# COVID-19: Financial Stress Test for Academic Medical Centers

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## Abstract

The coronavirus pandemic (COVID-19) is having profound effects on the lives and well-being of the world's population. All levels of the nation's public health and health care delivery systems are rapidly adjusting to secure the health infrastructure to manage the pandemic in the United States. As the nation's safety net health care systems, academic medical centers (AMCs) are vital clinical and academic resources in managing the pandemic. COVID-19 may also risk the financial underpinnings of AMCs because their cost structures are high, and they may have incurred large amounts of debt over the last decade as they expanded their clinical operations and facilities. This Invited Commentary reviews existing data on AMC debt levels; summarizes relief provided in the Coronavirus Aid, Relief, and Economic Security Act; and suggests policy options to help mitigate risk.

The SARS-CoV-2 (COVID-19) pandemic is having significant effects on the lives and well-being of the world's population, and daily life has been profoundly disrupted to prevent the pandemic from further escalation. All levels of the U.S. government, along with the nation's public health and health care delivery systems, are rapidly adjusting to secure the nation's health infrastructure to deal with the pandemic.[1,2] Our academic medical centers (AMCs) are the safety net health care systems in the United States; the clinicians, scientists, health care teams, and trainees working in those AMCs are indispensable professionals in the efforts to combat COVID-19.

Yet, the multiple academic missions of AMCs make them among the most expensive health care systems in the United States.[3] Some have questioned whether the modern AMC has become too large for its own health because of this overreliance upon clinical income and thus vulnerable to changes in payment models that reduce clinical income.[4] The underlying concern, while never explicitly stated, is a sobering one: Are AMCs in danger of collapsing under their own weight? We ask, will COVID-19 be the financial stress test that reveals this vulnerability?

It is important for all members of the academic medicine community to understand the impact of COVID-19 on the financial underpinnings of the U.S. health care system and how this crisis may destabilize the financial health of their AMCs. To begin, Moody's Investors Service, a bond credit rating agency, changed its financial outlook for not-for-profit and public hospitals in the United States from stable to negative in mid-March 2020.[5] This is a strong signal from the financial investment community about their concern about the financial stability of the health care sector in these turbulent times. Their justification is based on the following: (1) likelihood of lower cash flows in the health care sector because of reductions in profitable services in preparation for surges of COVID-19 cases, (2) increased expenses in the health care sector because of higher staffing costs and supply needs, (3) lack of an inpatient diagnostic-related group for COVID-19, and (4) greater use of expensive ICU care. Further, the value of hospital investment portfolios will decline, and rising unemployment rates will result in loss of health benefits for patients. Moody's reassured the bond investment community that the majority of hospitals will withstand the COVID-19 disruption, and those with strong operating cash flow margins and sufficient days cash on hand will fare better than those that don't have these characteristics. The Coronavirus Aid, Relief, and Economic Security (CARES) Act just passed by Congress directly addresses many of the short-term issues raised by Moody's.[6] As the pandemic wears on, will the financial support provided to hospitals by the CARES Act—including to AMCs—be sufficient to sustain the nation's health care system through the crisis?

Financial challenges for AMCs are nothing new. Significant difficulties were experienced in the 1980s when the prospective payment system was implemented, and later in the 1990s when the reduction in Medicare payment calculations and caps on graduate medical education (GME) residency slots enacted by the Balanced Budget Act of 1997 collided with the onslaught of managed care.[7,8] AMCs achieved modest positive operating margins, however, through favorable payment rates negotiated with private health plans that wanted AMCs to be in their networks.[3]

Positive financial performance enabled many AMCs to make significant investments in expanding clinical programs and facility infrastructure through the issuance of debt beginning in the early to mid-2000s.[9] This began when Medicare fee-for-service payments were roughly equal to hospital costs and accelerated after the 2008–2009 Great Recession secondary to favorable U.S. monetary policy that kept borrowing costs low.[10,11]

Before the COVID-19 crisis, some experts began to worry that a "Medicare for All"

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payment model could cause U.S. hospitals with average margins of 7% to quickly fall to margins as low as negative 9% unless they reduced waste and improved efficiency.[10] Importantly, the current Medicare payment operating margin for the nation's major teaching hospitals is already negative 9.0%.[12(p85)] We believe that moving the financial operating performance to Medicare "breakeven" requires operational efficiency and waste reduction that would significantly disrupt the culture and academic missions of many AMCs.

