



Management Discussion and Analysis

For the Six Months Ended June 30, 2017

Henry Ford Health System and its affiliates' (the System) Management's Discussion and Analysis (MD&A) is intended to provide a high level overview of the consolidated financial performance for the six months ended June 30, 2017, with comparable prior year information, including operational highlights. This document includes certain forward-looking comments based on management's beliefs; actual results could differ materially. This document should be read in conjunction with the unaudited consolidated financial statements as of and for the six months ended June 30, 2017.

It is management's intention to regularly provide an MD&A in conjunction with the public release of unaudited quarterly and audited annual statements. The intent is to provide current and prospective bondholders and other interested parties with a better understanding of the System's consolidated financial and operational performance. It is also management's intention to schedule periodic investor calls.

Organizational Overview

The System is a Baldrige award-winning, integrated, academic health system that includes both extensive provider assets and insurance operations. The System offers differentiated capabilities, as well as strong focus on population health, value based care, and disease management.

The System has an integrated hospital and employed physician model with an extensive integrated provider network, including:

- Five acute hospitals and two psychiatric hospitals geographically distributed, including Henry Ford Hospital, an internationally known academic referral center.
- More than 1,300 employed physicians and scientists, primarily through the Henry Ford Medical Group, a mature and long established integrated group practice.
- A pluralistic physician model, leveraged through the System's physician-led clinically integrated network called the Henry Ford Physician Network.
- A diversified ambulatory network with more than 70 medical and health centers, behavioral health clinics, a substance abuse facility, home-based care, pharmacy, eye care, and other retail services.
- Strong market share, brand and differentiation within southeastern and south-central Michigan, as well as a statewide, national, and international reputation resulting in substantial referral volume.
- A substantial role in teaching health professionals, complemented by a significant research and discovery function.

In addition to extensive provider assets, the System also has three decades of experience managing pre-payment arrangements through HAP. HAP has products for every market segment and serves more than 641,000 members through six distinct lines of business: group insured commercial, Medicare Advantage (the oldest plan in southeast Michigan), Medicaid,

self-funded, network leasing, and individual coverage through public and private exchange participation. HAP also has substantial Administrative Services Only (ASO) capabilities.

Given its history and assets, the System is uniquely positioned to succeed in a pay-for-value environment.

On February 1, 2016, Health Alliance Plan of Michigan (HAP) completed the merger, which was accounted for as an acquisition, with HealthPlus of Michigan (HPM), in Flint, Michigan, pursuant to the Agreement and Plan of Merger dated October 30, 2015, and the order approving acquisitions as approved by the State of Michigan Department of Insurance and Financial Services. The fair value of the assets acquired exceeded the liabilities assumed resulting in an inherent contribution of \$18.5 million, which was recorded during the year ended December 31, 2016.

On April 1, 2016, Allegiance Health Group and Affiliates merged with the System, which was accounted for as an acquisition. Allegiance Health Group and Affiliates, headquartered in Jackson, Michigan, operates an acute care facility and has more than 40 sites offering a wide array of primary and specialty care and represents a significant geographic expansion of the System's health care provider operations beyond southeastern Michigan. The fair value of the assets acquired exceeded the liabilities assumed resulting in an inherent contribution of \$221.8 million, which was recorded during the year ended December 31, 2016.

Summary of Operating Results

The System reported consolidated excess of revenues over expenses before unusual items of \$66.1 million for the six months ended June 30, 2017, on consolidated revenues of \$3.0 billion, providing a margin of 2.2%. This represented a decrease from consolidated excess of revenues over expenses before unusual items of \$76.5 million on consolidated revenues of \$2.8 billion, providing a margin of 2.8%, reported for the six months ended June 30, 2016. The change in System performance was primarily due to the impact of wage rate increases, a decrease in prior year settlements recorded in net patient service revenue, and EPIC implementation costs at Allegiance Health Group and Affiliates. This was partially offset by increased investment income and the curtailment gain on the Allegiance Health Group and Affiliates retirement plan.

Management has been implementing interventions to improve future performance with continued emphasis on the System's multi-year Strength and Sustainability program to create value through cost reduction, growth, population health leverage, care redesign, and revenue cycle initiatives.

Due to pressures on insurance plan performance, HAP withdrew all PPO products from the Exchange marketplace effective January 1, 2017 and is now only selling HMO products on the Exchange, where HAP has the ability to more effectively manage care.

