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www.reachmd.com info@reachmd.com (866) 423-7849

What Are the Risks and Outcomes Associated With Worsening Heart Failure Events?

Announcer: This is ReachMD. Welcome to *Spotlight on Worsening Heart Failure Events*. This program, titled "What Are the Risks and Outcomes Associated With Worsening Heart Failure Events?," is brought to you by Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., and is intended for health care professionals in the United States. Here is your host, Dr. Javed Butler.

Moderator (Dr. Javed Butler): Hello, and welcome to part 2 of our series, *Spotlight on Worsening Heart Failure Events*. I am Dr. Javed Butler from the University of Mississippi, and I am joined today by Dr. Robert Mentz from Duke University and Dr. Bill Colucci from Boston University. Today, we will discuss the risks associated with worsening heart failure events in patients with chronic heart failure with reduced ejection fraction, or HFrEF. Rob, what are some of the risks and outcomes associated with chronic HFrEF, particularly in patients experiencing these kinds of events?

Dr. Robert Mentz: Thank you, **Javed**. So, this is a great question and one that's best explained in the context of the patient journey. So, patients with worsening heart failure events develop progressively escalating signs and symptoms after periods of clinical stability, and these require them to seek medical attention.^{1,2} So, these events often put the patients at increased risk of hospitalizations and cardiovascular death.^{1,2}

Dr. Wilson Colucci: Well, I certainly agree. And I would like to emphasize that, as we mentioned in our last episode, this is why rapid identification of these patients is so important. I would also like to direct our attention to an observational cohort study that used the PINNACLE Data Registry to identify over 11,000 newly diagnosed HFrEF patients between January 2011 and December 2014. Patients with worsening heart failure in this cohort had 30 days or more of initial heart failure care and were free from heart failure—related emergency care, hospitalizations, and outpatient IV administrations for 90 days or more from their diagnosis and prior to the heart failure event. In this study, 1,851 out of the over 11,000 patients, which is about 1 out of 6 patients or 17% of the study population, had a worsening heart failure event within 18 months, on average, from their initial diagnosis. More than half of the patients with a worsening heart failure event were rehospitalized within 30 days, and 70% were rehospitalized within 2 years of the worsening heart failure event. In addition, at 2 years following the worsening heart failure event, the mean number of hospitalizations per patient was *two*. This observational study also showed that approximately 1 out of 5 patients, or 22.5%, died within 2 years of the worsening heart failure event.

Moderator (Dr. Javed Butler): Thank you for that explanation. **Rob**, could you elaborate on the link between hospitalizations and mortality rates based on your clinical experience and what has been published in the literature?

Dr. Robert Mentz: Absolutely. So, as **Bill** explained, hospitalization after a worsening heart failure event is a strong predictor of decreased survival time. In fact, in a retrospective cohort study of approximately 970,000 hospital admissions for heart failure among Medicare beneficiaries age 65 and older that looked between 2008 and 2011, it was shown that the risk of death within one year of discharge is as high as approximately 36%.³ Another study I'd like to mention used administrative data from the Military Health System Military Data Repository that looked at patients admitted to a health care facility for the first time for heart failure between January 1st of 2007 and December 31st of 2011. And in this study cohort of over 51,000 patients, it was shown that mean survival for patients with heart failure was 2.6 years after the first hospitalization; it was 1.8 years after the second, 1.5 after the third, and 1.3 years after fourth hospitalization.⁴

Moderator (Dr. Javed Butler): Thank you for that. And Bill, what about in the outpatient setting?





Dr. Wilson Colucci: Well, while, traditionally, worsening heart failure events have been synonymous with episodes of in-hospital care, we now realize that a worsening heart failure event is a clinical entity independent of the location of care.² Even though some patients with HFrEF may experience rapid clinical deterioration, many patients experience gradually worsening signs and symptoms over a prolonged period prior to hospitalization. This window of time may offer an opportunity for providers to manage signs and symptoms in the outpatient setting and thereby prevent hospitalization.^{2,5}

Moderator (Dr. Javed Butler): Once again, thank you, Dr. Robert Mentz and Dr. Bill Colucci, for a great discussion. To quickly summarize: today, we discussed the risks associated with worsening heart failure events in patients with chronic HFrEF in the hospital and outpatient settings. Be sure to tune in to our next episode in the *Spotlight on Worsening Heart Failure Events* series, where we will discuss the pathways associated with worsening heart failure events. Thank you for tuning in.

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References

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