PRESCRIBING GUIDANCE FOR WHEN THE SUBCUTANEOUS ROUTE FOR MEDICATIONS IS IMPOSSIBLE OR SIGNFICANTLY REDUCED

This formulary has been compiled for use in the event of administration of injectable medication in the community setting being impossible or significantly reduced. It provides a list of medications that may be administered via non-injectable routes.

Regular bolus SC administration of a single medication or a combination of medications remains an effective way to manage symptoms when:

- There is no syringe pump available
- There are no/insufficient staff present who are trained to set up or maintain a syringe pump
- Trained nursing staff are available to give regular SC medication or in some areas family carers can be trained to give regular SC medication

When giving SC opioid injections, the maximum recommended volume per injection is 2ml.
As required medication can be given in addition to this regular dosing.

Drugs given by the sublingual or buccal route can also be dispersed in water and administered down a naso-gastric tube where this is in place.

Please refer to the Guide for equivalent doses for opioid drugs on pages 9 &10 when considering prescribing an opioid. This includes advice about transdermal opioid patches.

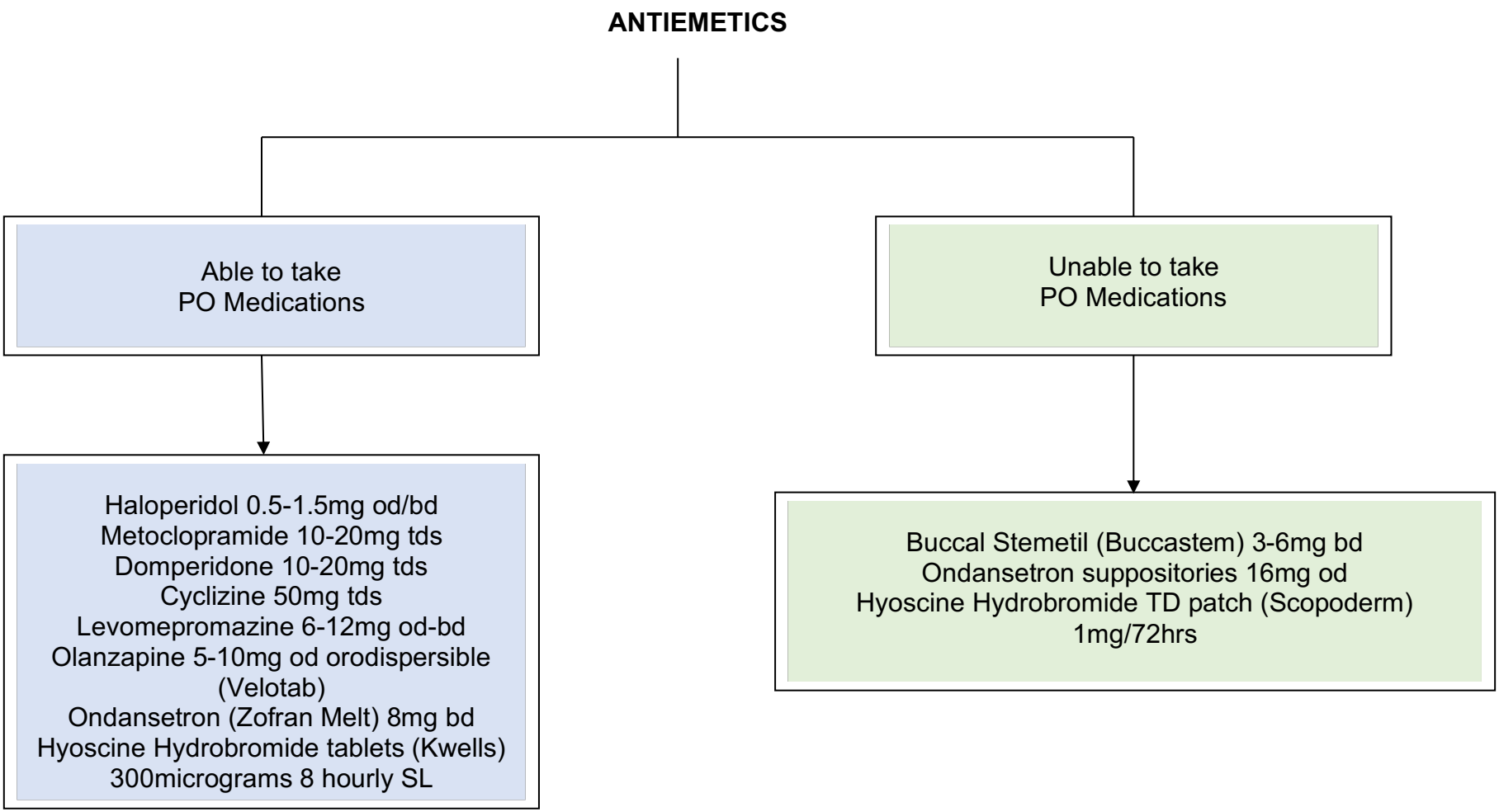
Please call for specialist palliative care advice if required

