

"Are Pharmacists on the Frontlines of the Opioid Epidemic? A Cross Sectional Study of the Practices and Competencies of Community and Hospital Pharmacists in Punjab, Pakistan"

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DEMOGRAPHICS

Please ENCIRCLE/WRITE

- Gender: Male Female
- Age (years) _____ Years of practice experience _____
- Employment status: Full-time Part-time Intern
- Type of community pharmacy: Chain Independent Hospital
- If pharmacy in hospital, type of hospital: Public Private
- Highest level of education: PhD Masters Pharm-D/B-Pharm
- Location of pharmacy:
 - Lahore, Kasur, Nankana Sahib, Sheikhupura
 - Gujranwala, Gujrat, Hafizabad, MandiBahauddin,
 - Narowal, Sialkot
 - Sargodha, Khushab, Mianwali, Bhakkar
 - Sahiwal, Pakpattan, Okara
 - Multan, Lodhran, Khanewal, Vehari
 - Faisalabad, Chiniot, Toba Tek Singh, Jhang
 - Rawalpindi, Jhelum, Chakwal, Attock
 - Bahawalpur, Bahawalnagar, Rahim Yar Khan
 - DG Khan, Layyah, Muzaffargarh, Rajanpur
- Please encircle the appropriate:
[Never = 1, rarely= 2, Sometimes= 3, Very often= 4, Almost always =5]
 - I.....make clinical notes in a journal/dispensing software (apart from narcotic register) to monitor ongoing opioids use.
1 2 3 4 5
 - Icounsel patients on the possible side effects of opioids.
1 2 3 4 5
 - Icounsel patients on opioids over dose risk.
1 2 3 4 5
 - Irefuse the supply of the opioids when in doubt of abuse
1 2 3 4 5
 - I.....notify police/regulatory bodies on the abuse of opioids
1 2 3 4 5
 - To clarify the opioids' prescription, Icall the physician
- [Never = 1, rarely= 2, Sometimes= 3 Very often= 4 Almost always =5]
 - Have you completed any continuous professional development course in last ONE year? YES NO
 - You completed your B.Pharm/Pharm-D degree from ainstitute
Public Private
 - Your system of education in B.Pharm/Pharm-D was:
Annual Semester

OPIOIDS AND SOCIETY

- The “Opioid Epidemic” or “Opioid Crises” refers to the increase in the number of deaths and hospitalization:
 - a. Due to prescription opioid use
 - b. Due to illicit(illegal) opioid use
 - c. Due to opioid use for instant pain relief
 - d. Due to both prescription and illicit(illegal) opioid use
 - e. I don’t know
- National Institute on Drug Abuse recommends the term _____ for a “substance or drug abuser”
 - a. Drug addict
 - b. Patient
 - c. Junkie
 - d. Addicted baby
 - e. I don’t know
- In Pakistan, the highest number of opioid drug users belongs to:
 - a. KPK
 - b. Punjab
 - c. Balochistan
 - d. Sindh
 - e. I don’t know
- In Pakistan, opioid misuse is more common among
 - a. Males
 - b. Females
 - c. Transgender
 - d. No difference on the basis of gender
 - e. I don’t know
- In Pakistan, generally women abuse sedative and amphetamines, while, men favor _____
 - a. Methamphetamine and cannabis
 - b. Cannabis and alcohol
 - c. Sedative and opioids
 - d. Cannabis and opioids
 - e. I don’t know

OPIOID PHYSIOLOGY

- 1 **Opioids produce analgesia, which indicates:**
 - a. CNS depression
 - b. CNS stimulation
 - c. Both depression and stimulation
 - d. No effect
 - e. I don't know
- 2 **The increase in the sensitivity of pain receptors is called:**
 - a. Analgesia
 - b. Algesia
 - c. Hyperalgesia
 - d. Allodynia
 - e. I don't know
- 3 **Beta endorphins are the most common endogenous ligands for the receptor:**
 - a. Beta
 - b. Delta
 - c. Kappa
 - d. Mu
 - e. I don't know
- 4 **When activated, which one of the following opioid receptors mainly cause both analgesia and dysphoria?**
 - a. Mu
 - b. Kappa
 - c. Delta
 - d. Alpha
 - e. I don't know
- 5 **When activated, which one of the following opioid receptors causes the most respiratory depression?**
 - a. Mu
 - b. Beta
 - c. Kappa
 - d. Delta
 - e. I don't know

