

Case 3

You are an F1 working in orthogeriatrics (Ward 32) at General Hospital. Your consultant is Dr Patel.

Patient details

Name: Marion Dempsey

DOB: 04/06/1943

Patient number: X1011978

History

You see Marion, a 79-year-old lady on the post operative orthopaedic ward round.

Marion was admitted to hospital with a fractured left neck of femur 2 days ago following an unwitnessed fall at her care home. She underwent a left hemiarthroplasty procedure yesterday.

Her past medical history includes chronic kidney disease stage 3, secondary to type 2 diabetes.

Having reviewed her Kardex, you see she has been receiving regular paracetamol for pain relief. You note that she has been receiving regular doses of PRN morphine post operatively.

Your consultant Dr Patel informs you that this is a significant error – morphine should be avoided in patients with poor renal function, as the active metabolites can build up and cause toxicity.

Task 1

On the new Kardex provided, please prescribe a more appropriate choice of PRN analgesia.

You do not need to prescribe any of Marion's other medications.

**CODES FOR NON-ADMINISTRATION OF
PRESCRIBED MEDICINE**

In situations where a dose of a medicine is not administered and the matter cannot be resolved immediately the nurse must:-

- Record on the medicine chart the appropriate code number for the reason why the dose was not administered and initial this code.
- TAKE APPROPRIATE ACTION** to resolve the matter **PROMPTLY** so that patient treatment is not compromised.

For further details refer to the 'Purple Booklet'

Patient refuses	1	Unable to swallow	8
Patient not present on ward	2	Vomiting/nausea	9
Medicine not available (obtain as soon as practicable)	3	Time varied on Dr's instructions	10
Instructions not clear or legal	4	Once only/PRN medication given	11
Patient Self-Administered Medicine	5	To be specified in the Nursing Care Plan	
Nil by mouth	6	Possible drug reaction/ side effect	12
Asleep/drowsy	7	Other reasons	13

Name of Patient **MARION DEMPSEY**

Patient Number **X1011978**

Ward 32

DOB 04/06/1943

Date of Admission 27/04/2023

Consultant **DR PATEL**

Weight	Surface Area
0.0001	0.0001
0.0009	0.0009
0.0064	0.0064
0.0081	0.0081
0.0097	0.0097
0.0100	0.0100
0.0103	0.0103
0.0106	0.0106
0.0109	0.0109
0.0112	0.0112
0.0115	0.0115
0.0118	0.0118
0.0121	0.0121
0.0124	0.0124
0.0127	0.0127
0.0130	0.0130
0.0133	0.0133
0.0136	0.0136
0.0139	0.0139
0.0142	0.0142
0.0145	0.0145
0.0148	0.0148
0.0151	0.0151
0.0154	0.0154
0.0157	0.0157
0.0160	0.0160
0.0163	0.0163
0.0166	0.0166
0.0169	0.0169
0.0172	0.0172
0.0175	0.0175
0.0178	0.0178
0.0181	0.0181
0.0184	0.0184
0.0187	0.0187
0.0190	0.0190
0.0193	0.0193
0.0196	0.0196
0.0199	0.0199
0.0202	0.0202
0.0205	0.0205
0.0208	0.0208
0.0211	0.0211
0.0214	0.0214
0.0217	0.0217
0.0220	0.0220
0.0223	0.0223
0.0226	0.0226
0.0229	0.0229
0.0232	0.0232
0.0235	0.0235
0.0238	0.0238
0.0241	0.0241
0.0244	0.0244
0.0247	0.0247
0.0250	0.0250
0.0253	0.0253
0.0256	0.0256
0.0259	0.0259
0.0262	0.0262
0.0265	0.0265
0.0268	0.0268
0.0271	0.0271
0.0274	0.0274
0.0277	0.0277
0.0280	0.0280
0.0283	0.0283
0.0286	0.0286
0.0289	0.0289
0.0292	0.0292
0.0295	0.0295
0.0298	0.0298
0.0301	0.0301
0.0304	0.0304
0.0307	0.0307
0.0310	0.0310
0.0313	0.0313
0.0316	0.0316
0.0319	0.0319
0.0322	0.0322
0.0325	0.0325
0.0328	0.0328
0.0331	0.0331
0.0334	0.0334
0.0337	0.0337
0.0340	0.0340
0.0343	0.0343
0.0346	0.0346
0.0349	0.0349
0.0352	0.0352
0.0355	0.0355
0.0358	0.0358
0.0361	0.0361
0.0364	0.0364
0.0367	0.0367
0.0370	0.0370
0.0373	0.0373
0.0376	0.0376
0.0379	0.0379
0.0382	0.0382
0.0385	0.0385
0.0388	0.0388
0.0391	0.0391
0.0394	0.0394
0.0397	0.0397
0.0400	0.0400
0.0403	0.0403
0.0406	0.0406
0.0409	0.0409
0.0412	0.0412
0.0415	0.0415
0.0418	0.0418
0.0421	0.0421
0.0424	0.0424
0.0427	0.0427
0.0430	0.0430
0.0433	0.0433
0.0436	0.0436
0.0439	0.0439
0.0442	0.0442
0.0445	0.0445
0.0448	0.0448
0.0451	0.0451
0.0454	0.0454
0.0457	0.0457
0.0460	0.0460
0.0463	0.0463
0.0466	0.0466
0.0469	0.0469
0.0472	0.0472
0.0475	0.0475
0.0478	0.0478
0.0481	0.0481
0.0484	0.0484
0.0487	0.0487
0.0490	0.0490
0.0493	0.0493
0.0496	0.0496
0.0499	0.0499
0.0502	0.0502
0.0505	0.0505
0.0508	0.0508
0.0511	0.0511
0.0514	0.0514
0.0517	0.0517

