

Dr. Madhu Badireddy: “Out-of-the-box” Thought Leader in Hospital Medicine

GopiKrishna Vadlamudi

Medical Director, Hospitalist Program, UPMC CCHM
Chair, Department of Medicine, Monangahela Valley Hospital
Email: gopivmudi@gmail.com; Phone: 4176133658

Negotiating the busy work environment inside a hospital often limits the ability of the hospitalist to attend to all problems of the patients. Importantly, mental and behavioral health issues are often ignored, and many relevant points in history taking are evaded. Scary as it may sound, practicing hospitalists are well-aware about these deficits in routine care. Dr. Madhu Badireddy needs special mention in this regard, where he has taken major steps in circumventing these issues during care delivery as a hospitalist. Dr. Badireddy is a consultant hospitalist with Sound Physicians in San Antonio, Texas. His succinct work in bridging the deficits related to behavioral health in hospitalized patients have attracted the attention of the medical fraternity.

Communication is critical for excellence in patient care within the hospital setting. However, a breach in communication is often the most common occurrence in suboptimal performance of routine activities involved in the hospital. Communication is required between hospital staff, physician, family members and patients. Frank communication is key to success, whereas breach of communication is the commonest cause affecting productivity at all scales within a health care organization. Keeping in mind that the patient is the central figure in the hospital, Dr. Madhu Badireddy is leading a unique campaign of enhancing communication involving patients admitted to the hospital. His “*Disclose*” campaign is truly an ingenious project, which is much needed in today’s health care settings. Commonly, the patients are admitted to the hospital through the ED (Emergency Department). Others may come to the hospital for elective surgeries. Often times, brief histories are obtained, in which the exact recreational drugs that the patients use, and its duration, is often missed out. With increasing decriminalization of marijuana, vigorous debate is going on whether marijuana may be used as an alternate mode of pain control and advanced pain management. This is especially true for terminally ill cancer patients with intractable pain.

Just like location in real estate, communication is key for success in the hospital. In the hospital environment, it is communication—the physicians in each discipline must communicate in each step of the process. Dr. Badireddy has a remarkable approach to include his patients, which decreases the patient's anxiety and takes the patient and his family into confidence. The impact of marijuana on body health of hospitalized patients are multiple. When marijuana is smoked, tetrahydrocannabinol (THC) and other cannabinoids are released in the systemic circulation rapidly via the lungs, with

effects peaking in fifteen minutes. These effects can last for up to a dose-dependent four hours in the acute setting. When ingested orally however, onset of effects is slower but has a longer duration of action, due to ongoing absorption through the intestine. The cognitive effects can be present for up to a day regardless of administration route. Cannabinoids are highly lipid soluble, meaning that it can stay in the body system for very prolonged periods of time. This leads to a slow release into the bloodstream with a single dose, which may not be fully eliminated for up to a month after initial consumption. This has very important effect on surgical patients or those anticipating surgery, as the drug tends to be retained in the body for long periods and can significantly impact the postoperative course and outcome.

Dr. Badireddy has a long interest in behavioral health management. After obtaining his initial medical training from Kurnool Medical College in India, he underwent extensive training in psychiatry under the NHS system in the United Kingdom. After crossing the pond, he accomplished his residency training in Internal Medicine at St. Luke’s Hospital in Bethlehem in Pennsylvania. He has, thereafter, religiously served the patients in the hospital, first in the Division of Hospital Medicine at Wake Forest University and currently continuing in his luminary roles at the Christus Santa Rosa Hospital in San Antonio, Texas. With these rich background in hospital medicine, Dr. Badireddy has a deep understanding of the key issues plaguing patient satisfaction and high-quality care in the hospital. The most important thing in the hospital is time. Time spent with patients is of paramount importance in eliciting appropriate medical history. However, this is also the most important bottle neck in patient care. Rounding multiple patients rapidly on multiple floors in the hospital, the busy hospitalist seldom finds time to obtain a full history, often missing out the important component of past substance abuse. Furthermore, with intermittent use of recreational substance, the patients may not even reveal that they have used marijuana or other substances of abuse. Interestingly, because the cannabinoid metabolites persist in the body long after the cessation of its use, making them vulnerable to guarded outcome in the hospital, including a high risk for sudden cardiac death. These issues are becoming increasingly important in the atmosphere of decriminalization of medical marijuana. The cardiovascular effects of marijuana are wide ranging. Marijuana can increase heart rate, increase blood pressure and can cause cardiac rhythm disturbances. In fact, Brugada-like features, which means sudden cardiac death, may occur. Marijuana use also cause myocardial infarction.

