Society of Hospital Medicine

# Key Guidance On Safe Opioid Prescribing for the Treatment of Acute Non-Cancer Pain in Hospitalized Adults

The purpose of the guidance statement is to present clinical recommendations on safe use of opioids for the treatment of acute, non-cancer pain in hospitalized adults, based on a systematic review of existing guidelines on opioid use for acute pain. The guidance is intended for clinicians practicing internal medicine in the inpatient setting (e.g., hospitalists, primary care physicians, family physicians, nurse practitioners, and physician assistants). The guidance is intended to apply to hospitalized adults with acute, non-cancer pain (i.e. pain that typically lasts < 3 months or during the period of normal tissue healing) outside of palliative care and end-of-life care. While some of the recommendations may be applicable to other situations or specific settings (i.e., chronic pain, post-operative pain, patients on long-term opioid therapy or opioid-agonist therapy), these guidance statements were not intended for this purpose.

## Deciding Whether to Prescribe Opioids During Hospitalization:

**Guidance Statement 1: The Society of Hospital Medicine recommends that clinicians limit the use of opioids to patients with 1) severe pain or 2) moderate pain that has not responded to non-opioid therapy, or where non-opioid therapy is contraindicated or anticipated to be insufficient.**

Rationale and comment: Opioids are associated with several well recognized risks ranging from mild to severe, including nausea, constipation, falls, delirium, sedation, respiratory depression, and death. Given these risks, the risk-to-benefit ratio is generally not favorable at lower levels of pain severity. Furthermore, for most painful conditions, including those causing severe pain, non-opioid analgesics like acetaminophen and non-steroidal anti-inflammatory medications (NSAIDs) have been demonstrated to be equally or more effective with less risk of harm than opioids. Clinicians should be familiar with conditions for which acetaminophen and NSAIDS are contraindicated or associated with increased risk, and make a determination in each patient regarding whether the benefits outweigh the risks. Often these conditions do not represent absolute contraindications and the risks can be mitigated by adhering to dosage limits, and, with respect to NSAIDs, 1) monitoring renal function, 2) monitoring volume status in patients with congestive heart failure, and 3) considering a selective cyclooxygenase-2 (COX-2) inhibitor rather than a non-selective NSAID or pairing the NSAID with an acid-suppressive medication in patients with a history of peptic ulcer disease or at elevated risk for gastroduodenal disease. For these reasons, a trial of non-opioid therapy should always be considered before prescribing opioids for pain of any severity. This does not imply that a trial of non-opioid therapy must be performed in all patients, but rather, that the likelihood of benefit and associated risks of opioid and non-opioid therapy should be considered for all patients in determining the best initial management strategy.

**Guidance Statement 2: The Society of Hospital Medicine recommends that clinicians use caution when prescribing opioids to patients with risk factors for opioid-related adverse events.**

Rationale and comment: Several factors have been consistently demonstrated to increase the risk of opioid-related adverse events – most importantly, respiratory depression and overdose – in varied patient populations and settings of care, including age 65 years and older, renal insufficiency, hepatic insufficiency, chronic obstructive pulmonary disease, sleep apnea, and receipt of other central nervous system depressant medications (including, but not limited to, benzodiazepines). These factors should be

weighed against the benefits when deciding on opioid appropriateness in a given patient. However, identification of these risks should not preclude opioids as part of pain management in the setting of severe pain. When a decision is made to use opioids in patients with these risk factors, clinicians should: 1) use a reduced starting dose (generally 25-50% reduction in usual starting dose), and 2) consider closer monitoring for adverse effects.

**Guidance Statement 3: The Society of Hospital Medicine recommends that clinicians review the information contained in the prescription drug monitoring program (PDMP) database to inform prescribing decisions.**

Rationale and comment: Although data on the impact of use of the PDMP on prescribing practices or patient outcomes are limited, PDMP use has been advocated by multiple guidelines on acute pain management. The PDMP provides information that can be useful in several ways, including 1) confirmation of prior opioid exposure and dosage, which should be used to guide appropriate dosage selection in the hospital, 2) identification of existing controlled substance prescriptions which should be considered in prescribing decisions on discharge, and 3) identification of signs of aberrant behavior (e.g. controlled substance prescriptions written by multiple different clinicians, evidence of diversion), which will allow for early identification of evolving or existing opioid use disorder and the opportunity for intervention. Concerns regarding evolving or existing opioid use disorder should prompt further discussion with the patient, both to clarify their understanding of their recent administration history, and to discuss concerns for patient safety related to the increased risk of opioid-related adverse effects (including respiratory depression and overdose) among patients with controlled substance prescriptions written by multiple providers. While such concerns should not automatically preclude the use of opioids for severe pain, they should be included in the assessment of whether the benefits of opioid therapy outweigh the risks for a given patient.

