

AUTHORITY NOTES

2018 Series A

SPRING

From the Executive Director

Even when things are going well, you can benefit from a good jolt. This is exactly how I feel. The Authority has just finished back to back years with over \$1 billion in financings for the first time in its 45-year history. However, we are also beginning a new era in



New Jersey government with the commencement of Governor Phil Murphy administration. As with the advent of every administration, there is always some nervous anticipation paired with cautious excitement. It will be very interesting to watch Governor Murphy as he unveils his health care agenda and initiates his policies. I am also, however, very curious to see how the Governor's initiatives will affect the Authority, but more importantly how we can help.

The commissioners serving as our ex officio members who were appointed by Governor Murphy exemplify the bold, fresh approach to governing that he has been advocating. Since the enacting of the Affordable Care Act in 2010, health care has become truly a national issue in policy as

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The Future of Health Care: Digital, Data-Driven and Dynamic

Albert Einstein once said, "I never think of the future - it comes soon enough." In health care, it may be sooner than we think.

To say that technology dominates our culture is an understatement. Through our cell phones, smart TVs, computers and even the swipe card at the grocery store we are constantly generating data and being targeted with information in the hopes of influencing our decisions. Through social media platforms, communication is now practically instantaneous, enabling the sharing of personal messages, media clips, photos and, yes, even work files and documents, in volumes that could never be imagined.

In private industry, companies such as Amazon, Google and Apple have changed the way the world does business. With a few taps on the phone or clicks on a keyboard, you can do practically anything – buy a car, trade on the stock market, order Chinese food and even start a nuclear war. It was only a matter of time before practical applications began to appear in health care. Currently Apple is beta testing its iPhone Health Records pilot at 39 health systems across America,

including AtlantiCare in Atlantic City, as well as Penn Medicine and Jefferson Health facilities in Philadelphia.

It was recently reported that Uber, the ride-sharing company, was launching a new dashboard called Uber Health. According to Healthcare Dive, 3.6 million Americans miss medical appointments each year because they lack transportation. Uber Health allows a health-care worker to not only schedule rides for their patients' appointments, but even order rides on demand for emergencies. Uber Health is now being tested by approximately 100 hospitals and doctor's offices. The goal is not simply to save money by decreasing the use of ambulances or public transportation costs. It is hoped that by increasing the access to preventative medical services, serious illness may be avoided.

Not to be outdone, Lyft is also entering the health care industry. Lyft secured partnerships with CVS Health and Walgreens to provide transportation to their pharmacies and clinics. Recently the Blue Cross Blue Shield Institute has joined the effort to use technology alliances

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well as implementation. Health care delivery, however, has become significantly much more localized. Governor Murphy's choices for the Authority's three commissioners truly reflect these current developments in US health care.

Health Commissioner Shereef Elnahal, M.D, M.B.A. brings with him a wealth of success from the US Department of Veterans Affairs as well as Johns Hopkins. The improvements he initiated in the areas of clinical and administrative best practices have become a model for excellence.

Similarly, Commissioner Carole Johnson of Human Services was a lecturer at George Washington University's Center for Health Policy Research and served on the health team of the White House Domestic Policy Council. These talented individuals ensure a direct link to what may transpire on a federal level and will ensure New Jersey's compliance and compatibility with national initiatives.

Conversely, Acting Commissioner Marlene Caride guarantees a "Jersey" influence. As a former legislator and member of the Assembly Financial Institutions and Insurance Committee, Ms. Caride knows the "ins and outs" of New Jersey government and has worked with leaders in our state's financial sector. As an attorney, Ms. Caride has held a number of municipal government positions and is well connected to the pulse of our citizens.

The Authority also benefits from the knowledge and talent of our two Public members. Dr. Kazmir brings his medical and hospital expertise, while Suzette Rodriguez is an accomplished attorney with expertise in employment law and general corporate counseling. We look forward to see who Governor Murphy will appoint to the two Public Member vacancies to complete our great team.

