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RESEARCH ARTICLE

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KSA-Self Assessment of Pain Management Medication Safety for Hospitals

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Abstract

Pain management program is essential and required the program to prevent the adverse event, drug misadventure, and pain killer medications related death at health care institutions. One of the tools to evaluate the performance and drug safety of the pain management program. It is the assessment of ten directions of medication safety including patient information, medication information, communication process of medicines, drug packaging and labeling, drug devices, work environment and staffing management, competency and education, patient or family education, and quality and risk management. The new tools as self-assessment of pain management medication safety and modified of former the United States of America and Canada Institution Safe Medication Practice (ISMP) ten elements with additional to the health care institution demographic information and according to the pharmacy law and regulations in Saudi Arabia. This new method can assess the hospital's pain management implementation and detect the gap problems implementation, risk of the patient safety level of pain management. The tool had a scoring scale system of acceptable or risk level or need improvement with the annual application. The tool is first self-assessment tool of pain management medication in Saudi Arabia. The tool is highly recommended to apply at all government and private hospitals in Kingdom of Saudi Arabia.

Key words: Pain Management, Safety, Medications, Self-Assessment, Ministry of Health, Saudi Arabia.

INTRODUCTION

Managing the patient's pain is one of the patients right. Therefore, the healthcare facility should do the best to satisfy the patient, that's by relieving his pain with using the different approach despite the pain score variety with each patient. As a result, many of incidents occurred of medication error events or adverse reaction or even fatal occurrence that's conclusion of the safety of pain management medication not compromised.[1–7] Problems with pain management can link to absent of complete a structural pain management program with inadequate close patient monitoring.[8–13] There is a wide variety of different analgesics available on the market; dosage forms that range from lollipops to patches; the differences of delivery vehicles from implantable devices to patient-controlled analgesia (PCA),

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and different routes of administration. It is imperative for hospitals to revise this issue to ensure a safe, efficient, and realistic approach to managing pain. There are minimum preventive strategies to ensure the safety of pain management medication. One of the strategies used is a hospital self-assessment tool to improve pain killer medications safety at all hospital units; including all aspects and process of patient safety. The authors are not familiar with any published studies locally around, or the Middle East countries or even in the world wide discussed self-assessment of pain management medications safety.

Current Practice of Pain Management Medications

The power of mandatory requirement as law and regulation, only the medication listed as narcotic and controlled counted for that purpose. The goal is to ensure the adherence with the legal and authorized body requirements. The patient safety not considered, and the picture is not completed and will not clear by the only simple count of those medications against full legal prescriptions. The authors' dimension of the image as measuring the processes of handling that group of medicines, the safety practice and monitoring the effectiveness not considered. Now a day the patient safety reviewed, and many hospitals developed policy, defining high-risk medications and implemented many preventive measures as the tall man letter, labeling, developing guideline etc. Nobody focused on medication safety rather than the mandatory requirement and general solutions by patient safety initiatives. The authors suggest developing the unique tool for pain management medications, which can use by any hospital with preferable of accredited hospital where many systems and process related to quality and patient safety in place. The suggested tool will help any hospital to assess the medication safety practices in their units and compare it with other hospital surrounding the use of pain management drugs, identify the gap and creating many opportunities for improvement, and compare the hospital experience with the aggregated experience of others. The suggested tool contains standards that address the use of pain management medications in the facility.[14]

Why Suggested Tool?

The suggested tool developed to open the eye to new preventive measures that are in place in many hospitals and may need to implement at others to support the medication safety. Many of the standards included in the suggested tool already required by national and international accreditation standards or Institution of Safe Medication Practice (ISMP) Medication Safety Self-Assessment® for Hospitals standards that represent the primary function in the United States of America (USA).[15–18] The system or process improvement supports the handling of pain management medications. Some of those standards or standards are new to many hospitals; implementation of those will lead to raising the clinical practice level and may help in reaching best practice and improve the safety of pain management medications by preventing or minimizing harms that may result from misuse.