OPIOID PHARMACOLOGY

- 1 **The difference between Opiates and Opioids is**
 - a. Opiates are natural, while Opioids are synthetic
 - b. Opioids are natural, while Opiates are synthetic
 - c. Opiates are semi-synthetic, while Opioids are synthetic
 - d. Opioids are semi-synthetic, while Opiates are synthetic
 - e. I don't know
- 2 **Majority of the opioid receptors belongs to:**
 - a. Intracellular receptors
 - b. Tyrosine Kinase receptors
 - c. G-protein coupled receptors
 - d. Enzyme linked receptors
 - e. I don't know
- 3 **Tramadol is a _____ Mu receptor agonist**
 - a. Strong
 - b. Weak
 - c. Moderate
 - d. None of these
 - e. I don't know
- 4 **At the injection site, Morphine causes localized pain and itching due to the release of:**
 - a. Glutamine
 - b. Serotonin
 - c. Dopamine
 - d. Histamine
 - e. I don't know
- 5 **Which one of the following opioids is a mixed agonist-antagonist?**
 - a. Morphine
 - b. Fentanyl
 - c. Codeine
 - d. Pentazocine
 - e. I don't know

OPIOID PHARMACOKINETICS AND DRUG INTERACTIONS

- 1 **Morphine undergoes _____ during phase-2 biotransformation**
 - a. Methylation
 - b. Acetylation
 - c. Glucuronidation
 - d. Oxidation
 - e. I don't know
- 2 **Which one of the following opioids is safe to use in renal failure and does not require dose adjustment?**
 - a. Buprenorphine
 - b. Morphine
 - c. Fentanyl
 - d. Methadone
 - e. I don't know
- 3 **Which one of the following opioids has the least CNS penetration?**
 - a. Morphine
 - b. Loperamide
 - c. Codeine
 - d. Fentanyl
 - e. I don't know
- 4 **Opioids can cause significant respiratory depression when administered with:**
 - a. Naloxone
 - b. Naltrexone
 - c. Anti-hypertensive
 - d. Benzodiazepines
 - e. I don't know
- 5 **Which of the following drugs when administered with tramadol can cause serotonin syndrome (increase in serotonin levels)?**
 - a. Tricyclic anti-depressants
 - b. Selective serotonin reuptake inhibitors
 - c. Both
 - d. None of these
 - e. I don't know

THERAPEUTIC USE OF OPIOIDS

- 1 **The appropriate treatment for moderate pain as defined by WHO analgesic ladder is:**
 - a. NSAIDS
 - b. Strong opioids and NSAIDS
 - c. Weak opioids and NSAIDS
 - d. Weak opioids and strong opioids
 - e. I don't know
- 2 **Which of the following opioids are used for opioid substitution therapy?**
 - a. Meperidine and Methadone
 - b. Oxycodone and Buprenorphine
 - c. Fentanyl and Methadone
 - d. Methadone and Buprenorphine
 - e. I don't know
- 3 **Opioid dependence refers to:**
 - a. Withdrawal symptoms when not taking the opioid
 - b. Reduced response to an opioid with repeated use
 - c. Persistent use of an opioid despite substantial harm and adverse consequences
 - d. Overwhelming desire to continue taking the opioid and obtaining it by all means
 - e. I don't know
- 4 **Which one of the following opioids is generally contraindicated in Myocardial Infarction?**
 - a. Morphine
 - b. Fentanyl
 - c. Methadone
 - d. Pentazocine
 - e. I don't know
- 5 **Opioid dependence during pregnancy can be treated with:**
 - a. Methadone
 - b. Fentanyl
 - c. Naloxone
 - d. Morphine
 - e. I don't know