Governor Murphy's initial three appointments demonstrate a commitment towards a new attitude to New Jersey's health care, one that demonstrates the synergy between the nation's policymakers and the end users in our towns and neighborhood clinics. I am confident that the Governor's Public Member nominations will not only compliment, but enhance the Authority.

I believe the future of New Jersey's health care is bright and starts now.

- Mark E. Hopkins

Happy Anniversary!



*Assistant Director of Research,
Investor Relations and Compliance,
Taryn Rommell celebrated 10 years at
the Authority on March 24, 2018*

Bring Your Child to Work Day!

April 26, 2018



*Account Administrator
Jessica Lucas with her
daughter Mackenzie*



*Compliance Manager and
Tax Compliance Officer
Neetu "Nikki" Thukral
with her daughter
Akanksha*

Welcome to the Authority's New Ex-officio Officers!



Shereef Elnahal M.D., M.B.A. Chairman,

(serves during his tenure as Commissioner of the Department of Health)

Dr. Shereef Elnahal was sworn in as the Commissioner of the New Jersey Department of Health on April 2, 2018. Dr. Elnahal formerly served as the Assistant Deputy Under Secretary for Health for Quality, Safety, and Value at the US Department of Veterans Affairs. He was initially appointed to VA as a White House Fellow in 2015, and in this capacity he founded the Diffusion of Excellence Initiative, the major initiative meeting the Under

Secretary's priority of establishing consistency in clinical and administrative best practices. He has authored many publications on health care quality, operations management, and patient safety. Dr. Elnahal co-developed a published methodology that doubled clinic efficiency in the Johns Hopkins Pancreatic Multidisciplinary Clinic, cutting patient wait times by half. As an operations consultant for Wright-Patterson Air Force Base and Pittsburgh VA hospitals, he expanded on this work to improve care access for veterans and active duty service members. He was a Fellow in the Armstrong Institute for Patient Safety and Quality, and served as Chair of the House Staff Patient Safety and Quality Council at Hopkins. Dr. Shereef served on advisory boards for two firms focused on patient education and clinical operations. He also co-founded the Baltimore chapter of The Triple Helix, a 501(c)(3) non-profit that publishes an internationally-circulated journal on science in society. His civic contributions earned him the 2015 National Quality Scholar Award from the American College of Medical Quality. He received a dual-degree M.D. and M.B.A. with Distinction from Harvard University. He also graduated summa cum laude with a B.A. in biophysics from Johns Hopkins University.



Carole Johnson, Member

(serves during her tenure as Commissioner of the Department of Human Services)

Carole Johnson was sworn in as the Commissioner of the Department of Human Services on April 2, 2018. Ms. Johnson was confirmed as Commissioner by the New Jersey State Senate on March 26, 2018. She is a research scientist and a previous lecturer at the George Washington University's Center for Health Policy Research. In addition, she served on the White House Domestic Policy Council health team, appointed by former President Barack Obama. Ms. Johnson also has Master's degree in government from the University of Virginia.



Marlene Caride, Member

(serves during her tenure as Acting Commissioner of the Department of Banking and Insurance)

Marlene Caride served in the New Jersey General Assembly since 2012, where she represented the 36th Legislative District. Ms. Caride served in the Assembly on the Commerce and Economic Development Committee (as Vice-Chair), the Financial Institutions and Insurance Committee, the Transportation and Independent Authorities Committee, the New Jersey Legislative Select Committee on Investigation and the Intergovernmental Relations Commission.

Ms. Caride earned a bachelor's degree in Education from Fairleigh Dickinson University and was awarded a J.D. degree from the California Western School of Law. She is an attorney who is a partner in private practice with the firm of Gonzalez & Caride. She has served as prosecutor for the Board of Alcoholic Beverage Control of West New York from 2009 to 2012, as an attorney of the town's parking authority from 1995 to 2009, and has been the municipal prosecutor of the Borough of Ridgefield since 2011. In her hometown of Ridgefield, she was a library alternate trustee from 2005-2006 and was an alternate member of the board of health from 2005 to 2007.

