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Why an Algorithmic "Rule-Out MI" Order Set Is Necessary But Not Sufficient Care for Chest Pain in the Emergency Department Setting

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Chest pain is a common chief complaint evaluated in emergency department (ED) settings across the country. However, only 2 of every 10 patients seen have a true cardiopulmonary emergency (1,2). Among the majority deemed "low-risk chest pain" patients, undiagnosed or untreated anxiety contributes to the physical symptoms about half of the time (3). Yet, anxiety in low-risk chest pain patients is rarely addressed in the ED setting, even if providers suspect it as the underlying cause of symptoms (4). The standard or usual care provided for chest pain patients is understandably focused on ruling out life threats such as a myocardial infarction or other serious event and ends with a subsequent discharge. Understanding the patient perspective on care provided in the ED for low-risk chest pain and anxiety provides valuable insight into why usual care is not sufficient and how it can be improved. The purpose of this article is to share the patient's experience of care to create awareness of the missed opportunity to initiate follow up care among low-risk chest pain patients with anxiety in the ED setting.

Information presented in this article results from listening sessions and other engagement activities with patients who received care in the ED for low-risk chest pain associated with anxiety (LRCP-A). The listening sessions were undertaken as an initial step in planning improvements to care and patient-centered outcomes research under a Pipeline-to-Proposal Engagement Award through the Patient-Centered Outcomes Research Institute and were determined nonhuman subjects research by our institutional review board. While there may be similarities in patient experiences across EDs, this information should not be generalized to other populations and settings outside the context of this article.

Unfortunately, anxiety has a high symptom burden that extends beyond physical and cognitive symptoms and includes functional impairments to work, family, and social life as well. However, in the ED setting, the focus tends to be limited to physical symptoms that can range from heart racing or pounding to gastrointestinal discomfort among patients with anxiety. Lack of a discernable cause often leads to vague descriptions-like low-risk cardiac symptom complex rather than recognition or discussion of anxiety. Due to prioritization of life-threatening physical injury or illness in the ED setting, it is not surprising that patients feel their symptoms are minimized. Box 1 highlights a patient's ("Mary") lived experience with health and health care relative to anxiety. Albeit Mary's case is a highly individual experience, it exemplifies several common issues presented below among LRCP-A patients that contributed to poor experiences of care.

First, although patients are generally relieved to learn that they did not have a heart attack (today), there is widespread confusion about what *is* causing their symptoms as well as what to do about them. Hence, when symptoms continue or reoccur following discharge, patients often return to the ED with the same fear or concern related to having a heart attack. This may partially contribute to the 36% rate of ED recidivism among low-risk chest pain patients (5). Although many providers use a tool such as the Heart Score (6) to determine subsequent cardiac risk, this information is often not clearly communicated to patients despite the availability of shared decision aids. In fact, low-risk chest pain, a

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Box 1. The Story of "Mary."

Mary experienced chest pain accompanied by headaches, tightness in her neck and shoulders, shortness of breath, and extreme fatigue. When symptoms occurred, unexplained anger built up inside resulting in self-isolation to avoid irritability toward others. Her symptoms made it difficult to sleep and caused concern among family members. Nothing seemed to help alleviate symptoms, not even the rocking behavior that had been a comfort since childhood. Persistence of symptoms worsened by fear of having a heart attack finally caused Mary to seek care in the emergency department (ED). After a full diagnostic work up she was told, "Don't worry it's not a heart attack, it's just stress, you're fine." The problem was Mary did NOT feel fine and did not relate to any particular stressor, high stress, or a recent change in levels of stress. Furthermore, she felt dismissed by the provider who made no physical or eye contact, offered minimal explanation or concern for symptoms, and was perceived as abrupt and rushed. This aggravated Mary's symptoms and nearly caused her to leave against-medical-advice (AMA) to avoid a confrontation with the provider. Dissatisfaction with care and worry over continuing symptoms led to additional trips to a different ED as well as her regular doctor. Albeit slightly better experiences, each provider reiterated the cause of her symptoms as stress. She was prescribed medicine that initially did not make a difference, and stopped taking it upon a prescribed dose increase due to feeling like a "zombie." Follow-up care with her regular doctor included additional "stress" testing (ie, electrocardiogram), discussions about sources of stress and stress management, and resulted in a plan to see if taking a few days off from work reduced her stress. Although Mary found her job as a certified nursing assistant meaningful, she followed her doctor's advice upon self-reflection of high physical stress due to lifting and transfers of patients. After some relief from symptoms with 5 days off, Mary decided to leave her job for a less desirable unskilled labor position (that coincidentally interfered with her family responsibilities as a caregiver to her grandchild) only to have symptoms reoccur. After being told by 3 doctors that her symptoms were caused by stress and considerable confusion over stress as a cause of symptoms, Mary was starting to feel like she must be wrong (and a little crazy) . . . . until her mother, a retired nurse, first introduced the term "anxiety." *Fictitious names have been used to protect patient confidentiality