OPIOID EDUCATION

- 1 **Pharmacist should educate the patient to change the fentanyl patch after:**
 - a. 72 hours
 - b. 48 hours
 - c. 24 hours
 - d. 6 hours
 - e. I don't know
- 2 **The appropriate fate of fentanyl patch after use is:**
 - a. Reuse the same patch
 - b. Incinerate(fire) the patch
 - c. Flush over (used or leftover patches)
 - d. Give to someone else for use to prevent drug wastage
 - e. I don't know
- 3 **Pharmacist should advise the patient to store opioids at:**
 - a. Room temperature
 - b. Refrigerator
 - c. Freezer
 - d. Any temperature
 - e. I don't know
- 4 **Pharmacist should restrict methadone supply for:**
 - a. 7 days
 - b. 8 days
 - c. 6 days
 - d. 10 days
 - e. I don't know
- 5 **In case of incorrect, ambiguous or incomplete prescription of opioids, pharmacist should:**
 - a. Dispense medication as written
 - b. Correct the prescription and dispense the medication
 - c. Call to police
 - d. Hold dispensing and clarify from the prescriber
 - e. I don't know

OPIOID DISPENSING

- 1 **In Pakistan, as per Control of Narcotic Substances Act 1967, opioids come under:**
 - a. Schedule A
 - b. Schedule B
 - c. Schedule C
 - d. Schedule D
 - e. I don't know
- 2 **Which one of the following is NOT the sign of opioid's intoxication?**
 - a. Altered mental state
 - b. Shallow breathing
 - c. Irresponsiveness
 - d. Fast breathing
 - e. I don't know
- 3 **Pharmacist should dispense the take home doses of opioids in:**
 - a. Child resistant containers
 - b. Amber colored bottles
 - c. Light colored containers
 - d. Aluminum foil
 - e. I don't know
- 4 **The record for the sale of opioids should be documented in the narcotic register with:**
 - a. blue ink
 - b. red ink
 - c. green ink
 - d. any color
 - e. I don't know
- 5 **As per Punjab Drug Rules-2007, which one of the following is an important particular to mention in the narcotic register during the sale of opioids?**
 - a. Lot number
 - b. Expiry date
 - c. Manufacturing date
 - d. Batch number
 - e. I don't know

OPIOIDS AND PAIN MANAGEMENT

- 1 **...is the pain due to injury to nerve and opioid of choice for this kind of pain is.....**
 - a. Neuropathic, Methadone
 - b. Psychogenic, Morphine
 - c. Somatic, Methadone
 - d. Visceral, Morphine
 - e. I don't know
- 2 **Which one of the following opioids is the gold standard for the treatment of acute (severe, accidental) pain?**
 - a. Methadone
 - b. Fentanyl
 - c. Morphine
 - d. Tramadol
 - e. I don't know
- 3 **Which one of the following is the opioid of choice in labor pain?**
 - a. Meperidine
 - b. Pentazocine
 - c. Methadone
 - d. Buprenorphine
 - e. I don't know
- 4 **The Centers for Disease Control and Prevention recommends the use of opioid therapy in patients with acute (severe) pain for:**
 - a. 7-14 days
 - b. 3-7 days
 - c. 14-28 days
 - d. More than 1 month
 - e. I don't know
- 5 **FDA approved opioid for treatment of acute pain in children is:**
 - a. Morphine
 - b. Codeine
 - c. Fentanyl
 - d. Methadone
 - e. I don't know