DRUG SENSITIVITIES

NO KNOWN DRUG ALLERGIES - 27/4/23 T SNOOK

ONCE ONLY

[illegible]

OTHER CHARTS IN USE

Date	Type of Chart	Details	Signature NAME

X1011978

Name Number

REGULAR

[illegible]

AS REQUIRED THERAPY

Drug (Approved Name) OXYCODONE HYDROCHLORIDE (MR)			Date															
			Time															
Dose 5mg	Route PO	Start Date 27/04/23	Dose															
			Given by															
Frequency & Instructions <small>EVERY 12 HOURS FOR PAIN, DOSE MAY BE INCREASED, MAX 200MG/12 HOURS</small>		Signature T SNOOK Teresa Snook FY1	Date															
		NAME	Time															
Date Discontinued & Initials		Pharmacy	Dose															
			Given by															

Drug (Approved Name)			Date															
			Time															
Dose	Route	Start Date	Dose															
			Given by															
Frequency & Instructions		Signature	Date															
		NAME	Time															
Date Discontinued & Initials		Pharmacy	Dose															
			Given by															

Drug (Approved Name)			Date															
			Time															
Dose	Route	Start Date	Dose															
			Given by															
Frequency & Instructions		Signature	Date															
		NAME	Time															
Date Discontinued & Initials		Pharmacy	Dose															
			Given by															

Drug (Approved Name)			Date															
			Time															
Dose	Route	Start Date	Dose															
			Given by															
Frequency & Instructions		Signature	Date															
		NAME	Time															
Date Discontinued & Initials		Pharmacy	Dose															
			Given by															

Drug (Approved Name)			Date															
			Time															
Dose	Route	Start Date	Dose															
			Given by															
Frequency & Instructions		Signature	Date															
		NAME	Time															
Date Discontinued & Initials		Pharmacy	Dose															
			Given by															

EXPLANATION

This question tests your knowledge of prescribing acute analgesia in renal impairment and ability to accurately fill out a Kardex. Do not forget the basic principles of ensuring patient details are filled in correctly and all pages of the Kardex are appropriately labelled.