common term used by providers, is generally not understood by patients. Use of simple explanations, such as "Among people with few risk factors like you, only 2% or 2 out of 100 patients are likely to have a heart attack or related event in at least the next 6 weeks," can reduce the fear of subsequent events as well. In addition, screening for anxiety could provide additional information related to alternative causes of symptoms. Since the Generalized Anxiety Disorder 7-item scale (7) is aligned with diagnostic criteria, it is an ideal instrument to use in screening for anxiety once a patient is deemed low risk. Hence, providers can have confidence in assessing whether anxiety may be contributing to a patient's symptoms.

Second, although conversations about anxiety are rarely initiated in the ED, patients are open and receptive to this discussion. Not all patients will be familiar with anxiety; hence, it's important to provide reliable information about anxiety using existing resources from reputable organizations targeted toward the lay community. For some patients, it may also be important to differentiate anxiety from the overused and generalized term of stress. Furthermore, communication must also be bidirectional, sensitive to mental health stigma, and empathic. Gaining input on improved communication from our patient partners revealed the importance of making sure patients feel heard and validated, understand the link between anxiety and common physical symptoms, perceive experience of LRCP-A as normalized, and are reassured that effective treatments for anxiety exist just as there are effective treatments for physical ailments like heart disease. While emergency medicine physicians may not be the ideal individuals to have this discussion, other members of team-based care (eg, social workers) in the ED may be well suited to the task. At a minimum, patients should have access to an informational brochure for use in the ED setting.

Finally, patients do not want care to end with discharge from the ED. Although the ED is not the ideal setting to provide care for nonemergent conditions, it is the ideal setting to initiate appropriate follow-up care. The exacerbation of anxiety symptoms that cause individuals to seek care in the ED offers an "actionable moment" in which patients may have a heightened motivation to pursue treatment when anxiety symptoms are high. Indeed, some patients will prefer a direct referral to treatment. However, among other patients, a lack of clarity in thinking during anxiety symptom exacerbation or information overload may not be conducive to a discussion of treatment options in the ED setting. This is particularly true for patients who experience increased anxiety symptoms or a panic attack during the encounter due to the ED environment. While a generalized recommendation to follow-up with a regular doctor if symptoms persist or worsen is likely not beneficial, coordination of care that includes results of all ED tests and screening along with a referral for further evaluation and treatment specifically for anxiety is warranted. Furthermore, some patients may feel more comfortable delaying discussion of treatment options with a regular doctor in the outpatient setting, while others clearly do not have a trusting relationship established with a

regular doctor. These choices emphasize the importance of assessing patient preferences for further evaluation and treatment.

In summary, simply ruling out a heart attack or other serious cardiopulmonary event among chest pain patients may be the goal of providers, but does not meet expectations for care among the majority of patients. The experience of care among patients with low-risk chest pain and anxiety suggests that current care for these patients has room for improvement. It is our opinion that an imperative exists to do something rather than continuing to do nothing to address anxiety among low-risk chest pain patients in the ED setting. Desired improvements to care made by our patient partners and described throughout this article are directly aligned with screening, brief intervention, and referral to treatment (SBIRT) principles. However, this practice is only beginning to be used for LRCP-A in the ED setting (8). In our opinion, SBIRT should be the minimum standard of care replacing no care. Furthermore, additional comparative effectiveness research is needed to determine which treatment options work best in this population and setting to inform decision-making among providers and patients who prefer direct referral to treatment.

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