

NYS Bar Association Health Law Section Annual Meeting

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Jack Wolf
Senior Vice President
Chief Information Officer
Montefiore Health System



Each time I say, “IT cannot possibly get more complex and stressful than it is today”, It does!

- Fee For Service Value Based Care
- Growth through acquisition and aging population.
- Regulatory changes and reporting requirements.
- Cyber Terrorism and increased security threats.
- Advances in research and clinical automation.
- Ever increasing volumes of data requiring Real Time Analysis.
- Constantly changing vendor landscape.
- Patient Directed Care

Montefiore

Montefiore Growth

2012 Vs 2017

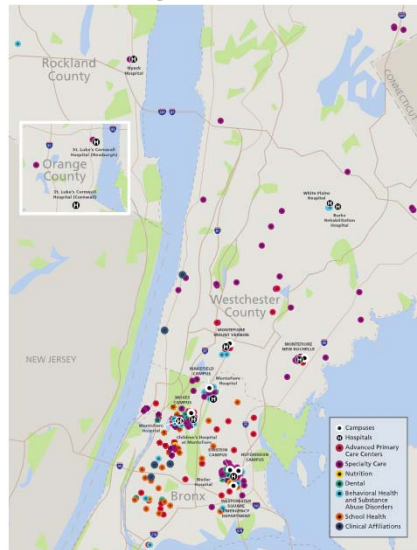
Beds 1490
Operating Rev. \$3B
Hospitals 4
Amb Visits 2M

Beds 3214
Operating Rev. \$5.7B
Hospitals 11
Amb Visits 5M

2015 Albert Einstein College of Medicine

Montefiore

Integrated Delivery System



Our Locations

3,236 Total Beds Across 11 Hospitals

- Including 132 beds at the Children's Hospital at Montefiore (CHAM)
- 86 NICU/PICU beds

150 Skilled Nursing Beds

200 Sites Including

Hutchinson Campus – Hospital without Beds

1 Freestanding Emergency Department
 First in New York State

68 Primary Care Sites
 - 21 Montefiore Medical Group Sites
 - 23 School Health Clinics

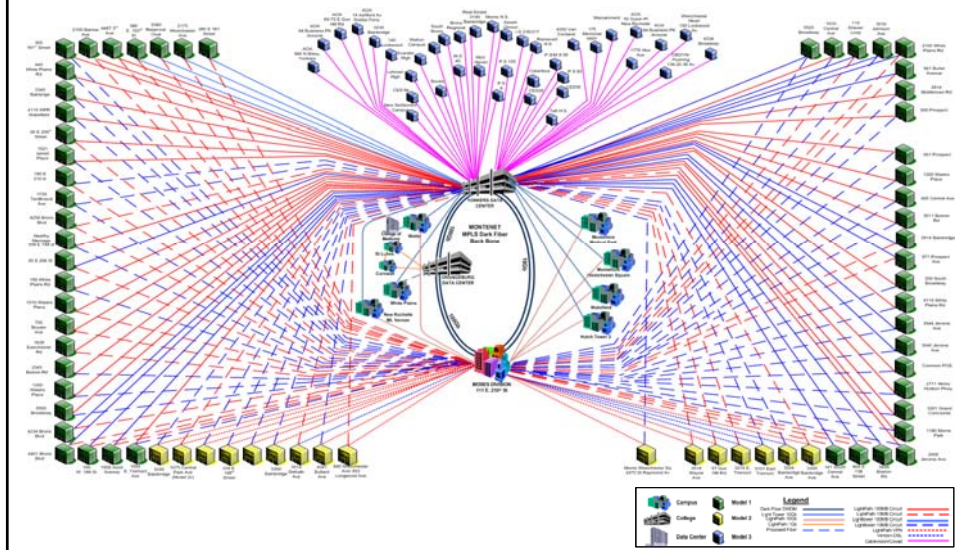
16 Mental Health/Substance Abuse Treatment Clinics

73 Specialty Care Sites
 - 3 Multi-Specialty Centers
 - 4 Pediatric Specialty Centers
 - 12 Women's Health Centers

10 Dental Centers

5 Imaging Centers

Montefiore Health System Communications Network



Data Security

Our world has changed. In the past we focused on protecting Credit cards and Bank Accounts. Now it's identity theft.

Dark Web – Value of
a credit card
\$0.25

Dark Web – Value of
a Medical Record
\$1.5 – 2.0

Fortinet's, FortiGuard Labs reports that in 2017 healthcare saw an average of almost 32,000 intrusion attacks per day on average per organization as compared to over 14,300 per organization in other industries.

Hackers in 2016 were offering stolen records at between \$1.50 and \$10 each, based on a report by San Mateo, Calif.-based security firm [TrapX](#), the company that produced the report.

