

EDITORIAL

# Return to Work After Acute Myocardial Infarction

## The Importance of Patients' Preferences

See Article by Warraich et al

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The longstanding disease-centered outlook on patient care, where physicians make the majority of treatment decisions, is increasingly being challenged by patient-centered healthcare, defined by the Institute of Medicine as “care that is respectful of and responsive to individual patient preferences, needs, and values.”<sup>1</sup> Providing such care requires a shift that recognizes that the success of treatments is dependent on patients not only adhering to treatments, but actively engaging in their own self-care.<sup>2</sup>

Acute myocardial infarction (AMI) is a common cardiac condition and a classic example of how patient-centered care can be readily applied to optimize outcomes. AMI is a life-changing event that is often accompanied by a complex set of emotional reactions, including fear, anxiety, isolation, and depression, that pose barriers to successful recovery and functioning—including the ability to resume employment. In the last decade, advancements in prevention and treatment strategies for AMI have led to significant improvements in clinical outcomes such as mortality.<sup>3</sup> Although clinical outcomes are obviously crucial, patients report that patient-centered outcomes, like the ability to return to work post-AMI, are vital to their recovery too. Because 95% of patients with AMI survive the initial hospitalization and are discharged home,<sup>4</sup> it is crucial to understand this transitional period in patients' lives. Incorporating patients' preferences, needs, values, and goals into treatment should include addressing patient preferences about employment. There is emerging qualitative research illustrating the importance of work in the lives of patients who have experienced an AMI as a motivating factor in recovery and day to day self-care. For example, reflections<sup>5</sup> from a 58-year-old employed female explained “...work is important to me both mentally and physically. I wanted to get back to work after my heart attack so I worked twice as hard in cardiac rehab... I don't ever want my mind to go to mush, which I think it did right after the heart attack.” Conversely the daily demands of one's work and job stress post-AMI have been described as feeling “overwhelmingly exhausted” and “waiting for the next heart attack,” illustrating the importance of addressing a patient's risk for adverse events related to stress and depression after return to work.<sup>5</sup>

In this issue of *Circulation: Cardiovascular Quality and Outcomes*, Warraich et al<sup>6</sup> report on the prevalence of adverse change in employment status within the first year after an AMI in a US cohort, the TRANSLATE-ACS registry (The Treatment With ADP Receptor Inhibitors: Longitudinal Assessment of Treatment Patterns and Events After Acute Coronary Syndrome)—and the association of adverse change in employment status with medication adherence, financial barriers in affording medications—and the impact of health status (symptoms, functioning, quality of life) and psychosocial factors (eg, depression). The TRANSLATE-ACS study is an

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observational, longitudinal registry involving 12 365 patients aged >18 years with AMI enrolled across 233 hospitals in the United States from 2010 to 2012. An adverse change in employment status (including full-time or part-time work) was defined as patients who reported that they were working immediately before the index AMI hospitalization but were either no longer working or working fewer hours a year later.

The final cohort included in this study consisted of 9310 patients (2530; 27% women) with a mean age of 56 years; half of patients (51%) were used at the time of the index AMI. Patients who were not working at baseline were older (and retired), more likely to be women, of black race, nonmarried and were less educated. Nonworking individuals also had a clustering of adverse risk factors, comorbidities, and higher rates of recurrent AMI and complications in comparison to patients who were working.

By 1-year post-AMI, 10% of patients working before the attack reported an adverse change in employment status, with 3% of patients working less and 7% no longer working. Of these, only a small proportion reported retirement. Patients who experienced this adverse change in employment status were more likely to be female and had a range of unfavorable risk factors and adverse outcomes. In multivariable models, the factors significantly associated with an adverse change in employment status included a number of unplanned readmissions within the first year, bleeding complications post-stenting, smoking, and hypertension. Similar to prior research,<sup>7</sup> female sex was significant in unadjusted analyses but attenuated after adjustment for important factors such as sociodemographics, cardiovascular risk factors, and treatments.

In unadjusted and adjusted analyses, patients experiencing an adverse change in employment status, versus those experiencing no change, were more likely to be depressed, had a poorer health status, and reported increased financial burden in affording medications at 1-year. However, no difference was found in medication adherence.

The major novelty of this study is the focus on return to work as a patient-centered outcome. Return to work represents a critical indicator of recovery from illness—and return to a degree of normality after an acute event.<sup>8</sup> Employment is reflective of superior health and well-being,<sup>9</sup> whereas the inability to resume employment and being out of work can have negative effects on patients physical and mental health.<sup>10</sup> Subgroups such as women are especially vulnerable for leaving the workforce and often fail to return to work after AMI, most likely because of their complex life burdens and poorer health outcomes.<sup>7</sup> Unemployment can lead to increased rates of adverse outcomes such as depression, repeat cardiac events, and even higher rates of death.<sup>9</sup>

There are several key messages from this study. First, the authors demonstrate the lowest rate of adverse change in employment status 1-year after AMI to date (ie, 10%). This is excellent news; previous research reported up to 51% adverse change in employment status at 1-year. Improvements in cardiac management over the past decade may help explain the current results as many prior studies were based on data from the 1970s to 1990s.<sup>8</sup> That is to say: a focus on clinical outcomes remains crucial. Nevertheless, the significant rate of work loss reported in this study requires further improvements in patient-centered care. Notably, nearly half of all job losses were described by the patient as involuntary including for job loss because of disability. Moving forward, future work is required to understand the barriers to successful return to work for these patients.

Second, although prior work has demonstrated that factors such as hypertension and smoking may be associated with return to work in patients post-AMI, the finding of unplanned readmissions and bleeding complications as markers of an adverse change in employment status are novel. Beyond the burden on the healthcare system, readmission is clearly an important outcome as it imposes significant physical, psychological, and financial burden on patients—and may contribute to work disability. Importantly, the adverse change in employment status reported in this study was associated with increased risk of depression, poorer health status, and increased financial difficulty in affording medications. These findings are supported by a wealth of prior research—but extend the field by confirming these outcomes in a large US setting.

These conclusions, however, must be interpreted in the context of several study limitations. There was a lack of detailed information on work type (eg, professional, clerical, skilled labor), and occupational characteristics (eg, workplace stress, workplace social support, job satisfaction). This information is important, as the low percentage of patients who reported an adverse change in employment status may reflect those in professional types of work versus those in manual or semi-skilled labor roles that require more intense physical activity. The precise timing of work loss could not be analyzed when comparing outcomes (because work status was assessed only at 6 weeks and 1 year) and highlights the need for ongoing research to understand the transitional period of return to work. Further, comparisons to prior research are difficult<sup>6</sup> given contextual differences between countries (eg, differences in society and patient's attitudes, social welfare systems, health insurance and benefits, and employment protection laws).

Because of the aging of the large birth cohort of 1946 to 1960 and an increasing trend toward postponed retirement,<sup>11</sup> there has been a 72% increase

since 2000 in the number of workers 55 years and older.<sup>12</sup> In addition, employment trends for women who make up 47% of workforce and racial and ethnic minority groups who make up 25% of workforce,<sup>12</sup> the same populations that experience poorer cardiovascular outcomes after AMI, highlight the importance of incorporating patient preferences about return to work and continued employment into patient care planning. As the demographics of America's workforce changes, the magnitude of AMI among working adults and the need for interventions that support successful return to work requires continued attention by researchers and clinicians.

## ARTICLE INFORMATION

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### Disclosures

None.

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