Why is debt the Achilles' heel of AMCs? Simply put, it is because AMCs must pay debt service on the issuance of their debt, just as individuals must make mortgage payments on home purchases. Events such as COVID-19 that disrupt liquidity, for example, cash flow used for making payments, may place a significant financial strain on some AMCs—serving as their "financial stress test." AMCs' cash flow will be disproportionately affected by COVID-19 because of safety net responsibilities, lower operating margins, higher percentage of government payer mix, supply chain challenges for necessary equipment and supplies, and higher debt relative to their net assets and investments.

The amount of debt issued by the nation's AMCs over the last 10 to 15 years is hard to publicly source. The Medicare Payment Advisory Commission reports that U.S. nonprofit hospitals issued bonds totaling $35 billion in 2017, but we do not know how much of that amount was issued by AMCs.[12] Some data exist that provide insight, however. The Open the Books initiative published the 2016–2017 tax filing data (gathered from IRS Form 990s, the informational tax form most tax-exempt organizations file annually) from the top 82 U.S. nonprofit hospitals/health systems as measured by total revenue.[13] Among these high-performing health systems, 27 were identified as university academic health systems associated with medical schools, 4 of which were public university medical schools. These high-performing university academic health systems recorded total revenues of $111.9 billion, gross assets of $154.7 billion, net assets of $88.3 billion, and liabilities (debt) of $66.4 billion.

The average current ratio (current assets divided by current liabilities) for these high-performing AMCs averaged 2.38, indicating strong liquidity. Their average debt-to-equity ratio (total liabilities divided by net assets) was 0.80, higher than what was found for AMCs in the mid-2000s.[14] Five institutions had debt-to-equity ratios greater than 1.7 indicating that they were significantly leveraged and thus more vulnerable to changes in cash flow that could negatively affect their capacity to service debt.

We do not know the status of smaller and lower-performing private or public AMCs located in competitive urban/suburban or rural markets that are on the front lines of the COVID-19 pandemic. Are they more leveraged by debt and, thus, more vulnerable to significant financial stress secondary to COVID-19? We believe these are important questions for AMC leaders to explore.

In this time of national emergency, we offer several policy and management recommendations for the urgent consideration of AMC leadership:

1. The CARES Act federal stimulus package is a lifeline to the nation's hospitals. It provides over $100 billion to support short liquidity challenges for U.S. hospitals through emergency funds, delays in cuts to Medicaid disproportionate share hospital payments, temporary elimination of the Medicare sequester, and a Medicare diagnostic-related group add-on payment for treating COVID-19 patients.[15] These short-term interventions are important, but over the longer term, AMCs would significantly benefit from the following governmental actions:

- Raising Medicare's direct and indirect GME payments to help offset teaching hospitals' contributions to GME from operating expenses
- Increasing Medicare and Medicaid disproportionate share payments to teaching hospitals
- Providing additional regulatory relief to allow AMCs to flexibly test and disseminate novel systems of care, such as telemedicine, to better manage large populations of patients
- Expanding Medicaid benefits to all states.

2. In these uncertain times, AMC leadership and governance should exercise vigilant oversight of their AMC financial performance with special attention to measures of liquidity, financial leverage, and debt coverage ratios with bond holders. Future decisions regarding the issuance of debt should take into consideration all academic missions, not just growth for growth's sake.
3. To ensure that the teaching missions of AMCs are minimally disrupted, AMC leaders should work with the Association of American Medical Colleges and the Accreditation Council for Graduate Medical Education to plan for absorbing medical students and residents from those AMC programs that are financially struggling, similar to what occurred after hurricane Katrina in 2005.[16]

The COVID-19 pandemic is challenging the nation's public health and health care delivery systems in ways not previously experienced, including their financial health. We are optimistic that our fellow professionals at the nation's AMCs will respond to this national emergency with compassion, great skill, and innovation that will benefit patients, our nation, and the world. Collectively, we will also learn important financial lessons that will better prepare AMCs to withstand future national emergencies.

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