**Guidance Statement 4: The Society of Hospital Medicine recommends that clinicians educate patients about potential risks and side effects of opioid therapy as well as alternative pharmacologic and non-pharmacologic therapies for managing pain.**

Rationale and comment: Patients are often unaware of the risks of opioid therapy, or that there are often equally effective alternative therapies, which limits informed decision making around pain management. Clinicians should discuss these risks with patients at the outset of therapy, as well as the potential benefits of non-opioid pharmacologic and non-pharmacologic therapies for managing pain.

## Once a Decision Has Been Made to Prescribe Opioids During Hospitalization:

**Guidance Statement 5: The Society of Hospital Medicine recommends that clinicians prescribe the lowest effective opioid dose for the shortest duration possible.**

Rationale and comment: Higher opioid doses are associated with increased incidence of opioid-related adverse events, particularly overdose, in studies of both inpatient and outpatient populations. Studies assessing specific dosage thresholds associated with substantially increased risk in hospitalized patients are insufficient to make a maximum dosage recommendation in this setting. Clinicians should reduce the usual starting dose by 25-50% among patients with conditions that increase susceptibility to opioid-related adverse events (see Guidance Statement 2). The ongoing need for opioids should be re-assessed daily during the hospitalization.

**Guidance Statement 6: The Society of Hospital Medicine recommends that clinicians prescribe immediate-release opioid formulations and avoid initiation of long-acting/extended-release formulations for treatment of acute pain.**

Rationale and comment: Studies in outpatient settings demonstrate that use of long-acting opioids is associated with greater risk for overdose – especially in opioid naïve patients – and long-term use. When coupled with the fact that hospitalized patients frequently have fluctuating renal function and rapidly changing pain levels, we recommend that initiation of long-acting opioids be avoided in hospitalized medical patients with acute non-cancer pain. It is important to note that we do not recommend discontinuation of long-acting/extended-release opioids in patients who are taking these medications for chronic pain at the time of hospital admission (unless there are concerns regarding adverse effects or drug-disease interactions).

**Guidance Statement 7: The Society of Hospital Medicine recommends that clinicians use the oral route of administration whenever possible. Intravenous opioids should be reserved for patients who cannot take food or medications by mouth, patients suspected of gastrointestinal malabsorption, or when immediate pain control is necessary.**

Rationale and comment: Intravenous opioid administration is associated with increased risk of adverse events and medication error. Additionally, studies consistently demonstrate that the addiction potential of medications is greater the more rapid the rate of onset of action. Accordingly, addiction potential is lower for medications administered by the oral route, and higher with intravenous administration. As such, intravenous administration should be reserved for situations when oral administration is not possible or likely to be ineffective, or when immediate pain control is necessary (the onset of action is 5-10 minutes for intravenous and 15-30 minutes for oral administration).

**Guidance Statement 8: The Society of Hospital Medicine recommends that clinicians use an opioid equivalency table or calculator to understand the relative potency of different opioids 1) when initiating opioid therapy, 2) when changing from one route of administration to another, and 3) when changing from one opioid to another. When changing from one opioid to another, clinicians should generally reduce the dose of the new opioid by 25-50% of the calculated equianalgesic dose to account for inter-individual variability in the response to opioids as well as possible incomplete cross-tolerance.**

Rationale and comment: Many errors causing adverse drug events occur at the prescribing stage. Clinicians are often unaware of the potency of different types of opioids relative to each other or to morphine (i.e., morphine equivalent dose), which can lead to inadvertent overdose when initiating therapy with non-morphine opioids, and when converting from one opioid to another. To facilitate safe opioid prescribing, we recommend that clinicians use an opioid equivalency table or calculator to better understand the relative potencies of opioids, to inform both starting dose calculations and conversions between opioids and routes of administration. When converting from one opioid to another, we caution clinicians to reduce the dose of the new opioid by 25-50% of the calculated equianalgesic dose to account for inter-individual variability in the response to opioids and the potential for incomplete cross-tolerance, wherein tolerance to a currently administered opioid does not extend completely to other opioids.