LIST OF NON-PARENTERAL DRUGS FOR END OF LIFE CARE
PANDEMIC COVID-19 PROTOCOL

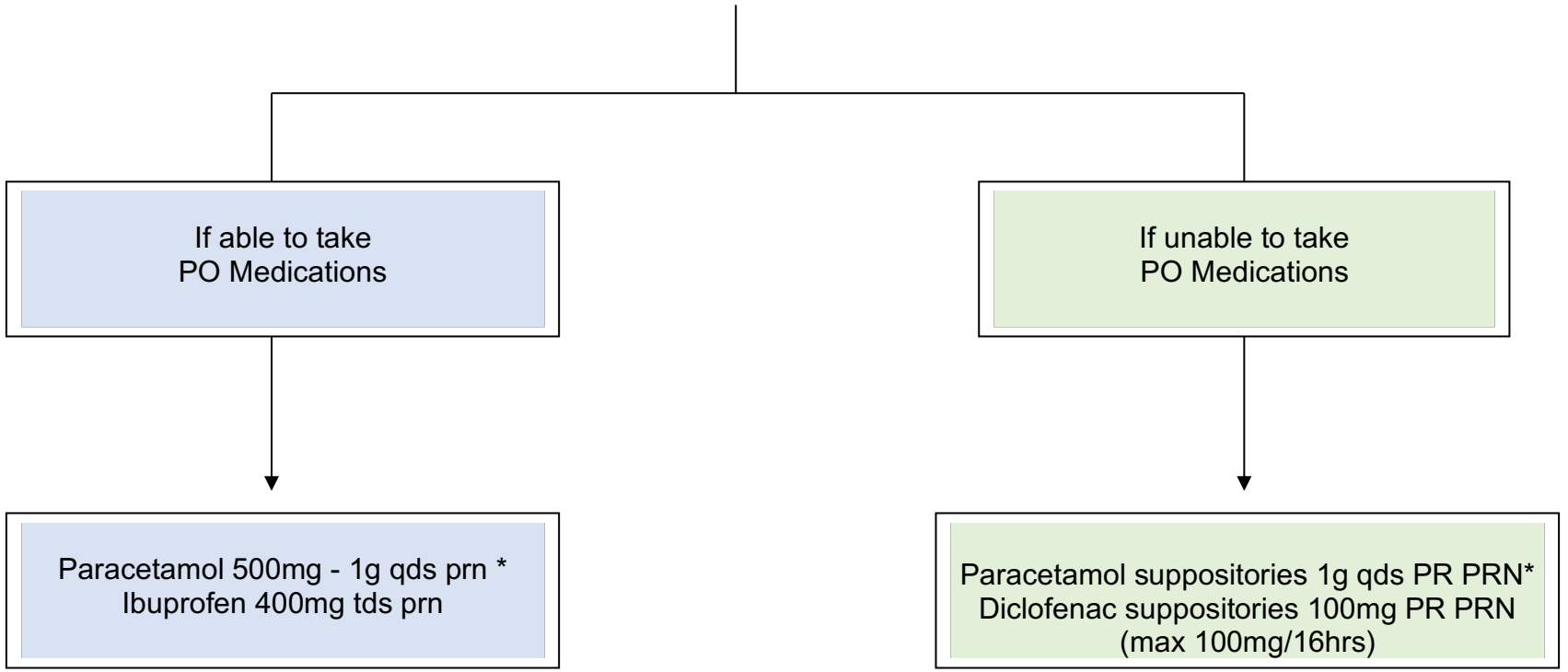
Abbreviations: MR = modified release, IR = immediate release, SL = sublingual, TD = transdermal, PO = per os, by mouth, SC = subcutaneous, SPCT = specialist palliative care team