Method of designing Tools

The tools conceived in a manner that first processes of handling medications have listed and detail required is in shape of standards. All the standards related to the safe use of pain management medications. Standards create a baseline of activities that will play a role in preventing/minimize the risk, enhancing medication safety with pain management medications, and assess these activities continuously. The self-assessment consisted of two parts. Part one about demographic information section that includes information about the type of hospital, hospital bed number, the type of service hospital provides the presence of pharmacy practice services, number the location of pharmacy, number of pharmacists, number of clinical pharmacists. The second part of the advanced tool consisted of ten chapters that significantly influence the safe use of pain management drugs. Each chapter defined by one or more focus area of a safe medication system. Each focus area contained the standards. The total numbers of the standards were one hundred and twenty six. All standards have equal weight. Self-assessment standards for pain management medicationprovided to help the healthcare providers to evaluate the success of achieving each Focus area as explored in appendix 1 and appendix 2.

DISCUSSION & RESULT

How to use the Pain Management Medications Self-Assessment tool?

There are many practitioners perform of such medication assessment with different responsibilities from various units/departments. So formulating a multidisciplinary team for that purpose strongly recommended. The team should develop representing all core function and system to be able to assess all processes. The team should train and empowered with needed information. Before that, the team must have to charge with the responsibility to evaluate in anywhere and anytime the pain management medications used. The team has to do a comprehensive action plan; responsibilities should distribute among team

Table 1: KSA-Self Assessment of Pain Management Medication Safety for Hospitals

Part I: Characteristics of healthcare facility

1.A. Focus Area: The following standards are focusing on the essential patient information that supports proper prescribing, dispensing, and administering pain management medications. [15–19]		
Which of hospitals are you working for?	□ Ministry of health □ University Hospitals □ Armed Forces □ National Guard □ Aramco Hospitals	□ Hospitals, Security Forces □ King Faisal Specialist Hospital and Re □ Royal Commission for Jubail and Yanbu □ Private hospitals
Which of type hospitals are you working for? (you can choose more than one answer)	□ Public-hospital □ Pediatrics □ Maternity and Obstetric □ Rehabilitation	□ Dental □ Diabetic Center □ Cardiology Center □ Oncology Center □ Psychiatry
What region are you in?	□ Riyadh □ Makkah □ Jeddah □ Taif □ Madina □ Quseen □ East Province □ Alhasa □ Hefalbatin □ Aseer	□ Bisha □ Tabuk □ Hail □ North Border □ Jazan □ Najran □ Albaha □ Aljouf □ Alqurayat □ Qunfetha
Please mention the hospital's name:	_____	
No. of hospital beds:	□ <50 □ 50–99 □ 100–199 □ 200–299	□ 300–399 □ 400–599 □ = or > 600 □ Medical City
Your hospital was accredited by (you can choose more than one answer)	□ CIBAHI ☐ Canada □ Joint Commotion the USA □ Saudi Commission of Health specialties	
Pain management programs covers	□ Non □ 1–24% of beds □ 25–49 % of beds	□ 49–74 % of beds □ 75–100 % of beds
Number of pharmacy staff	□ Number of Pharmacy Technician --------- □ Number of Pharmacists ---------- □ Number of Clinical Pharmacist ----------	
Number of pain management prescriptions daily	□ < 50 □ 50–100 □ 101–300 □ 301–600	□ 601–900 □ 901–1200 □ 1201–1500 □ > 1500

What are department of pharmacy available (you can choose more than one)?	□ Inpatient pharmacy □ IV Admixture Pharmacy □ Emergency pharmacy □ Clinical Pharmacy □ Extemporaneous Preparation area □ Medication safety officer □ Pharmacy Research	□ Outpatient pharmacy □ Satellite Pharmacy □ Drug information □ Prepackaging area □ Pharmacy Store □ Training and Education □ Others———————-
Does your organization do pain management self-assessment before?	□ Yes □ I do not know	□ No
Does your organization provide mandatory educational course of pain management?	□ Physician □ Nurses	□ Pharmacist □ Others healthcare professionals

Appendix 2. Part II

1:No activity to implement this standard

2:The standard formally discussed and considered, but it has not implemented.