Data Security is Everyone's Concern

The hackers are turning now to Ransomware. Their automated attacks are no longer selective to individual Organizations, they target whole industries. Bad Actors now embed Malware and Data Bots designed to activate and transmit your data.



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Montefiore IT
INFORMATION TECHNOLOGY

Montefiore's Threat statistics

Phishing Email

Average 10K to 15K per day.
500-1,000 actually get to inboxes.

SPAM Email

Average 150K SPAM emails per day.
Approximately **10%** get through our filters to user mail boxes.

Valid External Email

Average **100K to 120K** emails per day.

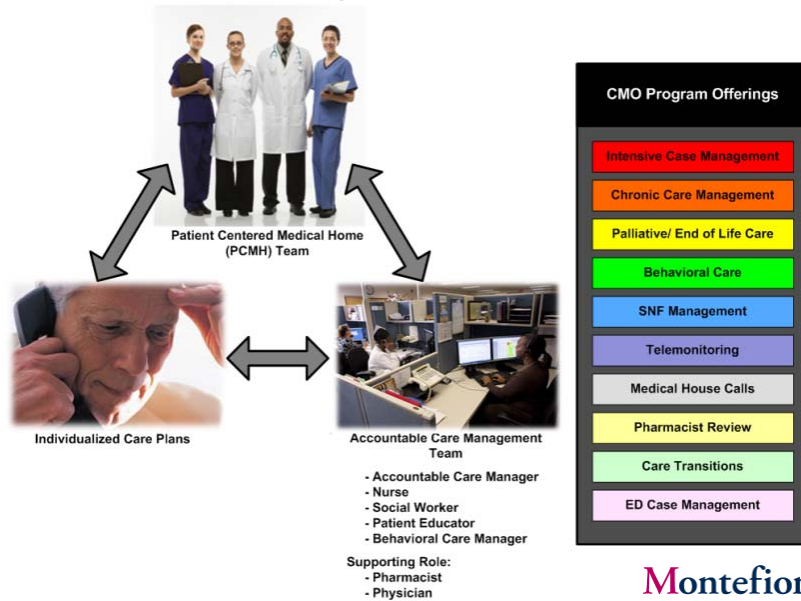
Montefiore's Multiple Levels of Security

Multiple layers of Firewalls
 Segmented Networks
 SIEM External activity monitoring
 Role based access
 Multiple levels of Logging and monitoring tools
 Encrypted data at rest
 BYOD Policies and procedures
 Removeable Media Policy – Encrypted device
 Fair Warning Software

Fully Implemented Data Loss Prevention software
 Patch Management Software with Policies
 Bluecoat security
 Active Directory password control
 Perform annual security assessments
 BioMedical Device assessment
 DC – Tier 3 SOC II Facility

23 FTE's under CISO
 Dual Report to CIO and VP Compliance

Montefiore's Care Management Organization Care Guidance Program



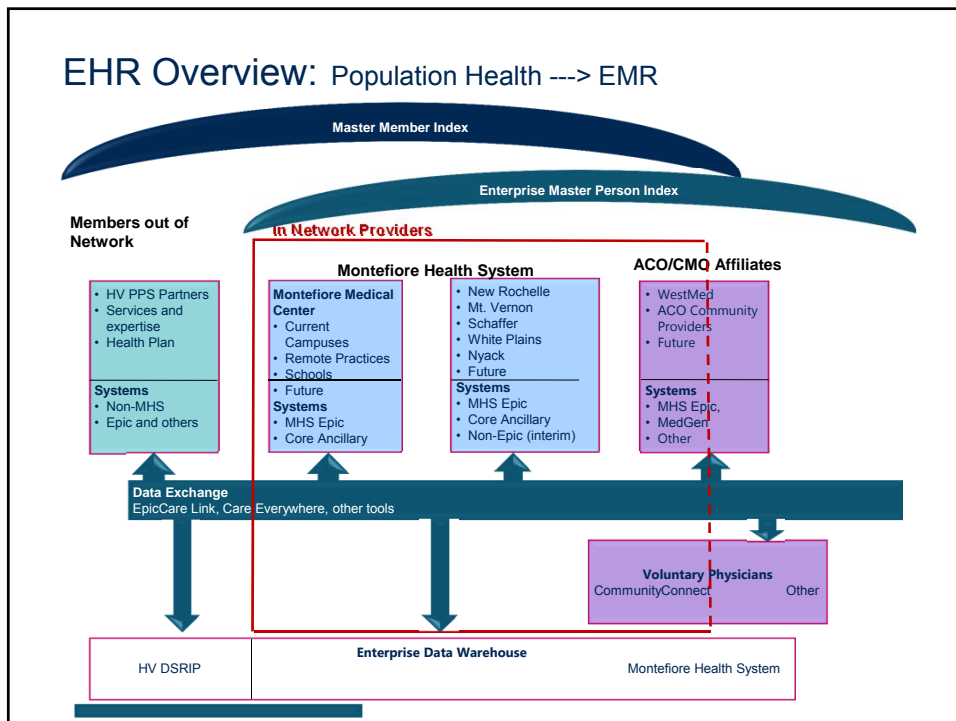
Current Value-Based Payment (VBP) Arrangements