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and innovation to remove barriers to health care in the pursuit of population health. After a 6-month study, they saw a 28% reduction in Emergency Room visits and a 114% increase in primary care appointments.

Transportation is one a small part of the technological advances. We live in a data-driven world. The massive quantity of data stored daily is unimaginable. Data by itself however is useless. Programs are now designed to analyze this data for functional purposes. Through analytics, data is mined to identify similarities, patterns and trends. Health care professionals have found these predictive analytics helpful not only in the achieving the goal of population health, but projecting the health outcomes of individual patients.

At Penn Medicine, analysts are working on a program to improve prescribing antibiotics. The platform would tap into a patient's electronic health records. Factoring in such things as past antibiotic use, previous infections, hospital and ICU stays, etc., doctors can practice "precision medicine" and eliminate any guesswork. Similarly, Cape Regional Medical Center is using a detection algorithm to detect sepsis as well as examine trends and correlations among the variables that may cause sepsis. Patients with sepsis, or prone to sepsis are identified more quickly and receive treatment sooner. Morristown Medical Center has also received national recognition for their use of analytics in achieving complete joint replacement reconciliations.

They were able to reduce costs through increasing direct-home discharges and reducing the length of hospital stays.

Predictive analytic tools can definitely play a role in identifying an individual's risk for certain diseases. The University of Pittsburgh Medical Center wants to go even further. They are looking beyond reducing hospitalizations by creating diagnostic tools that allow patients to manage their own conditions. They also see the use of Artificial Intelligence (AI) in diagnosing terminal conditions.

Many in the medical community view AI as a powerful tool with almost limitless potential. However, they are being very careful and taking slow, deliberate steps in the process. Beyond patient self-management, advances are being made in computer vision, deep learning, machine learning and natural language processing. A number of these advances are now happening in New Jersey.

Computer vision is coming quickly. Our Lady of Lourdes has a new CT scan that produces images in less than a second with double the resolution of current images. Patients are exposed to less radiation and no longer have to hold their breath. Hackensack University Medical Center Mountain-side recently announced a radiological breakthrough that enhances PET scan images and facilitates more precise diagnosis and treatment of neuroendocrine tumors.

Recently, Princeton University and a Princeton-based medical technology

firm announced that they are now working on the development of "machine learning." The technology will enable computer systems to process information without specific inputs or instructions. As a result, physicians will have much more data on the patient and their condition in which to make a diagnosis and prescribe a treatment plan.

New Jersey could definitely benefit from natural language processing. There are 155 languages spoken in our state. Our doctors speak only a small percentage of them. This technology would definitely improve doctor-patient communications, reduce the risk of errors and make the patient more at ease.

Probably the main element of AI development in health care is that the public trusts technology. A recent study by Accenture revealed some interesting public attitudes towards advanced technology. Over half of the respondents (56%) said that they would prefer AI-assisted surgery while 47% said that they use an AI virtual physician. And, these percentages will only increase as the technology progresses.

The rapidly evolving technology in health care certainly makes Einstein's words very prophetic. The future is happening right now! ☘

***Get a Loan through our
Capital Asset Program!***

**Contact: Jessica Lucas
Program Manager**

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Financing Note\$

CentraState Medical Center

The Authority closed on \$33,465,000 of refunding bonds on behalf of CentraState Medical Center on December 21, 2017. The proceeds of the transaction were used to currently refund all or a portion of the Authority's CentraState Medical Center Series 2006A Bonds and pay related costs of issuance.

The bonds were privately placed with Siemens and rated Baa1 by Moody's. The all-in true interest cost was 3.2988%. CentraState realized a present value savings of \$5,024,357 or 13.423% of the refunded bonds.

Hospital Asset Transformation Program State Contract Bonds

On December 28, 2017, the Authority closed on \$170,475,000 of refunding bonds for the State of New Jersey under the Hospital Asset Transformation Program.