3:The specification has partially implemented in the hospital for some or all areas, patients, drugs, and staff

4: The standard fully implemented in the hospital for some areas, patients, drugs, and staff.

5:The standard fully implemented throughout the hospital for all patients, drugs, and staff

NA: The standard care not provided

	Key Elements	**Scores**					
Ch.1	**Information of the Patient** [8–15–20]	**NA**	**1**	**2**	**3**	**4**	**5**
1.A. Focus Area: The following standards are focusing on the essential patient information that supports proper prescribing, dispensing, and administering pain management medications.							
1.1	The hospital has approved pain assessment system; the pain assessment implemented for all patient who receives **pain management medication** before administering the pain management medication (e.g. pain assessment tool and sedation assessment tool)						
1.2	All patient who receives **pain management medication** should include pain assessment system.						
1.3	Patient full information should obtain (name, ID number, contact number, address, gender, nationality, allergies) before receiving pain management medication						
1.4	All Medication order for pain management medication should include patient weight as part of patient information.						
1.5	It is a process for initial patient screening including screening for existing disease and condition before start pain management medications						
1.6	Order set including **pain management medication** should be designed to have complete patient information (e.g., patient's diagnosis, allergies, height, actual body weight, and most recent pain assessment score)						
1.7	Physician, nurse, and pharmacist who participate in pain management process of the patient should have access manually or electrically to patient information related therapy at any place of the institution.						
1.8	The Patients who receive patient-controlled analgesia (PCA), epidural narcotic infusions, or other IV opioids to treat pain monitored for signs of overdosing by evaluating vital signs and lateness level, and neurology overdoing symptoms.						
1.9	High-risk patient (e.g. obese, asthma, sleep apnea) should monitor beyond pulse oximetry (e.g., capnography)						
1.10	Current computer software should be available to identify patients at high risk of harm from **pain management medication** (e.g. decrease respiratory rate) and to alert physician, nurse, and pharmacist who participate in the process of managing the patient pain.						
1.11	The hospital should identify who allowed administering oral pain management medication professional staff competent to perform monitoring of neurologic and respiratory status and to resuscitate the patient if needed.						
1.12	The hospital should develop guidelines, protocols, or physician order prescription including, therapeutic dose change and calculation based on patient weight.						