ANALGESICS Able to take oral medications	• Oral Morphine IR • Morphine Sulphate MR • Paracetamol 500mg - 1 gram up to qds (Use 500mg dose if: Weight <50kg, hepatic impairment, eGFR<30ml/min, history of alcohol excess) • Ibuprofen 400mg up to tds
Unable to take oral medications	**Per rectum route**: • Paracetamol suppositories Paracetamol 500mg - 1 gram up to qds PRN (Use 500mg dose if: Weight <50kg, hepatic impairment, eGFR<30ml/min, history of alcohol excess) • Diclofenac suppositories 100mg PRN (maximum dose 100mg every 16 hours) • MST Continus tablets can be given rectally although the absorption is not as reliable as orally. Dose as per oral MST dose. • Morphine sulfate suppositories (10mg) – these are only available as a special **Transdermal route:** • Buprenorphine transdermal patch • Fentanyl transdermal patch **Transmucosal route:** • Fentanyl transmucosal tablets (Abstral) SL
ANTIPYRETICS Able to take oral medications	• Paracetamol 500mg - 1 gram up to qds (Use 500mg dose if: Weight <50kg, hepatic impairment, eGFR<30ml/min, history of alcohol excess) • Ibuprofen 400mg up to tds
Unable to take oral medications	**Per rectum route:** • Paracetamol suppositories Paracetamol 500mg - 1 gram up to qds PRN (Use 500mg dose if: Weight <50kg, hepatic impairment, eGFR<30ml/min, history of alcohol excess) • Diclofenac suppositories 100mg PRN (maximum dose 100mg every 16 hours)

ANXIOLYTICS Able to take oral medications	• Diazepam
Unable to take oral medications	**Sublingual route:** • Lorazepam (specify Genus brand, scored tablet) • Buccal midazolam **Per rectum route:** • Diazepam rectal solution
SECRETIONS Able to take oral medications Unable to take oral medications	• Amitriptyline 10-25mg od • Glycopyrronium (oral solution/suspension) 200 micrograms 8-hrly up to 1mg tds **Transdermal route:** • Hyoscine transdermal patch (Scopoderm) 1mg/72 hours **Sublingual route:** • Hyoscine hydrobromide tablets (Kwells) 300micrograms SL 8-hrly • Atropine 1% ophthalmic solution 1-4 drops SL 4-hrly
ANTIEMETICS Able to take oral medications	• Haloperidol 0.5-1.5mg od/bd • Metoclopramide 10-20mg tds • Domperidone 10-20mg tds • Cyclizine 50mg tds • Levomepromazine 6-12mg od-bd • Olanzapine 5-10mg od orodispersible (Velotab) • Ondansetron (Zofran Melt) 8mg bd • Hyoscine Hydrobromide tablets (Kwells) 300micorgrams 8 hourly SL
Unable to take oral medications	**Transmucosal route:** • Buccal Prochlorperazine (Buccastem) (3mg) **Per rectum route:** • Ondansetron suppositories (16mg od) **Transdermal route:** • Hyoscine hydrobromide TD patch (Scopoderm) 1mg/72hrs