**Guidance Statement 9: The Society of Hospital Medicine recommends that clinicians co-prescribe opioids with scheduled non-opioid analgesic medications, unless contraindicated, and always pair with non-pharmacologic pain management strategies.**

Rationale and comment: Concurrent receipt of opioids and non-opioid analgesic medications (including acetaminophen, non-steroidal anti-inflammatory drugs [NSAIDs] , and gabapentin/pregabalin) has been demonstrated to reduce total opioid requirements and improve pain control. Clinicians should be familiar with contraindications and maximum dosage recommendations for each of these adjunctive non-opioid medications. We recommend separate prescriptions for each, rather than using drug formulations that combine opioids and non-opioid analgesics in the same pill, due to the risk of inadvertently exceeding maximum recommended doses of the non-opioid analgesic (particularly acetaminophen) with combination products. Although few studies have assessed the benefit of non-pharmacologic therapies for treatment of acute pain in hospitalized patients, the lack of harm associated with their use argues for their adoption. Simple non-pharmacologic therapies that can usually be provided to patients in the hospital setting include music therapy, cold/hot packs, chaplain visits, and limited physical therapy.

**Guidance Statement 10: The Society of Hospital Medicine recommends that, unless contraindicated, clinicians co-prescribe a bowel regimen to prevent opioid-induced constipation.**

Rationale and comment: Constipation is a common adverse effect of opioid therapy, and results from the activation of mu opioid receptors in the colon, resulting in decreased peristalsis. Hospitalized patients are already prone to constipation by virtue of their often limited physical mobility. To limit this complication, we recommend the administration of a bowel regimen to all hospitalized medical patients receiving opioid therapy, provided the patient is not having diarrhea. Given the mechanism of opioid-induced constipation, stimulant laxatives (e.g., senna, bisacodyl) have been recommended for this purpose. Osmotic laxatives (e.g., polyethylene glycol, lactulose) have demonstrated efficacy for treatment of constipation more generally (i.e. not necessarily opioid-induced constipation). Peripherally acting mu opioid receptor antagonists (e.g., methylnaltrexone), which selectively inhibit the action of opioids in the gastrointestinal tract while preserving centrally mediated analgesia, have emerged as effective options for treatment of opioid-induced constipation, but their role in prophylaxis is uncertain owing to lack of comparative effectiveness studies for this purpose and high cost.

**Guidance Statement 11: The Society of Hospital Medicine recommends that clinicians avoid co-prescription of opioids with other central nervous system (CNS) depressant medications.**

Rationale and comment: This combination has been demonstrated to increase risk of opioid-related adverse events in multiple settings of care, including during hospitalization. While benzodiazepines have received the most attention in this respect, other medications with central nervous system depressant properties may also increase risk, including but not limited to non-benzodiazepine sedative-hypnotics (e.g., Z-drugs), muscle relaxants, sedating anti-depressants, antipsychotics, and antihistamines. For some patients, the combination will be unavoidable, and we do not suggest routine discontinuation of longstanding medications that pre-existed hospitalization given the risks of withdrawal and/or worsening of the underlying condition for which these medications are prescribed. Rather, clinicians should carefully consider the necessity of each medication class with input from the patient's outpatient providers when indicated, taper the CNS depressants when appropriate and feasible, and avoid new co-prescriptions to the extent possible, both during hospitalization and on hospital discharge.

**Guidance Statement 12: The Society of Hospital Medicine recommends that clinicians work with patients and families to establish realistic goals and expectations of opioid therapy and the expected course of recovery.**

Rationale and comment: Discussing expectations at the start of therapy is important to facilitate a clear understanding of how meaningful improvement will be defined and measured during the hospitalization, and how long the patient is anticipated to require opioid therapy. Meaningful improvement should be defined to include improvement in both pain and function. Clinicians should discuss with patients 1) that the goal of opioid therapy is *tolerability* of pain such that meaningful improvement in function can be achieved, and 2) that a decrease in pain intensity in the absence of improved function is not considered meaningful improvement in most situations, and should prompt re-evaluation of the appropriateness of continued opioid therapy as well as close follow up with a clinician following hospital discharge. Discussions regarding the expected course of recovery should include that acute pain is expected to resolve as the underlying medical condition improves and that although pain may persist beyond the hospitalization, pain severe enough to require opioids will often be resolved or almost resolved by the time of hospital discharge.