1.13	Two patient's identifiers should use to identify patient before administering **pain management medication**.						
1.B. Focus Area: The following standards are focusing on patient information that supports monitoring pain management medication effect and used to modify treatment plan of care.							
1.14	There is a process of pain management care plan by physician, nurse, and pharmacist, which participate in the process of managing the patient pain. The pain management care plan should include treatment goal and document in the patient file.						
1.15	There is a process to notifies the physician by a pharmacist for modifying **pain management medication order** (indication or dose or frequency) if the patient condition changed.						
1.16	High-risk patients may need dose reductions, and maximum dose limits should set for obese patients. T**he dose should adjust by a pharmacist** who authorized to modify those and frequency to suit patient condition.						
Ch.2	**Medication Information** [10–15–18–21–22]	**NA**	**1**	**2**	**3**	**4**	**5**
2.A. Focus Area: The following standards are focusing on the availability of valuable drug information when ordering, dispensing, and administering pain management medications.							
2.1	There is a process to obtain patient's current and past medication history including (including prescription, over-the-counter and herbal medicines) upon an emergency visit, admission, a transfer from upper to lower ward level and discharge to compare (reconcile) with current drug therapy at each section. In addition to the history of alcohol, tobacco, and illicit drugs.						
2.2	The Hospital has a developed list of high-alert medication including **pain management medications** (e.g. opioids).The list should available, reviewed, and updated regularly.						
2.3	The Hospital has a developed list of Do Not Crush list (e.g. crushed, split, opened, or dissolved) including **pain management medications**. The list should available and should be reviewed and updated regularly.						
2.4	The Hospital has developed protocol or guide of dosing charts for equianalgesic of **pain management medications**, **dosage forms including** non-steroidal anti-inflammatory medications Cox1 (Diclofenac, Ibuprofen, Indomethacin) or Cox 2 inhibitors **(Celecoxib) or *Opioids* medications** (Morphine, Fentanyl, and Pethidine, etc).The protocol or guide should available and should review and updated regularly.						
2.5	The hospital has developed manual or online drug information resources for **pain management medications** (e.g., physician order sets, protocols or checklists, patient drug education materials, compounding recipes). The resources should available to health care staff and should be reviewed and updated regularly.						
2.B Focus Area: The following standards are focusing on accessibility of valuable drug information to guide for action needed in case of adverse drug events that may occur when pain management medications used.							
2.6	All hospital developed protocol overdoing or guide for **pain management medications** should make accessible at any time by physician, nurse, and pharmacist who participate in the process of managing the patient pain.						
2.7	All hospital developed protocol or guide for **pain management medications** should make a standardized physician order protocol for a drug of choice, drug dosing and dose adjustments based on monitoring results.						
2.8	All hospital develop the adverse effects of pain management medication protocol or guidelines and available for all health care staff						
2.9	All equipment used in the hospital for an instant; (e.g. computerized prescriber order entry [CPOE] system, **PCA pump**, automated compounding devices) should regularly test to ensure functionality and its safety alert system (e.g. maximum dose, serious drug interaction, warn practitioners about overdoses for **pain management medications**).						
2.10	All order of **pain management medication**, except in emergencies, should review to check appropriateness for the patient using patient's current clinical profile for allergies, contraindications, interactions, and proper doses before **pain management medications** administered.						
2.11	Significant intervention of pharmacist about **pain management medication** should document and communicate immediately to the physician including professional recommendation (e.g. alternative therapy or additional monitoring)						
2.12	The hospital has established drug formulary system, which ensures minimizing duplication of medication, and the cost effective treatment implemented of **pain management medications**.						
2.13	When new **pain management medication** added to formulary, the drug should process medication safety scoring system at Ministry of Health						

