Morphine MR Tablet** 10-30mg Twice Daily **PR** (Morphine Supp. 5-10mg PR As Required 2hourly X4/day).	See above	See Above	**# Diazepam Enema** 5-10mg Once Daily PR (5mg As required 4hourly x2/24hrs).	**#Oxycodone MR Tablet** 5-15mg Twice Daily **PR** (Oxycodone oral liquid 5-10mg PR As Required X4/day)	See Above	See Above	**# Diazepam Tablet** 5-10mg Once Daily **PR** (5mg As required 4hourly x2/24hrs)	
	Increase doses only when advised by a health professional. *Evidence document* – **www.futureplanning.org.uk\COVID_EoLdrugchart**								

* All drugs in this table are used "off-label" as is accepted practice for most End of Life drug use.
**If 4 drugs are required in the syringe driver then SHFT/Solent policy does allow this in "extreme" circumstances. COVID-19 is extreme. Please D/W palliative care or your community matron if concerned. We will not be able to afford to tie up 2 syringe drivers with one patient just because of a policy.
‡ In all cases consider positioning and other non-pharmacological measures. Seek physio **advice** if required.
# These suggestions are made assuming all other medications are unavailable, inappropriate or contraindicated. Also, recognising the slow onset of pain relief and titration with Opioid transdermal patches. If a patient is breathless and/or in pain and the facility to setup a Syringe Driver or give SC PRNs is not available, then better to use an unusual treatment, which we are not used to, but should work, rather than nothing. Time will tell!

Lorazepam blue tablets – Genus brand will dissolve in a moist mouth if placed alongside/under the tongue - SL

SC – Subcutaneous ***SL*** – Sublingual ***Lay Carer*** – relative/friend/care assistant ***CSCI*** - Continuous SubCutaneous Injection (syringe driver) ***Supp.*** – Suppository ***PR*** – Per rectum ***As required*** or ***PRN*** – only give if patient becomes symptomatic ***X2, x3*** or ***x4/24hrs*** - seek advice if this number of As Required or PRN doses is exceeded in a 24hr period.

Patches - patients with fever are likely to absorb the drug more rapidly, hence the suggestion to change earlier than usual practice. Also, EoL patients may be unable to report their patch becoming less effective after 2 days.
- usually only for stable pain and will take 12-24hours to reach effective blood levels. In spite of fever absorption may be poor in very cachexic patients.

Wessex Palliative Care Physicians March 2020

www.futureplanning.org.uk/covid19_generalguidance.html