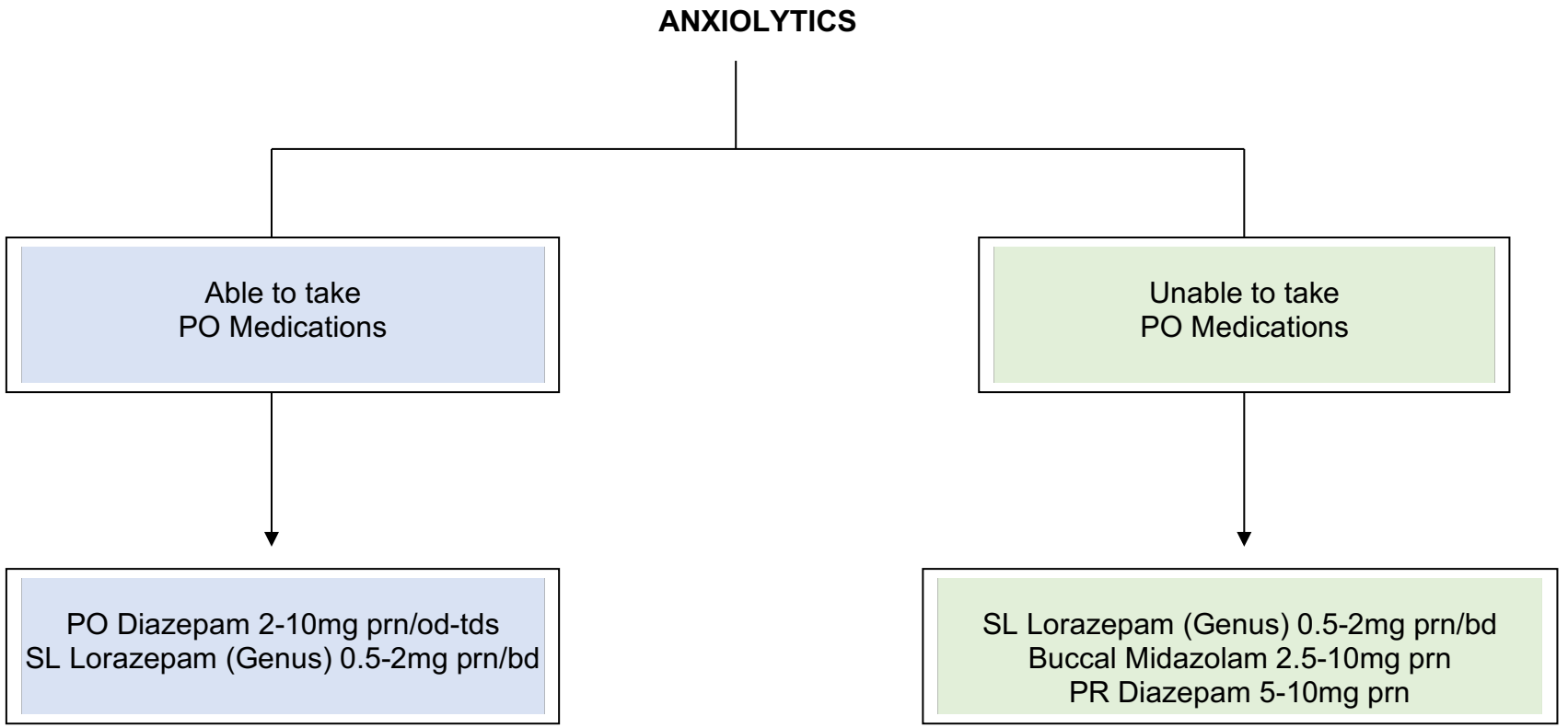

ANTIEMETICS
Able to take
PO Medications
Haloperidol 0.5-1.5mg od/bd
Metoclopramide 10-20mg tds
Domperidone 10-20mg tds
Cyclizine 50mg tds
Levomepromazine 6-12mg od-bd
Olanzapine 5-10mg od orodispersible (Velotab)
Ondansetron (Zofran Melt) 8mg bd
Hyoscine Hydrobromide tablets (Kwells) 300micrograms 8 hourly SL
Unable to take
PO Medications
Buccal Stemetil (Buccastem) 3-6mg bd
Ondansetron suppositories 16mg od
Hyoscine Hydrobromide TD patch (Scopoderm) 1mg/72hrs