2.14	Non-formulary of **pain management medication** is not accepted; unless therapeutically interchanged necessary and appropriate and checked by health care team.						
2.15	The hospital has set up drug reporting system to monitor and manage anticipated adverse effects or medication errors. The system includes investigation and recommendation considered in drug formulary system. The system implemented for **pain management medications**.						
2.16	At a time High alert **pain management medication** added drug formulary, The safety measure (e.g. standardized order sets, prescribing guidelines, check systems, administration guidelines, monitoring protocols, and/or limitations on use) should establish						
2.17	The multidisciplinary team responsible for overseeing the process of handling **pain management medications** should work to update the physician, nurse, and pharmacist who participate in the process of managing the patient pain with the published medication error or adverse drug event related to **pain management medications**.						
Ch.3	**Medication Communication Processes** [10–15–18–23]	**NA**	**1**	**2**	**3**	**4**	**5**
3.A. Focus Area: The following standards are focusing on the proper communication of pain management medications and drug information to minimize risk from miscommunication.							
3.1	All **pain management medications orders** can integrate with the computerized patient profile in the pharmacy.						
3.2	The physician order sets (electronic or manually) with an intravenous and epidural infusion/medication doses should use in the standard concentration(s) during infusion pumps (e.g., PCA pumps).						
3.3	The hospital has a process for automatic stop order. The method implemented for **pain management medications** when required without a prescription from the physician.						
3.4	The hospital has a defined list of prohibited abbreviation. The implementation should monitor for a prescription of **pain management medications** orders (e.g. handwritten or preprinted orders).						
3.5	All pain management medication orders not accepted by verbal order at all.						
3.6	All **pain management medications** orders administered in Emergency or other outpatient settings (e.g., radiology) should communicate to the pharmacy at the time of admission.						
3.7	All pain management medication should administer by trained nurses.						
3.8	All opioid pain management medication should administeraccording to local Narcotics and Controlled Drug Act.						
3.9	The hospital has a system to make a pharmaceutical intervention in response to a potentially serious **pain management medications** order. The intervention note should immediately communicate to the physician.						
Ch.4	**Packaging and Labeling of Medications**[15–18]	**NA**	**1**	**2**	**3**	**4**	**5**
4.A. Focus Area: The following standards are focusing on preventive measures to minimize the possibility of harm of labeling/packaging of pain management medications.							
4.1	All drug labels with appropriate auxiliary typed, or computer generated and not handwritten at any place in the hospital						
4.2	All **pain medication medications** labels contain standard English and Arabic language with any additionalexternal one when needed.						
4.3	**Pain management medications** with similar names and packaging that should identify by the hospital.That medication should separate and not stored alphabetically, and a system redirects staff to where those medications placed.						
4.4	Any **pain management medication**, on and off the sterile field in preoperative and other procedural settings that placed in(e.g., oral syringes, syringes of line flushes, vials ampoules, and bowls for medications on patient care units) should label with drug name and strength.						
4.5	Any **pain management medication** in the multi-dose vial should label with the medication name, strength /concentration, date of expiration or time of expiration if expiration occurs in less than 24 hours.						
4.6	All pain management medications brought from patient home or family member is not accepted to administer to the patient						
Ch.5	**Medication Standardization, Storage, and Distributions** [15–18–20–22]	**NA**	**1**	**2**	**3**	**4**	**5**
5.A. Focus Area: The following standards are focusing on standardizing concentrations, doses, and administration times of pain management medications.							
5.1	The standardized, unified concentration at the institution is required for adults and pediatrics infusions of **pain management medications** as much as possible to use for the majority of patients.						
5.2	When ordering **pain management medications**, consistent terminology is required to express concentration needed (e.g., double strength)						