| Source | 2017 Population | 2017 Est. Revenue |
|---|-----------------|-------------------|
| Risk Contracts | 218,000 | \$1,415M |
| Shared Risk | 97,000 | \$584M |
| NextGen ACO | 47,000 | \$736M |
| Medicaid Health Home (Care Coordination) | 9,000 | \$22M |
| Under Negotiation | 64,000 | - |
| Totals | 435,000 | \$2,757M |

Note: All Value-based payment patients are referred to as "ACO" and inclusive of risk, shared savings and NGACO patients.



EHR Overview: Population Health ---> EMR



Sharing Data is Mandatory

Requires a unique ID.

Not a popular concept

Must be HIPPA and FERPA compliant.

Moving target when bundled with Rptg Rqmnts

Requires NYS Opt In Consent.

Let's make things more difficult

Must cross multiple proprietary system architectures.

API's?



Patient Driven Care

“The premise is that we are at a new phase of health and medical care, where more decisions are being made by individuals on their own behalf, rather than by physicians, and that, furthermore, these decisions are being informed by new tools based on statistics, data, and predictions ... We will act on the basis of risk factors and predictive scores, rather than on conventional wisdom and doctors recommendations. We will act in collaboration with others, drawing on collective experience with health and disease ... these tools will create a new opportunity and a new responsibility for people to act - to make health decisions well before they become patients.”

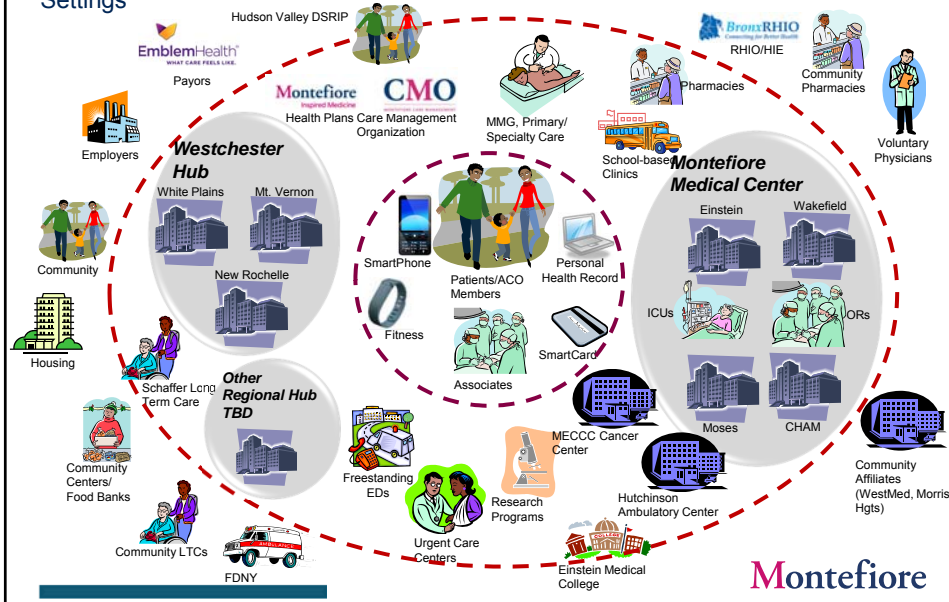
– Thomas Goetz, Decision Tree (<http://thedeisiontree.com/blog/?p=278>)

Consumer Driven Healthcare

“The Patient Will See You Now”

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Connectedness: Shared Data/Communications Across Care Settings



Physician Notes – You can't make this stuff up.

Here are some quotes taken from actual medical records dictated by physicians. They appeared in a column written by Richard Lederer, Ph.D., for the Journal of Court Reporting:

By the time he was admitted, his rapid heart had stopped, and he was feeling better.

Patient has chest pain if she lies on her left side for over a year.

On the second day the knee was better and on the third day it had completely disappeared.

Discharge status: Alive but without permission. The patient will need disposition, and therefore we will get Dr. Blank to dispose of him.

The patient refused an autopsy. The patient has no past history of suicides.

Patient has left his white blood cells at another hospital.

The patient's past medical history has been remarkably insignificant with only a 40 pound weight gain in the past three days.

She slipped on the ice and apparently her legs went in separate directions in early December.

The patient left the hospital feeling much better except for her original complaints.