ANTIPYRETICS

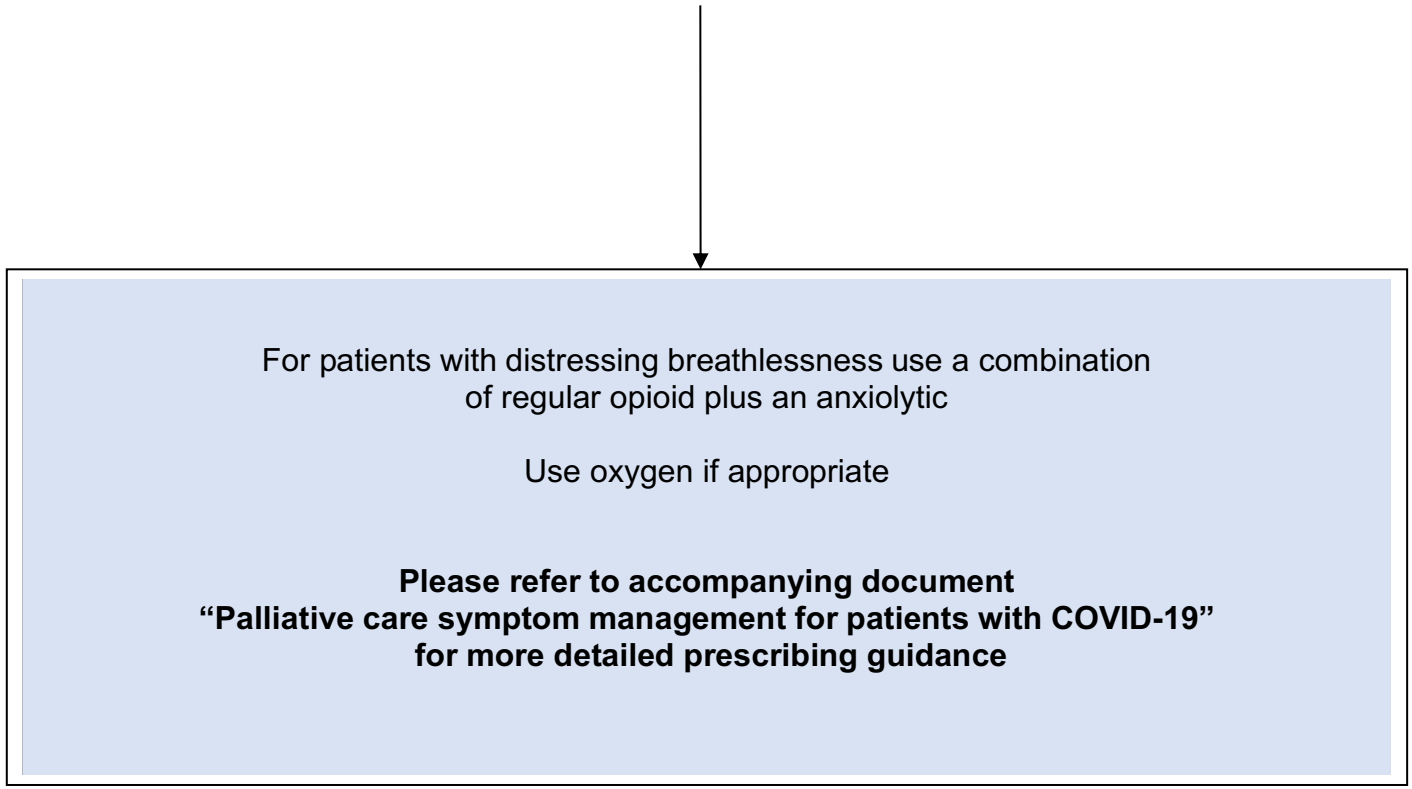


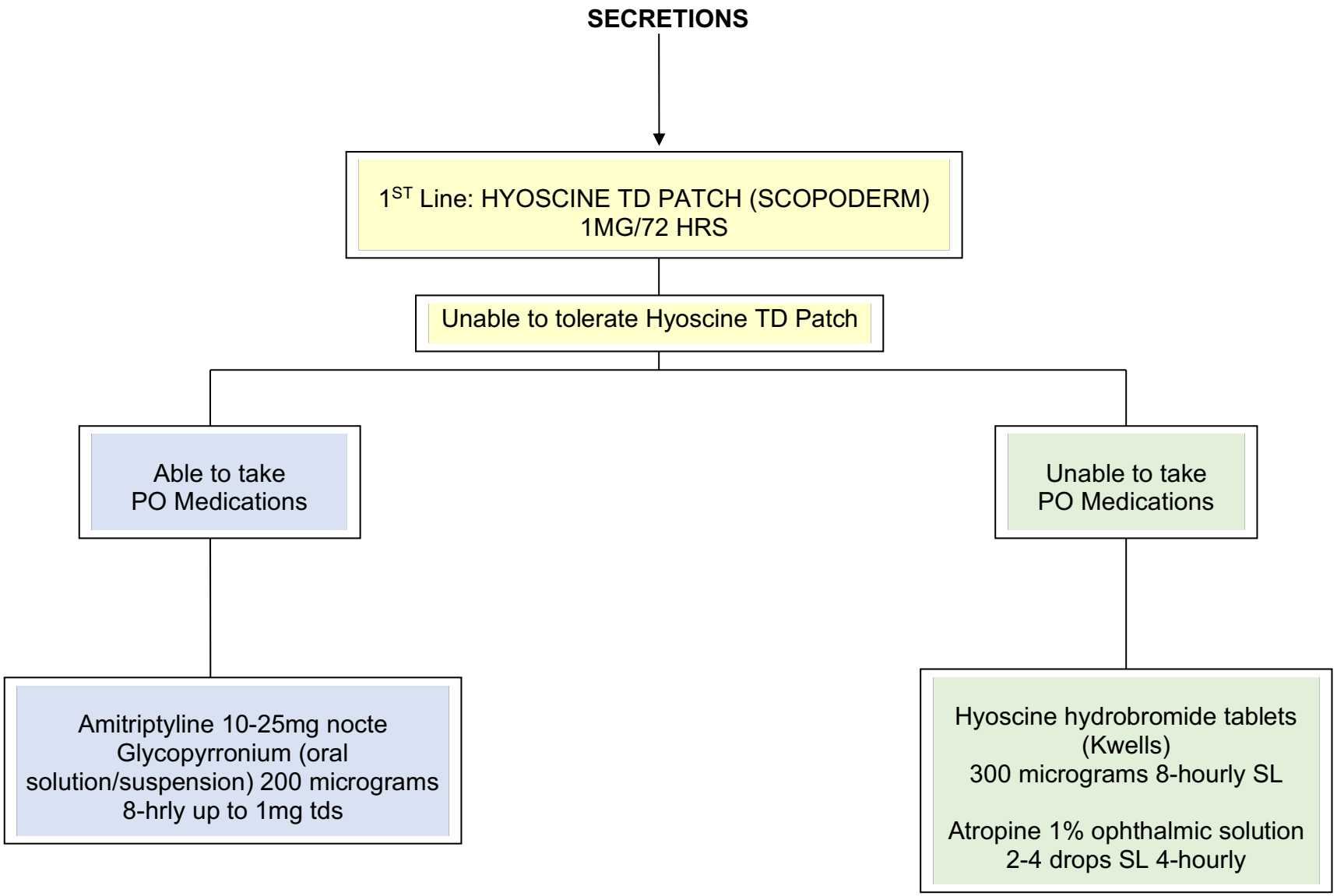
* Use 500mg dose if: Weight <50kg, hepatic impairment, eGFR<30ml/min, history of alcohol excess

PAL/KATHY/DR SARAH HUMAN/ADMIN/ANTIPYRETICS


ANXIOLYTICS
Able to take
PO Medications
Unable to take
PO Medications
PO Diazepam 2-10mg prn/od-tds
SL Lorazepam (Genus) 0.5-2mg prn/bd
SL Lorazepam (Genus) 0.5-2mg prn/bd
Buccal Midazolam 2.5-10mg prn
PR Diazepam 5-10mg prn

BREATHLESSNESS





PAL/KATHY/DR SARAH HUMAN/ADMIN/SECRETIONS

PRESCRIBING IN PALLIATIVE CARE: A GUIDE TO EQUIVALENT DOSES FOR OPIOID DRUGS

This is to be used as **a guide** rather than a set of definitive equivalences. It is crucial to appreciate that conversion ratios are never more than an approximate guide (comprehensive data are lacking, inter-individual variation). The advice is always to calculate doses using morphine as standard and to adjust them to suit the patient and the situation. Some of these doses have by necessity been rounded up or down to fit in with the preparations available, including adjustment of doses for liquid and injectable medications in order to optimise ability to dispense accurately.