5.3	Premixed Intravenous solutions stranded concentration of pain management medications used whenever possible especially if intravenous admixture services not existed.						
5.4	All parenteral pain management medication including narcotics or controlled drugs prepared by the pharmacy						
5.5	The hospital has defined standard time for medicines with the emphasison **pain management medications** administration.						
5.6	The hospital has defined dosing windows for safe administration of medications when the first dose administered at a non-standard time. It should implement for **pain management medications** administration.						
5.7	The hospital has defined the specific period for stat ORDER and urgent medication delivery from the pharmacy to units and including for **pain management medications** delivery.						
5.8	There area specific quantity of pain management medications at point of care (e.g. manual floor stock or automated dispensing cabinet)						
5.9	The hospital has developed standard order set for **pain management medications** based on the evidence-practice guideline with reviewed and approved by the multidisciplinary team responsible for overseeing the process of handling **pain management medications**.						
5.10	The hospital should make antidotes of pain management drug overdoing or allergies or potential adverse drug reaction and reversal agents available and accessible at the point of care (e.g. Naloxone for Opioid toxicity) along with the approved guide for use.						
5.11	All oral or parenteral pain management medications narcotics or controlled medication should follow MOH law and regulation of procurement, storage, preparation, dispensing, administration, recalling system, return drugs, and wastage quantities						
Ch.6	Medication devices procurements, monitoring and safety usage [15–18]	NA	1	2	3	4	5
6.A. Focus Area: The following standards are focusing on standardization of equipment used to deliver pain management medication to minimize the possibility of harm from any device.							
6.1	Pain management committee actively involved in procurement or replacement of pain management devices						
6.2	The type of pain management medication is minimized as possible to improve competency used (PCA or syringe infusion pump)						
6.3	The risk from any device and/or tools (e.g. medical tubing) operating to deliver **pain management medications** should consider of identifying and assessing the associated risk.						
6.4	Feedback from the risk assessment of equipment and/or tools operating to deliver **pain management medications** should take into account in procurement decision and in establishing preventive measures.						
6.5	The hospital should review functionality of equipment and tool used to deliver epidural with standardized one type of equipment and tool.						
6.7	The hospital should develop a system for medication administration including the process of self-administration of **pain management medications.** The hospital has defined appropriate patient selection criteria for patient-controlled analgesia use.						
6.8	All epidural infusion pumps are only utilized for this indication not interchangeable with other devices and signed with specific color						
6.9	All electronic equipment used to deliver **pain management medications** (e.g. use of smart infusion pump technology with dosage error reduction software) should program to ensure safe administration by preventing any error (e.g. miss-programming)						
6.10	The pharmacy department oversees all **pain management medication** devices regularly including calibration, maintain of drug library, prevent and document any devices related errors						
6.11	All health care professionals of pain management services are educated, trained, and certified of pain management medication devices						
Ch.7	**Work Environment and Staffing Management [15–16–18–22]**	**NA**	**1**	**2**	**3**	**4**	**5**
7.A. Focus Area: The following standards are focusing on work environment surrounding the processes of prescribing, transcribing, preparing, dispensing and administering of pain management medication and completed staffing who handle those processes.							
7.1	The hospital has a system to ensure light is adequate in areas where **pain management medication** are prepared, dispensed and/or administered (including pharmacy, patient care units) to enable read the label, patient information, and drug information.						
7.2	The hospital has a system to ensure space in the area where **pain management medication** prepared is adequate to keep storing of the prepared syringe and/or solutions in the hospital wards and pharmacy.						

7.3	The hospital has a process in place to return discontinued/ unused **pain management medications** immediately. The method is implemented for **pain management medications** when medication order stopped (e.g. patient discharged)						
7.4	The hospital pharmacy has adequate qualified pharmacists and nurses trained in safe use of medication-related technology that used for **pain management medication** (e.g. smart infusion pump). Those qualified pharmacists and nurses are involved in the management of technology related need in any area of the hospital.						
7.5	The hospital has adequate qualified pharmacists and nurses, competent in pain management medication, and should involve in ordering and administration of**pain management medication** by different clinical activities (including reviewing patient files, medication reconciliation, patients counseling, and monitoring medication safety and effectiveness).						
7.6	The hospital has a system of staffing strategies to ensure proper coverage of qualified pharmacist and nurse, trained on **pain management medication**, to participate effectively in the process of managing the patient pain at the time of staff shortage (e.g. holiday, vacation).						
7.7	The hospital has a system of annual checkup health workers including physical examination, vision and hearing examination, and job satisfaction.						
Ch.8	**Staff Competency and Continuous Education** [15–18–20–24–26]	**NA**	**1**	**2**	**3**	**4**	**5**
8.A. Focus Area: The following standards are focusing on orientation, competency assessment skills and continuous education on safe practice in handling pain management medications							
8.1	The hospital has a system to provide orientation, training, and competency assessment for a new physician, nurse, and pharmacist who will participate in the process of managing the patient pain.						
8.2	The hospital has a system to provide regular continuing education for the safe use of **pain management medication** to the physician, nurse, and pharmacist who participate in the process of managing the patient pain.						
8.3	The hospital orientation, training, and continuous education should include information about the actual and published medication errors related to **pain management medication**, and they educated about different strategies used to prevent or minimize the risk of such mistakes at all medication process prescribing, preparation, dispensing, and monitoring						
8.4	All pain management staff had special training in focusing areas including intensive care units, emergency, pediatrics, anesthesia and operation section						
8.5	The hospital has a system to ensure that qualified, competent staff of pain management usage (trained on rescue patients from general anesthesia or severe respiratory depression and safe use of **pain management medication**) for non-ventilated patients.						
8.6	Physician, nurse, and pharmacist who participate in the process of managing the patient pain and use of devices for the preparation and administration of **pain management medication** are educated about the safe use of the devices and tested for competency.						
8.7	The pain management staff had education and training about any new pain killer drug formulary or non-formulary medication before used at any hospital section						
8.8	The hospital has staffing strategies to ensure that staff competent in the preparation, administration, and monitoring of pain management medication are available at all times, and when there is a shortage of staff.						
8.9	The pharmacy had regular per year an educational program for physicians and nurses for the safe practice of **pain management medications** including but not limited the following; the updated pain management protocol and guidelines, medication policy and procedures, medication devices, preventing of **pain management medication** errors and adverse drug reaction.						
8.10	The hospital has hand over communication process that should implement when a patient on **pain management medications** with either infusing intravenously or by the epidural route of administration if transferred to radiology or another department. Qualified, competent staff should implement the process.						
Ch.9	**Patient/Family Education Process** [15–18–27–28]	**NA**	**1**	**2**	**3**	**4**	**5**
9.A. Focus Area: The following standards are focusing on patient participation in their pain management medications by providing patient necessary information about safe use of pain management medications.							
9.1	The hospital has a system to provide multidisciplinary patient/family education needed information about **pain management medications** (e.g., indication, dosing information, drug storage, contraindication, and side effects of the therapy) before starting the initial dose. The patient/family may receive verbal or written instruction.						