COURSE OF OPIOID THERAPY

- 1 **Opioid taper, Opioid rotation, and Opioid Equianalgesic table refer to _____, respectively:**
 - a. Dose reduction over time, switching between opioids, equivalent to analgesic dose of morphine
 - b. Switching between opioids, dose reduction over time, equivalent to analgesic dose of codeine
 - c. Dose reduction over time, switching from opioids to non-opioids, equivalent to analgesic dose of morphine
 - d. Dose reduction over time, switching between opioids, equivalent to analgesic dose of methadone
 - e. I don't know
- 2 **The appropriate adult dose of Tramadol is:**
 - a. 50-100mg for 4-6 hours PRN, with maximum dose up to 400mg/day
 - b. 200-300mg for 4-6 hours PRN, with maximum dose up to 500mg/day
 - c. 50-100mg for 4-6 hours PRN, with maximum dose up to 500mg/day
 - d. 200-300mg for 4-6 hours PRN, with maximum dose up to 400mg/day
 - e. I don't know
- 3 **As per equianalgesic table, _____ oral dose of tramadol is equivalent to 10mg of morphine**
 - a. 100mg
 - b. 50mg
 - c. 200mg
 - d. 150mg
 - e. I don't know
- 4 **The indications for an opioid rotation are to:**
 - a. Improve analgesia
 - b. Reduce adverse effects
 - c. Decrease opioid tolerance
 - d. All of the above
 - e. I don't know
- 5 **CDC guidelines recommend appropriate opioid tapering as the**
 - a. 10% decrease in dose per month
 - b. 20% decrease in dose per month
 - c. 30% decrease in dose per month
 - d. 40% decrease in dose per month
 - e. I don't know

OPIOID MONITORING

- 1 **5A's of monitoring chronic pain are:**
 - a. Activity, analgesia, adverse effects, aberrant behaviors, affect
 - b. Activity, algesia, adverse effects, aberrant behaviors, assign
 - c. Activity, algesia, adverse effects, adherent behaviors, affect
 - d. Action, analgesia, adverse effects, aberrant behaviors, assign
 - e. I don't know
- 2 **The bolus injection of morphine requires monitoring of respiratory rate after every:**
 - a. 12 hours
 - b. 6 hours
 - c. 3 hours
 - d. 24 hours
 - e. I don't know
- 3 **Opioid therapy monitoring is recommendedfor patients at low risk of adverse effects:**
 - a. Once every 3-6 months
 - b. Twice every 3-6 months
 - c. Monthly
 - d. Weekly
 - e. I don't know
- 4 **Opioid therapy monitoring is recommendedfor patients at high risk of adverse effects:**
 - a. Once every 3-6 months
 - b. Twice every 3-6 months
 - c. Monthly
 - d. Weekly
 - e. I don't know
- 5 **Chronic opioid therapy is the use of opioids daily or nearly daily for at least:**
 - a. 30 days
 - b. 90 days
 - c. 60 days
 - d. 180 days
 - e. I don't know

OPIOID OVERDOSE TRAINING

- 1 **The maximum toxic dose of morphine in adult patients is:**
 - a. 250mg/day
 - b. 500mg/day
 - c. 1000mg/day
 - d. 100mg/day
 - e. I don't know
- 2 **The usual dose of Naloxone for opioid toxicity is:**
 - a. 0.4mg to 2mg IV at 2-3 min intervals
 - b. 10 mg IV at 2-3 min intervals
 - c. 2.5mg to 5mg at 2-3 min intervals
 - d. 7.5 mg IV at 2-3 min intervals
 - e. I don't know
- 3 **The FDA recommends administering IM Naloxone in the**
 - a. Upper arm
 - b. Buttock
 - c. Veins
 - d. Intrathecal
 - e. I don't know
- 4 **Three key symptoms of opioid overdose triad include:**
 - a. Pinpoint pupils, Slow breathing, Unconsciousness/non-responsiveness
 - b. Dilated pupils, Shallow breathing, Unconsciousness/non-responsiveness
 - c. Pinpoint pupils, Fast breathing, Clammy skin
 - d. Dilated pupils, Slow breathing, Limp body (difficulty in walk)
 - e. I don't know
- 5 **Which one of the following opioids is resistant to Naloxone?**
 - a. Buprenorphine
 - b. Morphine
 - c. Codeine
 - d. Hydromorphone
 - e. I don't know