**Guidance Statement 13: The Society of Hospital Medicine recommends that clinicians monitor the response to opioid therapy, including assessment for functional improvement and development of adverse effects.**

Rationale and comment: Pain severity and function should be assessed at least daily, and improvement in reported pain severity without improvement in function over several days should, in most circumstances, prompt reconsideration of ongoing opioid therapy and reconsideration of the underlying etiology of pain. Hospital specific functional measures and goals should be individualized based on pre-existing function, and may include the ability to sit up or move in bed, move to a chair, work with physical therapy, or ambulate in the hallway. Protocols for assessment for adverse effects are not well established. Because sedation typically precedes respiratory depression, it is generally recommended that clinicians evaluate for sedation after each opioid administration (10-20 minutes for intravenous and 30-60 minutes for oral administration based on time to peak effect). Whether certain patients may benefit from more intensive respiratory monitoring, such as pulse oximetry or capnography, is an area of active investigation and not yet established, but such monitoring may be considered in patients with multiple risk factors for opioid-related adverse effects (see Guidance Statement 2). It should be noted that pulse oximetry cannot be relied upon to detect respiratory depression in patients receiving supplemental oxygen.

## Prescribing at the Time of Hospital Discharge:

**Guidance Statement 14: The Society of Hospital Medicine recommends that clinicians ask patients about any existing opioid supply at home and account for any such supply when issuing an opioid prescription on discharge.**

Rationale and comment: Even in the setting of acute pain, patients may have previously received an opioid prescription from an outpatient clinician prior to hospitalization. Unused prescription opioids create the possibility of both overdose (when patients take multiple opioids concurrently, intentionally or inadvertently) and diversion (many adults with prescription opioid misuse obtained their opioids from a friend or relative who may or may not have known this occurred). The PDMP database can provide

information related to the potential existence of any prior opioid supplies, which should be confirmed with the patient and considered when providing a new prescription on hospital discharge. Information on proper disposal should be provided in the event that use of the pre-existing opioid is no longer intended.

**Guidance Statement 15: The Society of Hospital Medicine recommends that clinicians prescribe the minimum quantity of opioids anticipated to be necessary based on the expected course and duration of pain severe enough to require opioid therapy after hospital discharge.**

Rationale and comment: For many patients, the condition causing their acute pain will be mostly or completely resolved by the time of hospital discharge. When pain is still present at the time of discharge, most pain can be wholly managed with non-opioid therapies. For those with ongoing pain severe enough to require opioids after hospital discharge, while decisions should be made on a case-by-case basis, provision of more than a 7-day supply of opioids should generally be avoided for several reasons, including 1) acute pain lasting longer than 7 days after appropriate treatment of any existing underlying conditions should prompt re-evaluation of the working diagnosis and/or reconsideration of the management approach, 2) receiving higher intensity opioid therapy (including longer courses) in the setting of acute pain has been associated with increased risk of long-term disability and long-term opioid use, and 3) unused opioids create the possibility of intentional or unintentional opioid diversion (see Guidance statement 13). Accordingly, clinicians should attempt to arrange an outpatient follow up appointment for re-evaluation within 7 days, when feasible, rather than providing an extended opioid prescription on hospital discharge. Some states have begun enacting legislation to limit the duration of first-time opioid prescriptions, typically using a 7-day supply as an upper limit.

**Guidance Statement 16: The Society of Hospital Medicine recommends that clinicians ensure that patients receive information regarding how to minimize the risks of opioid therapy, including but not limited to: 1) how to take their opioids correctly (the planned medications, doses, schedule); 2) that they should take the minimum quantity necessary to achieve tolerable levels of pain and meaningful functional improvement, reducing the dose and/or frequency as pain and function improve; 3) that they should dispose of any unused supply and how to do so; 4) that they should avoid agents that may potentiate the sedative effect of opioids, including sleeping medication and alcohol; and 5) that they should avoid driving or operating heavy machinery while taking opioids.**

Rationale and comment: Clear and concise patient instructions on home opioid dosing and administration will limit opioid-related adverse events and dosing errors upon hospital discharge. Each of these recommendations derive from one or more of the existing guidelines, and reflect the transfer of responsibility for safe opioid use practices that occurs as patients transition from a closely monitored inpatient setting to the more self-regulated home environment.