Opioid Conversion factors (16th September 2005)

3 step conversion

1. Find the current opioid and route at the TOP of the table

2. Find the new opioid and route you are changing to on the RIGHT of the table

3. Where the lines cross, read the conversion factor

x multiply current opioid by this factor

÷ divide current opioid by this factor

ask = ask for advice

New opioid and route ↓ / Current opioid and route →	PO codeine	PO dihydrocodeine	PO morphine	PO oxycodone	SC oxycodone	SC morphine	SC diamorphine	PO hydromorphone	SC hydromorphone	SL buprenorphine	TD or SC fentanyl
PO codeine	—	x 1	x 10	x 15	x 20	x 20	x 30	ask	ask	ask	ask
PO dihydrocodeine	x 1	—	x 10	x 15	x 20	x 20	x 30	ask	ask	ask	ask
PO morphine	÷ 10	÷ 10	—	x 1.5	x 2	x 2	x 3	x 5	x 10	x 30	ask
PO oxycodone	÷ 15	÷ 15	÷ 1.5	—	x 1.5	x 1.5	x 2	x 3	x 7	x 20	ask
SC oxycodone	÷ 20	÷ 20	÷ 2	÷ 1.5	—	x 1	x 1	x 2	x 4	x 13	ask
SC morphine	÷ 20	÷ 20	÷ 2	÷ 1.5	÷ 1	—	x 1	x 2	x 4	x 13	ask
SC diamorphine	÷ 30	÷ 30	÷ 3	÷ 2	÷ 1	÷ 1	—	x 1.5	x 3	x 10	ask
PO hydromorphone	ask	ask	÷ 5	÷ 3	÷ 2	÷ 2.5	÷ 1.5	—	x 2	x 6	ask
SC hydromorphone	ask	ask	÷ 10	÷ 7	÷ 4	÷ 5	÷ 3	÷ 2	—	x 3	ask
SL buprenorphine	ask	ask	÷ 30	÷ 20	÷ 13	÷ 13	÷ 10	÷ 6	÷ 3	—	ask
TD or SC fentanyl	ask	ask	ask	ask	ask	ask	ask	ask	ask	ask	—

Example: Oral morphine to diamorphine infusion: conversion factor is (÷ 3)
So, 60mg/24 hours oral morphine ≡ 20mg /24 hours SC diamorphine

For fentanyl: check the manufacturer's conversion tables
(quick conversion: oral morphine in mg/24hrs ÷ 3 = TD fentanyl in microg/hr)
If in doubt, contact pain or palliative care specialist

- These conversions are approximations, and the patient must be observed for:
  -opioid toxicity if moving to a more potent opioid or a different strong opioid.
  -opioid withdrawal on stopping, moving to a weaker opioid or changing to a different strong opioid.
- More potent opioids or routes DO NOT provide greater efficacy. eg. a pain that is not responsive to titrated oral morphine, will not respond to injectable diamorphine either, even though this route and drug are 3 times as potent. An alternative route may be needed to ensure adequate absorption.

Rules of opioid conversions
1. Know your opioid
2. Use a conversion factor with which you are familiar
3. Be prepared to re-titrate the dose.
4. If in doubt, ask for advice

	Conversion ratio from oral morphine	24 hour dose equivalent	12 hourly dose equivalent	8 hourly dose equivalent	4 hourly dose equivalent	breakthrough dose equivalent
PO codeine	**x 10**	600mg	n/a	n/a	100mg	100mg
PO pethidine	**x 10**	600mg	n/a	n/a	100mg	100mg
PO dihydrocodeine	**x 5**	300mg	150mg	n/a	50mg	50mg
PO morphine	**X 1**	**60mg**	**30mg**	**n/a**	**10mg**	**10mg**
PO oxycodone	**÷ 1.5**	40mg	20mg	n/a	7mg	7mg
SC oxycodone	**÷ 2**	30mg	15mg	n/a	5mg	5mg
SC morphine	**÷ 2**	30mg	10mg	n/a	2.5mg	2.5mg
SC diamorphine	**÷ 3**	20mg	10mg	n/a	2.5mg	2.5mg
PO hydromorphone	**÷ 5**	12mg	6mg	n/a	2mg	1.2mg
SC hydromorphone	**÷ 10**	6mg	3mg	n/a	1mg	0.5mg
SL buprenorphine	**÷ 30**	n/a	n/a	600 microg	n/a	400 microg

	Conversion ratio from oral morphine	24 hour dose equivalent	12 hourly dose equivalent	8 hourly dose equivalent	4 hourly dose equivalent	breakthrough dose equivalent
PO codeine	**x 10**	600mg	n/a	n/a	100mg	100mg
PO pethidine	**x 10**	600mg	n/a	n/a	100mg	100mg
PO dihydrocodeine	**x 5 -10**	300- 600mg	150mg	n/a	50-100mg	50-100mg
PO morphine	**X 1**	**60mg**	**30mg**	**n/a**	**10mg**	**10mg**
PO oxycodone	**÷ 1 - 2**	30 - 60mg	15 - 30mg	n/a	5 - 10mg	5 – 10mg
SC oxycodone	**÷ 2 - 3**	20 - 30mg	10 - 15mg	n/a	2.5 - 5mg	2.5 – 5mg
SC morphine	**÷ 2**	30mg	15mg	n/a	5mg	5mg
SC diamorphine	**÷ 2 - 3**	20 - 30mg	10 - 15mg	n/a	2.5mg	2.5mg
PO hydromorphone	**÷ 5 – 7.5**	12 - 18mg	6 - 9mg	n/a	2 - 3mg	1.2 – 2.4mg
SC hydromorphone	**÷ 10 - 15**	6 - 9mg	3 - 4mg	n/a	1 – 1.5mg	0.5 – 1mg
SL buprenorphine	**÷ 30**	n/a	n/a	600 microg	n/a	400 microg