Revenue Growth

As a fully integrated health system, total consolidated unrestricted revenue grew to \$3.0 billion during the six months ended June 30, 2017, up \$210.8 million or 7.6% from the six months ended June 30, 2016. The System recognized consolidated net patient service revenue of \$1.6 billion and consolidated healthcare premium revenue of \$1.2 billion for the six months ended June 30,

2017. Consolidated revenues associated with healthcare services provided by the System to members of its capitated insurance products are included in premium revenue. Consolidated net patient service revenue reflects amounts recognized from all other payers and patients.

Consolidated net patient service revenue increased \$220.8 million or 15.8% during the six months ended June 30, 2017 compared to the six months ended June 30, 2016. This was primarily due to the addition of Allegiance Health Group and Affiliates (2017 includes six months of revenue and 2016 includes three months of revenue), increased inpatient volume (discharges, excluding Allegiance Health Group and Affiliates, increased 1.3% over prior year levels), increased outpatient volume (outpatient facility visits, excluding Allegiance Health Group and Affiliates, increased 5.9% over prior year levels), expanded specialty pharmacy activities, and an increased all payor case mix index.

Expense Trends

Consolidated total expenses increased by \$221.2 million or 8.2%, for the six months ended June 30, 2017 compared to the six months ended June 30, 2016. Consolidated total expenses, excluding Allegiance Health Group and Affiliates, increased by \$82.0 million or 3.0% for the six months ended June 30, 2017 compared to the six months ended June 30, 2016. Following are explanations for the most significant variances.

Consolidated salaries, wages, and employee benefits increased by \$146.1 million or 13.9% for the six months ended June 30, 2017 compared to the six months ended June 30, 2016. Consolidated salaries, wages, and employee benefits, excluding Allegiance Health Group and Affiliates, increased by \$73.7 million or 7.0% for the six months ended June 30, 2017 compared to the six months ended June 30, 2016 primarily due to increased volume, strategic investment of staff (including physicians) in high growth areas, and 2016 mid-year salary increases and market adjustments.

Consolidated supplies expense increased \$68.0 million or 16.8% for the six months ended June 30, 2017 compared to the six months ended June 30, 2016. Consolidated supplies expense, excluding Allegiance Health Group and Affiliates, increased by \$44.0 million or 10.9% for the six months ended June 30, 2017 compared to the six months ended June 30, 2016 primarily due to increased volume (including advanced technology areas such as the novel transcaval heart procedures) and pharmacy expense related to expanded specialty pharmacy activities.

Community Benefits and Uncompensated Care

The System expended \$205.7 million on Community Benefit programs for the six months ended June 30, 2017, compared to \$176.6 million in the prior year. The increase is primarily due to increased unreimbursed Medicare and Medicaid cost related to volume growth and governmental payment constraints. Consistent with expectations resulting from the Affordable Care Act, there were fewer patients without health insurance coverage due to expanded coverage through the subsidized health insurance exchanges and Michigan Medicaid expansion. However, there has been a corresponding growth in Medicaid patient volume, where payment rates do not fully cover the cost of care. In addition, a large number of patients are finding that they now have insurance coverage with deductibles and copayments that are beyond their ability to pay.

Given its mission, the System also had substantial unreimbursed costs for health professional education, research and other community services, which are also important components of overall Community Benefit expenditures.

Balance Sheet

The System maintains a solid balance sheet. Total System days cash (inclusive of insurance operations) at June 30, 2017, totaled 121.8 compared to 122.5 at December 31, 2016. The decrease was primarily due to the impact on last year's calculation resulting from only nine months of Allegiance expense included in 2016. Total System days cash is lower than some health systems due to the substantial size of the insurance segment and the amount of capitation revenue and operating expenses for medical services. If days cash was calculated only using expenses of the provider segment for the denominator, days cash would be a much stronger 175.5 days at June 30, 2017.

Investment Performance

The System maintains significant operating investments including cash and cash equivalents, short-term investments, and long-term investments. Consolidated investment income recognized during the six months ended June 30, 2017 was \$47.1 million compared to \$23.5 million recognized during the six months ended June 30, 2016. Consolidated investment income is consistent with market returns on the underlying securities in these funds. As a result of a recent comprehensive asset liability management (ALM) analysis, management anticipates modifications to its asset investment structure in the future to increase net returns within reasonable risk parameters.