The proceeds of the financing were used for: the current refunding of all of the NJHCFFA State Contract Bonds (Hospital Asset Transformation Program – St. Mary's Hospital, Passaic, NJ Issue) Series 2007-1 ("Series 2007-1 Bonds"); 2) the advance refunding all of the NJHCFFA State Contract Bonds (Hospital Asset Transformation Program) Series 2008A ("Series 2008A Bonds"); and funding related costs of issuance

The publicly issued bonds were rated Baa1 by Moody's and BBB+ by Standard and Poor's.

The transaction had an all-in true interest cost of 3.99%. The result of the financing was a present value savings of \$15,272,746 or 8.48% of the refunded bonds

JFK Assisted Living Facilities, Inc.

As part of the merger between JFK Medical Center and Hackensack Meridian Health, the outstanding debt of JFK Medical Center is being moved under the established Hackensack Meridian Health Obligated Group Master Trust Indenture. Subsequently, it was requested that the Authority currently refund the JFK Assisted Living Facility, Series 2001 Bonds in order to recognize the issuance of substitution of the JFK Assisted Living, Inc. Note and Mortgage security with new promissory notes issued under the Hackensack Meridian Health Obligated group Master Trust Indenture, and to conform financial covenants to mirror those utilized in the Authority's Series 2017 tax-exempt transaction.

On March 22, 2018, the Authority Members approved a contingent sale of bonds on behalf of the Community Hospital Group, Inc. d/b/a JFK Center Medical. The Series 2018A Bonds will be secured by payments made by JFK Assisted Living Facilities, Inc. under a Loan Agreement with the Authority. The JFK Assisted Living Issue, Series 2018A will be used to refund the Series 2001 Bond and pay related costs of issuance, in an aggregate principal amount not in excess of \$6,305,566. The bonds were privately placed with TD Bank, N.A.

John Brooks Recovery Center

On March 22, 2018, the Authority approved a Capital Asset Program Loan for John Brooks Recovery Center. The aggregate principal amount of the loan is not to exceed \$11,000,000. The proceeds of the loan will be used by John Brooks to partially finance the construction of a new 55,000 square foot in-patient substance abuse rehabilitation facility located in Mays Landing, New Jersey.

Management Changes and Mergers in 2017 & 2018

On July 14, 2017, the Bergen County Board of Freeholders awarded a contract to manage the Bergen Regional Medical Center to Care Plus Bergen. Care Plus Bergen is comprised of three subcontractors: Care Plus NJ, Rutgers New Jersey Medical School and Integrity House. Care Plus Bergen took over the hospital on October 1, 2017, and renamed the facility ***New Bridge Medical Center***.



On September 13, 2017, Jefferson Health and Kennedy Health signed the formal agreement that officially merged the two organizations. On October 4, 2017, Jefferson health announced the following name changes:



Kennedy Memorial Hospital, Cherry Hill is now ***Jefferson Cherry Hill Hospital***.

Kennedy Memorial Stratford Hospital is now ***Jefferson Stratford Hospital***.

Kennedy Memorial Hospital, Washington Township is now ***Jefferson Washington Township Hospital***.

In December 2017, Meadowlands Hospital was sold to NJMHMS, LLC and was renamed ***Hudson Regional Hospital***.



In January 2018, Princeton HealthCare officially joined Penn Medicine and will be known as Penn Medicine Princeton Health. The University Medical Center of Princeton at Plainsboro is now ***Penn Medicine Princeton Medical Center***.



NJHCFFA SENIOR STAFF

Mark E. Hopkins
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Ron Marmelstein
Director, Division of Operations, Finance & Special Projects

William McLaughlin
Director, Division of Project Management

NJHCFFA MEMBERS

Ex-Officio Members

Dr. Shereef Elnahal
Commissioner of Health

Carole Johnson
Commissioner of Human Services

Marlene Caride, Esq., Acting
Commissioner of Banking & Insurance

Public Members

Suzette T. Rodriguez, Esq.
Munir Kazmir, M.D.

*The Authority currently has two
Public Member vacancies.*

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