9.2	The hospital has patient/family education system enriched by an instructional tool (e.g. videos, and special brochures) which given to the patient/family or emphasize referral to King Abdullah Bin Abdul-Aziz Health Arabic Health Encyclopedia.						
9.3	The hospital has a system to support patient/family by providing updated and current education material, written information at 6th-grade reading level (or lower) in their primary language about **pain management medications** or translates/simplify the verbal education information.						
9.4	The hospital has a system to document multidisciplinary patient/family education activity on **pain management medications** in patient's medical record						
9.5	The hospital should define when the Multidisciplinary patient/family education conducted for **pain management medications** (e.g. when outpatient or inpatient when starting administer the **pain management medications** or during discharge).						
9.6	The patient/family who educated at discharge about **pain management medications** should demonstrate proficiency in administering medication safely.						
9.7	The hospital has a system to support patient/family during the education of **pain management medications** through encouraging them to ask any question about the medications they are receiving.						
9.8	The pharmacist who participates in the process of multidisciplinary patient/family education should design a schedule or specific time for **pain management medications** administration considering patient preference.						
9.9	The pharmacist who participates in the process of multidisciplinary patient/family education should collaboratively identify patients at high-risk for nonadherence with **pain management medications** prescribed at discharge.						
9.10	All discharged patients may follow by pain management clinic or through other interaction with pain management team via telephone or other media						
9.11	The pharmacy develops annual educational program about **pain management medication** to the public through hospital system						
Ch.10	**Quality Management and Risk Management** [10–15–19–29–31]	**NA**	**1**	**2**	**3**	**4**	**5**
10.A. Focus Area: The following standards are focusing on detecting and report any events related to pain management medications and the hospital system to analyze, to prevent patient harm and improve the patient safety							
10.1	The hospital has formal pain management program with job description of pain management committee and pain management team, vision with mission of the program, policy procedures of the program, measurement performance and pain management indicators						
10.2	The hospital has an annual survey for measuring the compliance of opioid **pain management medication** with MOH Narcotics and Controlled Act.						
10.3	The hospital has a tool or survey or assessment to revise the pain management program annually (e.g. Assessment of pain management program)						
10.4	The hospital has leader's orientation program about pain management with the emphasison competency and performance appraisal, and a physical visit to all hospital units.						
10.5	The hospital has a system for preventing and reporting medication error of **pain management medications** (e.g. MOH medication error reporting programs).						
10.6	The hospital has a system for preventing and reporting adverse drug events for **pain management medications**						
10.7	The hospital has a system for reporting pain management Medicine's quality (e.g. MOH drug quality reporting system).						
10.8	The hospital has a system to detect markers or triggers for selected drug orders (such as antidotes for **pain management medications**) used to alert pharmacist for potential adverse events.						
10.9	The hospital has a system to utilize internally and collected data (e.g., data obtained converted into learning) related to **pain management medications**.						
10.10	The multidisciplinary team responsible for overseeing the process of handling pain management medications are working together to analyze measure/data and recommend for preventive measures to prevent/minimize the harm associated.						