PLEASE SEEK SPECIALIST ADVICE IF YOU ARE UNCERTAIN ABOUT WHAT TO PRESCRIBE AND/OR PATIENT NEEDING ESCALATNG OPIOID DOSES

Oral Morphine			Subcutaneous Morphine		Subcutaneous Diamorphine		Oral Oxycodone			Subcutaneous Oxycodone		Approximate TD Fentanyl patch micrograms/hr	Subcutaneous Alfentanil		Subcutaneous Fentanyl	
4 hr dose (mg)	12hr SR dose (mg)	24hr Total dose (mg)	4 hr dose (mg)	24 hr total dose (mg)	4 hr dose (mg)	24 hr total dose (mg)	4hr dose (mg)	12hr SR dose (mg)	24hr total dose (mg)	4 hr dose (mg)	24 hr total dose (mg)	Please see additional chart below for dose conversion ranges	4 hr dose (mg)	24hr total dose (mg)	4 hr dose (mcg)	24hr total dose (mcg)
5	15	30	2.5	15	1	10	2.5	7.5	15	1	7.5	12mcg	0.1	1	25	200-250
10	30	60	5	30	2.5-5	20	5	15	30	2.5	15	25mcg	0.2	2	50	400-500
15	45	90	7.5	45	5	30	7.5	25	50	4	25	25-37mcg	0.5	3	100	600-750
20	60	120	10	60	7.5	40	10	30	60	5	30	37-50mcg	0.7	4	Syringe pump volume issues likely above 500mcg/24hours because fentanyl injection available as 50micrograms/ml	
30	90	180	15	90	10	60	15	45	90	7.5	45	50-75mcg	1	6		
40	120	240	20	120	12.5	80	20	60	120	10	60	75-100mcg	1	8		
50	150	300	25	150	15	100	25	75	150	12.5	75	100-150mcg	1.5	10		
60	180	360	30	180	20	120	30	90	180	15	90	100-150mcg	2	12		
70	210	420	35	210	25	140	35	105	210	17.5	100	125-175mcg	2.5	14		
80	240	480	40	240	27.5	160	40	120	240	20	120	125-200mcg	2.5	16		

- Two thirds of palliative care patients need <180mg/24hrs of oral morphine
- The dose conversion ratio of morphine to oxycodone is approximately 1.5-2:1. For the purposes of this guidance we have adopted a 2:1 ratio
- The dose conversion ratio of SC diamorphine: SC alfentanil is from 6-10:1. It is prudent to use the more conservative ratio when switching from one to the other e.g. if switching from diamorphine to alfentanil, use dose conversion ratio 10:1 so that 10mg diamorphine = 1mg alfentanil. If switching from alfentanil to diamorphine use dose conversion ratio 6:1 so that 1mg alfentanil = 6mg diamorphine.
- The dose conversion ratio of SC Alfentanil: SC fentanyl is approximately 4-5:1

TRANSDERMAL (TD) OPIOID PATCHES

Fentanyl TD patch micrograms/hr	Approximate oral Morphine mg/24hours
12	30-45
25	60-90
37	90-135
50	120-180
62	150-225
75	180-270
100	240-360
125	300-450
150	360-540
175	420-630
200	480-720

Buprenorphine TD micrograms/hr	Approximate oral Morphine mg/24hrs
5	10-20
10	20-30
15	30-40
20	40-50
35.5	80-90
52.5	120-130
70	160-180
Maximum authorised dose is two 70micrograms/hr patches	

- A

PO morphine:transdermal fentanyl dose conversion ratio of 100-150:1
is used (PCF6 & BNF 100:1, Public Health Education Opioids Aware Resource 150:1) resulting in a dose range of oral morphine per patch strength e.g. Fentanyl TD 25mcg/hr patch approximately= 60-90mg oral morphine/24hrs

- It is suggested that for conversions from oral morphine to fentanyl patches, the lower doses of fentanyl should be used for patients who have been on oral opioids for just weeks and the higher doses for people who have been on a stable and well tolerated oral opioid regimen for a longer period.
- Transdermal fentanyl patches are changed every 3 days (72 hours)
- A PO morphine: transdermal buprenorphine dose conversion of 100:1 is used (PCF6)
- A variety of transdermal buprenorphine patches are available, changed either every 3, 4 days or 7 days. Check carefully before prescribing & instructing the patient.

Resources: Palliative Care Formulary 6th Edition (PCF6)
BNF
UK Medicines Information: How should conversion from oral morphine to fentanyl patches be carried out?
https://www.sps.nhs.uk/wp-content/uploads/2017/12/UKMI_QA_Conversion-from-oral-morphine-to-fentanyl-patches_November-2017_Final.docx.
Updated November 2018 / Review November 2021
Dr Sarah Human, Dr Jo Sykes and Dr George Walker, Consultants in Palliative Medicine, Rowcroft Hospice, South Devon in collaboration with Hospiscare, Exeter, St Luke's Hospice, Plymouth and North Devon Hospice, Barnstaple.