Prescribing analgesia is problematic in patients with CKD for several different reasons

1. Drugs may accumulate as they are **renally excreted**
2. Drugs may have increased **toxic effects** in patients with renal disease
3. Drugs with **nephrotoxic effects** (e.g. antibiotics, antihypertensives, NSAIDs) need to be used with caution

Table 1: Modified KDOQI staging of Chronic Kidney Disease

eGFR	CKD G stage	Notes for prescribing
> 60	Stage 1 or 2 if other evidence of kidney disease present (eg proteinuria)	No specific adjustment required
30-60	3	Caution advised, especially with high risk drugs (eg gentamicin) and nephrotoxic agents
15-30	4	All prescribing should take renal function into account and both dose and choice of agent should be checked. Specialist advice should be sought where appropriate.
< 15	5	
On dialysis	5D	

Pain is assessed and treated using the **WHO Pain Ladder scale**.

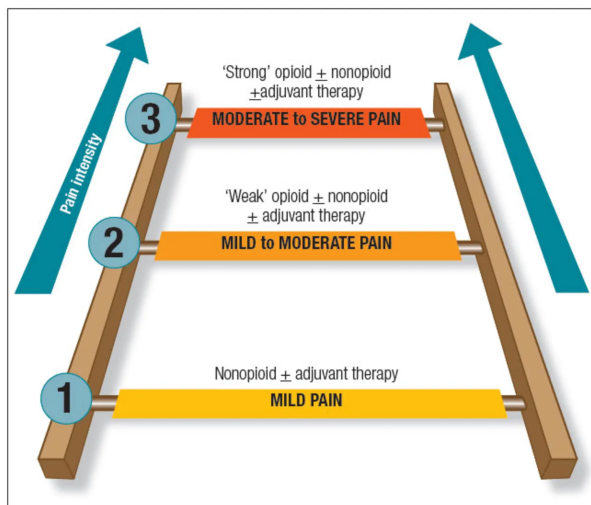


Figure 1. A modern rendition of the original 1986 WHO pain ladder with 3 steps. Patients begin at the first rung and then based on pain intensity progress, rung by rung, up the ladder as pain worsens.

Morphine is problematic in patients with reduced renal function due to the risk of accumulation of active metabolites and therefore should generally be avoided. Oxycodone is a reasonable first line strong opioid. It is partly renally excreted so doses should be reduced in patients with severe renal impairment. It is important to monitor patients regularly for evidence of **opioid side effects**.

OPIOID SIDE EFFECTS TO KNOW:

- Sedation
- Dizziness

- Nausea and vomiting
- Respiratory depression
- Constipation
- Physical dependence
- Tolerance

For oxycodone hydrochloride

Postoperative pain, Severe pain

By mouth using immediate-release medicines

Adult

Initially 5 mg every 4–6 hours, dose to be increased if necessary according to severity of pain, some patients may require higher doses than the maximum daily dose; maximum 400 mg per day.

By mouth using modified-release medicines

Adult

Initially 10 mg every 12 hours (max. per dose 200 mg every 12 hours), dose to be increased if necessary according to severity of pain, some patients might require higher doses than the maximum daily dose, use 12-hourly modified-release preparations for this dose; see *Prescribing and dispensing information*.

Do not forget that in any patient prescribed regular opioids, a laxative should be prescribed alongside to prevent **opioid induced constipation**. The NICE guidelines state for patients with opioid induced constipation:

- **Do not** prescribe bulk-forming laxatives.
- Offer an **osmotic laxative and a stimulant laxative**.

Please refer to the following constipation treatment summary section 'Opioid induced constipation'

<https://www.dbth.nhs.uk/wp-content/uploads/2022/10/Analgesia-in-patients-with-impaired-renal-function-revision-2022.pdf>

<https://bnf.nice.org.uk/treatment-summaries/constipation/#chronic-constipation>

Image: Pergolizzi J, Raffa R. The WHO Pain Ladder: Do We Need Another Step?. Pract Pain Manag. 2014;14(1).

<https://www.practicalpainmanagement.com/resources/who-pain-ladder-do-we-need-another-step>