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## Moving Beyond Pain as the Fifth Vital Sign and Patient Satisfaction Scores to Improve Pain Care in the 21<sup>st</sup> Century

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Pain is a prevalent ongoing health care challenge in the United States. Data from the 2010 – 2011 National Health Interview show that 16.9% of men and 20.7% of women experience pain most days or every day over a 3-month period (Centers for Disease Control and Prevention, 2017). Further, persistent, intense pain can impair an individual’s mental and physical health (Herr & Arnstein, 2016). The lack of clear, effective treatments for pain has contributed in part to the evolving crisis of opioid misuse (Volkow & Collins, 2017).

Appropriate pain assessment is the essential first step in pain management (Csomay Center, 2017). Every person with pain, including those with substance use disorders, needs high quality pain assessment and management (Oliver, et al., 2012). However, evidence is mounting that current initiatives to promote pain assessment across clinical settings have failed to solve the problem of undertreated pain, and may contribute in part to the current opioid crisis.

One such initiative is the declaration of pain as the “fifth vital sign”. In 1995, Dr. James Campbell addressed the American Pain Society urging that health care providers treat pain as the “fifth vital sign” (P5VS) (American Pain Society, 1999), highlighting the essential need for improved pain care (American Pain Society Quality of Care Committee, 1995). Shortly thereafter, the Veterans Health Administration (VHA) introduced a national strategy to improve pain treatment (Veterans Health Administration, 2009) that included mandatory pain screening using the uni-dimensional Numeric Rating Scale (NRS). In an effort to improve pain care, pain-related questions were also added to patient satisfaction surveys. These initiatives were directed at improving pain care broadly, to include patients with both acute and chronic pain.

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Despite positive intentions, the P5VS initiative has fallen short. A large body of evidence indicates that measuring pain intensity using uni-dimensional tools like the NRS has not improved pain outcomes (Clark, et al., 2002, Wood, et al., 2010, Gordon, 2015, Ballantyne & Sullivan, 2015, Krebs, et al., 2007, Lucas, et al., 2007, Frasco et al., 2005, Mularski et al., 2006). For example, a well-conducted study examined the efficacy of the NRS as a pain-screening tool (Ballantyne & Sullivan, 2015). This study found that the quality of pain treatment was unchanged after implementation of the initiative. In another investigation, researchers utilized the Multidimensional Affect and Pain Survey (MAPS) questionnaire to identify the various dimensions of patients' pain that impact their NRS scores (Clark, et al., 2002). The investigators administered the MAPS to cancer patients recovering from surgery and found that the emotional aspects of pain, including anxiety, depressed mood and anger significantly impacted patients' NRS scores. The authors concluded that the NRS score should not be used in isolation to determine whether additional analgesic treatment is needed. Health care professionals should also assess and treat postoperative psychological distress when present. These and other published data indicate that implementation of the P5VS has not measurably altered pain outcomes for patients receiving care in acute, ambulatory and long-term care settings over the past 15 years (Clark, et al., 2002, Wood, et al., 2010, Gordon, 2015, Ballantyne & Sullivan, 2015, Krebs, et al., 2007, Lucas, et al., 2007, Frasco, et al., 2005, Mularski, et al., 2006).

Embedding pain-focused questions in patient satisfaction surveys represents a second initiative intended to improve pain outcomes that may have resulted in inadvertent consequences. In 1985, Press Ganey Associates created a questionnaire to collect patients' perceptions regarding the quality of care they received in outpatient clinics, inpatient units, and ambulatory surgery practices (Press Ganey, 2015). These surveys grew in popularity and were developed, evaluated, and disseminated across diverse clinical settings. In 2002, the Centers for Medicare and Medicaid Services developed the Hospital Consumer Assessment of Healthcare Providers and Systems Survey (HCAHPS), which asks patients questions regarding the hospital environment, care received from health care providers, and management of their pain (HCAHPS Online, 2015). Press Ganey submits the data collected from the HCAHPS, a requirement of the Centers for Medicare and Medicaid in order to document all patient discharges (Centers for Medicare and Medicaid Services). As a result of the Deficit Reduction Act of 2005, hospitals that use the Inpatient Prospective Payment System (IPPS) also must submit HCAHPS data in order to receive their full IPPS annual payment update (Centers for Medicare and Medicaid Services). If they do not report these data, participating hospitals may receive a payment update that is reduced by two percent. As a result, satisfaction survey ratings regarding pain became connected with financial incentives for hospitals. Furthermore, one component of the 2010 Patient Protection and Affordable Care Act linked hospitals' Medicare reimbursement rates to patient satisfaction ratings on surveys; hospitals with lower patient satisfaction ratings were reimbursed at lower rates (Centers for Medicare and Medicaid Services). In essence, hospitals were given a financial incentive to increase satisfaction ratings. Preliminary evidence (based largely on qualitative studies) supports the idea that some providers feel pressure to prescribe opioids to ensure patient satisfaction with pain care (Zgierska, et al., 2012, Siegrist, 2013, Bendix, 2014, Anson, 2016, Zierska, 2014, Sinnenberg, et al., 2017). In contrast, one quantitative

study found no association between patient satisfaction scores and administration of opioids (Schwartz, et al., 2014).