Second Quarter Strategic Developments and Additional Highlights

The System continues to have a strong leadership team, which includes both long tenured executives and other seasoned leaders who have joined more recently. Second quarter highlights include the following:

- Seth Frazier has been named as the System's Executive Vice President and Chief Strategy Officer. He has extensive experience with academic medical centers and integrated health systems. His experience includes serving as the Chief Transformation Officer for Evolent Health in Arlington, Virginia; culminating his tenure at Geisinger Health System as Chief Transformation Officer; and serving as the Senior Vice President of Strategic Services for The Children's Hospital of Philadelphia. His experience also includes serving as a partner in the health care strategic consulting firm of APM, Inc. He received his master's degree in business administration from The Wharton School at the University of Pennsylvania as a Kaiser Fellow and his bachelor's degree in economics (honors) from Haverford College.
- Nina Ramsey has joined the System as Senior Vice President and Chief Human Resources Officer. Her prior experience includes serving as the Chief Human Resources Officer and Senior Vice President for Global Human Resources for Kelly Services, Inc. since 1992, receiving multiple promotions during her tenure. She received her master's

degree in education in Instructional Technology from Wayne State University and a bachelor's degree in Human Resources Development from Oakland University.

- Wright Lassiter III, President and CEO of the System, has been inducted into the Executive Leadership Council, the pre-eminent membership organization committed to increasing the number of global black executives in C-Suites, on corporate boards, and in global enterprises.
- Betty Chu, M.D., MBA, Chief Medical Officer and Vice President of Medical Affairs, Henry Ford West Bloomfield Hospital, has been elected president-elect of the Michigan State Medical Society. She will serve a one-year term as president-elect until she assumes the presidency in May of 2018.
- Cardiologist Adam Greenbaum, M.D., Co-Director of the Henry Ford Center for Structural Heart Disease and National Institutes of Health Cardiovascular Intervention Program Senior Investigator Robert J. Lederman, M.D. have received the prestigious 2017 Orloff Award from the NIH's National Heart, Lung, and Blood Institute. They received the award for their pioneering work on the novel transcaval heart procedure and proving its effectiveness. The unique procedure accesses the heart by temporarily connecting major blood vessels in the patient's abdomen. The recognition came as a 76-year-old metro Detroit man became the 100th patient to undergo the procedure at Henry Ford Hospital on May 11, 2017. Dr. Greenbaum performed the first human transcaval procedure in the world on July 3, 2013.
- Lisa A. Newman, M.D., MPH, director of the Breast Cancer Center at the Henry Ford Cancer Institute, has been appointed by Susan G. Komen – the world's largest nonprofit funder of breast cancer research – to its Scientific Advisory Board. Komen's eight-member Scientific Advisory Board guides the organization's education and advocacy work, public health efforts, and helps direct Komen's research program – an investment in breast cancer research surpassed only by the U.S. government.

The System is nationally and internationally recognized for its innovation and excellence. The following are awards received and unique achievements during the second quarter:

- On June 6, 2017, the System broke ground on the new home for the Henry Ford Cancer Institute. The Brigitte Harris Cancer Pavilion will be a destination center for ambulatory cancer treatment, precision medicine, clinical trials and research, and enhanced support services for cancer patients. It is expected to open in early 2020. The building is backed by a \$20.0 million gift from Detroit businessman and philanthropist Mort Harris, in honor of his late wife Brigitte. The donation is part of a \$40.0 million package to support the building project and three specific program areas: precision medicine, brain cancer, and pancreatic cancer. The estimated capital cost of the project is approximately \$157.0 million.
- The Henry Ford Cancer Institute is the first in Michigan, and the first in the world, to offer patients an advanced radiation therapy that uses an FDA-approved real-time magnetic resonance imaging and linear accelerator delivery for more precise and accurate

radiation treatment. The ViewRay MRIdian Linac® is the world's first and only FDA-approved commercially available linear accelerator-based MRI-guided radiation therapy system that can image and treat patients simultaneously. It is being installed at the Cancer Institute at Henry Ford Medical Center-Cottage in Grosse Pointe Farms and will be ready for treating patients in July 2017.

- The System was honored with the Michigan Peer Review Organization Governor's Awards of Excellence in multiple categories for improving health care quality and patient safety.
- Henry Ford West Bloomfield Hospital was honored with the Healthgrades' 2017 Outstanding Patient Experience Award, a Leapfrog "A" Rating for patient safety (for two rating cycles in a row), and the Economic Alliance for Michigan's Hospital Patient Safety Award.
- Henry Ford Macomb Hospital was included in the May 2017 issue of Consumer Reports as a top heart hospital, one of only three in Michigan and one of only a few in the Midwest region.
- The System has been named by DiversityInc. to its Top 50 list of healthcare organizations for fostering inclusion of women, minorities, veterans, people with disabilities, and of varying sexual orientations in the workplace. DiversityInc. is a New Jersey-based, veteran-owned business with the mission of promoting inclusive workplaces and educating businesses in the value of diversity-management initiatives that conducts an annual survey each year.