Marijuana can cause stroke and inflammation of the large blood vessels, especially of the lower limbs (causing a feature like Buerger disease, often resulting from smoking nicotine). In fact, only a few cannabis cigarettes daily equals 20 tobacco cigarettes in terms of lung and airway tissue injury. Because of the tremendous experience in psychiatry and general medicine, Dr. Badireddy has been able to synthesize this issue into a simple manifesto for the patients to reveal their drug use history in a non-judgmental fashion, resulting in more open and frank communications and identification of emergent issue of hospitalized patients.

Dr. Badireddy's efforts are laudable in another highly important sector of patient care in the hospital. His efforts are truly visionary because he has hit the bull's eyes in key areas of patient care. Though there is no immediate panacea for the opioid epidemic facing the nation, physicians like Dr. Badireddy are at the helm of organizing grass root level activities which manages pain control in hospitalized patients, as well as when they are out of the hospital. He has advocated the use of biohacking and other simple measures like physical measures of pain control. More importantly, he has initiated important communication strategies to motivate his patients for cessation of drug sharing. Here again, there is a reflection of a visionary clinician, who has transcended above his routine scope of duties and gone beyond to impact behavior and cater to some of the most pressing national health problems. Dr. Badireddy's advocacy of alternate methods of pain control including the use of physiotherapy, intermittent fasting and behavioral methods in order to combat chemical dependency is highly novel intervention as a hospitalist and praiseworthy.

Doctors often use opioids to treat severe pain after surgery or sudden injuries (like broken bones). Opioids are used to treat chronic pain, such as in people with terminal illness (like cancer) or nonterminal pain conditions (like certain long-term back problems). There are legal prescription opioids, such as oxycodone, hydrocodone, and fentanyl. There also are illegal opioids, including heroin and illegally manufactured fentanyl. Both legal and illegal opioids are contributing to the current US epidemic of opioid deaths. Maintaining adequate pain control remains a high clinical priority, but efforts to titrate opioid use and to increase the use of multimodal pain regimens are implemented. Being a vocal advocate and implementation of these policies has catapulted Dr. Badireddy to a status of national leader in hospital medicine to whose work we look forward to as a path-leader.

Substances like opioids have the ability to cause unpredictable intestinal obstruction and chronic constipation (1). Dr. Badireddy has published important papers in diagnosing unusual cases of esophageal inflammation and intestinal obstruction, demonstrating the high quality probative clinical care that he brings to the setting of American hospital medicine. Leaders like Dr. Badireddy are the key resources for the innovative legacy that American hospital medicine maintains its global reputation and leader in healthcare.

Finally, Dr. Badireddy is leading a paradigm-shifting awareness on social isolation by highlighting the concept of "nourishing people through people", whose impact goes

beyond the walls of the hospital and pervades into one of the most pressing issues in current society. Loneliness and major depression are second commonest causes of death after heart attack (Both in the United States and globally). This is also a big challenge in hospitalized patients. Dr. Madhu Badireddy is vigorously creating awareness on these social issues. Dr. Badireddy has advocated watching televisions, sports channels, socializing in the rehabilitation unit and doing away the "silos" in the hospital. He has recommended brief walking and physical activity, even in sick patients admitted to the hospital. Physical activity and watching sports are effective distractors for mental health. Even limited mobility and getting out of bed can significantly add to physical recovery. These are highly efficient methods to restore wellness, increasing mental freshness, reduces adherence to pain medication and prevent hospital readmissions.

Dr. Badireddy has proposed the concepts of *Hygge* and *Koselig* to enhance hanging out together and help recover post-hospital course illness. Family support is extremely important for recovery for patients who are admitted to the hospitals for prolonged periods. Under some conditions when the patient is in the intensive care unit (ICU), the illness may linger several months after discharge, leading to a recalcitrant post-ICU illness. Family support is key in recovery of these patients, as well as prevention of delirium (unpredictably developing mental confusion) long after these patients are discharged from the hospital. An earlier American study, called the Roseto study (2), showed that a closely-knit community can prevent heart attack and significantly reduce death rate. Dr. Badireddy's work is blatantly raising the red flag associated with poor recovery of patients due to the fast pace of the modern life. Dr. Badireddy's work is undoubtedly of global significance. Dr. Badireddy's pioneering approaches is teaching us the valuable lessons of bringing delight and fullness to our daily lives, promoting *ikigai*, a strong reason for our very existence.

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Figure 1. Dr. Madhu Badireddy