Studies show that patient satisfaction with pain care does not necessarily reflect adequate pain treatment. Vila et al. (2005) evaluated one hospital that implemented the P5VS initiative. The researchers measured patient satisfaction with pain care and adverse drug reactions (e.g., opioid over-sedation) after implementation of this initiative. This study showed that while the initiative was associated with increased patient satisfaction, it also led to an increase in opioid-related adverse drug reactions. These findings emphasize the danger of allowing patient satisfaction surveys to influence pain management decisions.

Measuring pain using the NRS and implementing patient satisfaction surveys regarding pain care across clinical settings have failed to solve the problem of undertreated pain. Due to concerns with inadequate pain measurement tools and potential opioid-related effects, the Physicians for Responsible Opioid Prescribing (PROP) wrote a letter in April of 2016 to the Joint Commission demanding a re-evaluation of its Pain Management Standards (Fiore, 2016). While PROP advocates urged the Joint Commission to redefine standards brought about by the P5VS initiative, they also recommended abolishing the use of patient satisfaction surveys in reimbursement procedures by health care providers and the Centers for Medicare and Medicaid services. PROP advocates believe patient responses reflecting dissatisfaction with pain care can put added pressure on health care providers to prescribe opioids in order to ensure adequate hospital reimbursement and avoid accusations of malpractice.

In light of research documenting the dramatic rise of opioid addiction and opioid-related deaths, delegates at the 2016 American Medical Association (AMA) meeting voted to stop treating pain as the fifth vital sign because they believe it is likely that the initiative, along with other factors, have exacerbated the opioid crisis (Anson, 2016). Clearly many factors have contributed to the opioid crisis, including aggressive marketing by pharmaceutical companies, increased number of prescriptions written by providers, social tolerability of opioid use for different purposes, and the lack of safe, effective treatment for chronic pain (Volkow, 2017, Volkow, 2014). AMA delegates outlined necessary actions steps to ensure adequate treatment of pain in the absence of the P5VS initiative. These methods include improving pain assessment measures and promoting non-opioid treatments for pain (Anson, 2016). They also declared that P5VS policies should be removed from professional standards and that pain management questions be eliminated from patient satisfaction surveys.

To assess pain more effectively, an inter-professional team approach using multi-dimensional pain assessment tools is needed. The inter-professional team can use these multi-dimensional tools to conduct comprehensive assessments to measure aspects of the pain experience (e.g., psychological, spiritual and socio-emotional pain; impact on daily functioning) beyond its sensory component and establish realistic goals that align with patients' needs (Arnstein & Herr, 2017). This approach is particularly appropriate for patients with chronic pain.

One example of a multi-dimensional pain questionnaire used to measure patients' response to post-operative pain therapy is the Overall Benefit of Analgesic Score (OBAS). Lehmann et al. (2010) measured the efficacy of the OBAS, a survey that evaluates patients' pain level and opioid symptom distress, to see how it compared to the uni-dimensional opioid-related symptom distress scale and the modified brief pain inventory short form. This study found that the use of the multi dimensional OBAS is more effective in measuring treatment effects than the other two measures. The authors state that pain intensity scores should not be used alone to measure pain after surgery. The OBAS effectively monitors opioid-related reactions while ensuring that patients are not in high levels of pain, and can be completed quickly as it is only comprised of seven items.

In response to the need for a more comprehensive approach to pain assessment, clinicians at the University of Utah developed a tool called the Clinically Aligned Pain Assessment Tool (CAPA) (University of Utah Health, 2013). CAPA is made up of a series of questions that asks patients in a discussion-based manner about the extent to which pain impacts their quality of life. Clinicians then document the responses and determine the appropriate intervention based on these data. Donaldson & Chapman (2013) determined the effectiveness of the tool in a study that included over 12,000 pain assessments. Study patients and nurses preferred CAPA to the NRS, and the probability of accurately identifying the severity of pain and effectively treating pain was 81% for CAPA compared to 42% for NRS. These findings suggest that both hospital staff and patients are more satisfied with CAPA, and the extensive information gained from CAPA allows clinicians to more efficiently treat patients' pain.

The development of reliable and brief multi-dimensional pain measures can improve assessment of chronic pain in primary and ambulatory care clinics. The PEG is a three-item pain scale that evaluates pain intensity and interference with daily life. Research has shown that it has strong reliability, construct validity and responsiveness in patients with chronic pain in primary care facilities (Krebs, et al., 2009). Lorenz et al. (2009) suggests that the PEG may be a more efficient pain-screening tool than the NRS because it is can be easily used in every day practice and provides more in-depth information about how pain impacts quality of life.

In conclusion, evidence is mounting that current initiatives to promote pain assessment have failed to solve the problem of undertreated pain, and may have contributed, in part, to the current opioid crisis. An inter-professional team approach to implementing multi-dimensional pain assessment tools in clinical practice is therefore needed. Although using a more comprehensive questionnaire will take more time than a uni-dimensional measure, a multi-dimensional approach can help the inter-professional team establish realistic goals that align with patients' needs (Arnstein & Herr, 2017). To implement these multi-dimensional pain assessments in busy clinical practices, nurses will need to play a central role. Nurses can work to ensure that patients complete the questionnaires prior to the visit. Nurses can also take the lead in the use of new technologies in the form of tablets, smart phones, and mobile apps to facilitate collecting patient-level data in the home or in a waiting room before their visits. Further, nursing research will be needed to confirm the feasibility and establish

the efficacy of an inter-professional approach to the use of multi-dimensional assessment questionnaires used in health practices to assess pain.

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