10.11	The multidisciplinary team responsible for overseeing the process of handling **pain management medications** are working together to update the hospital with and recommend for workable safety measures (evidence-based interventions) to prevent/minimize events.							
10.B. Focus Area: The following standards are focusing on independent checking process that should be performed at different procedure while handling pain management medications order wherever potential error/events may occur.								
10.12	The pain management committee and sufferingupdated evidence based regulatory of protocol and new technology with automation of **pain management medication** and risk safety.							
10.13	There is a working flow of pain management process designed to improve drug safety and risk.							
10.14	A hospital has a system of double-checking many vulnerable procedures. Independent checks should implement when prescribing or transcribing the **pain management medications** order with emphasis to use an electronic and computerized system.							
10.15	A hospital has a system of double-checking many vulnerable procedures. Independent checks should apply when calculating, preparing and labeling any **pain management medications** admixture/solution for infusion with emphasis to use infection control protocol and an electronic and computerized system.							
10.16	A hospital has a system of double checks for many vulnerable procedures. Independent checking when administering High alert **pain management medications** with emphasis to use an electronic and computerized system.							

members; the timeframe should determine, and follow-up should conduct. The team could be the members of medication safety committee, pain management committee, or may consist ofaphysician, nurse, pharmacist, quality management person, and patient safety representative.

Each self-assessment standards evaluate hospital services by using the Likert scale for scoring from 1–5 with place a checkmark in the appropriate column scoring key as following: (1) There has been no activity to implement this standard, (2) This standard has been formally discussed and considered, but it has not implemented. (3) This specification has partially carried out in the hospital for some or all areas, patients, drugs, and staff, (4) The standard is fully implemented in the hospital for some areas, patients, drugs, and staff. (5) The measure fully implemented throughout the hospital for all patients, drugs, and staff. Moreover, it may choose NOT APPLICABLE if care not provided. The data from the assessment should aggregate and submitted to the authorized body. The information about the gap and opportunities for improvement has to share with the Leadership to make the valuable recommendation to support medication safety of pain management drugs. Finally, the Safety level of the Hospital in handling Pain Management Medication should determine as following: "Accepted level" of safety in pain management medications; if the final score is 473 -630 (75%-100%). "At risk level" of safetyin pain management medications if the final score between 378–472 (60%-74%) "Need Improvement level" safety in pain management medications if the final score is less than 378 (60%).

CONCLUSION

The authors strongly recommend using the suggested tool. That may need to apply the recommended tool at many hospitals by the hand of the qualified team, which may need to have a sponsored body national or international body to help in support. Later on, this tool has to use in each facility has pain management medication especially narcotic and controlled medications, and it is a mandated to implement to reach the minimum accepted level of patient safety.

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CONFLICT OF INTEREST

None

ABBREVIATION USED

KSA: Kingdom of Saudi Arabia, PCA: patient-controlled analgesia, MOH: Ministry of Health, USA: United States of America, ISMP: Institution Safe Medication Practice.

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