These rates indicate the quality and safety of hospital care—but can be misleading.

**HAVE YOU EVER HEARD** of risk-adjusted mortality? Maybe you’re thinking, “No! It sounds like something only a healthcare administrator or researcher would be interested in.”

Actually, every healthcare professional should know—and be concerned—about risk-adjusted mortality. Risk adjustment refers to methods of determining if a patient’s characteristics might warrant greater use of medical services. It takes into account illness severity and certain other patient demographics and characteristics. In effect, risk adjustment levels the playing field to allow comparisons of the quality and safety of hospitals and healthcare providers.

Such comparisons, though, aren’t as easy as they might sound. This article explains the concept of risk adjustment for mortality measures and explains why it’s important to nurses.

**Expected vs. observed mortality rates**

Obviously, some patients die during hospitalization. Healthcare organizations try to predict how many patients will die over a specified period. Called *expected mortality rates*, these predictions are calculated using complex statistical regression modeling based on various factors, including case mix—a term that, to some degree, denotes illness severity of the hospital’s general patient population.

All nurses can relate to illness severity. We know that comorbidities, such as obesity, heart failure, and diabetes, affect a patient’s admission diagnosis (or diagnoses) and prescribed treatment approach. Typically, more comorbidities per patient predict poorer health outcomes. For example, a 63-year-old obese female with diabetes who undergoes total knee replacement surgery has a lower chance of a good outcome than a healthy 52-year-old male with no comorbidities who has the same procedure.

Unfortunately, determining illness severity of patient
How documentation practices can affect mortality indicators

Accurate documentation practices are vital to risk-adjustment models but vary widely among organizations and practitioners. Patient-classification systems typically use acuity levels to determine illness severity, but these systems also vary.

Documentation practices that increase the acuity level may lead to higher numbers of expected deaths, while practices that lower the acuity level may lead to decreased numbers of expected deaths. Either way, observed mortality always increases the numerator more than the denominator, because expected mortality never exceeds 100%. Conversely, expected deaths are never calculated as 0%, so accurate documentation of illness severity is vital to risk adjustment.

All of this depends on accurate administrative coding of the primary diagnosis and the identified comorbid conditions. The 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) is now in use. Although it’s improved over the previous revision (ICD-9), its correct use still hinges on accurate documentation.

Selected references


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