



# The Future of Post Pandemic Healthcare: Light at the End of tunnel or an Approaching Train

The Introduction and Context for Discussion

Foundational Healthcare Trends Disrupted

Old and New Transformational Trends Evolve

Conclusions, Critical Takeaways and Relevance – 2021/2022

MAY 2021



Jacque J. Sokolov, MD  
5665 North Scottsdale Road, Suite 110  
Scottsdale, AZ 85250  
Phone: (480) 427-3943  
[www.ssbsolutions.com](http://www.ssbsolutions.com)

# The Future of Post Pandemic Healthcare

## – Presentation Overview

### **The Introduction and Context for Discussion**

- The COVID19 Pandemic Effect on US Macro Economic Trends and the Healthcare Economy
- Changing Healthcare Trends – What Has Happened and What is really Happening Today

### **Foundational Healthcare Trends Disrupted**

- Disruption in the “Healthcare Food Chain” and Its Consequences
- Aggregator Strategies and Critical Mass Continue to Rule the Day but Differently than Pre-Pandemic

### **Old and New Transformational Trends Evolve**

- New Types of “Value Based” Products – The CIN/Federated Model, MSSP, CMMI, etc.
- The Super Consumer/Member/Patient Experience – Non-Virtual and Virtual Components
- mRNA and COVID19 Vaccines – Limited COVID19 Impact on Transformational Technology for Multiple Sectors

### **Conclusions, Critical Takeaways and Relevance – 2021/2022**

## The Introduction and Context for Discussion

- The COVID19 Pandemic Effect on US Macro Economic Trends and The Healthcare Economy
- Changing Healthcare Trends – What Has Happened and What is Really Happening Today



MAY 2021

The Future of Post Pandemic Healthcare

# Introduction and Context for Discussion

## – The US Economy/Healthcare Economy

### The 2019 US/Healthcare Economy

- 2019 Total US GDP = \$ 21.3 Trillion
- 2019 Healthcare Expenditures = \$ 3.81 Trillion\*
- Healthcare 17.9% of GDP

### The 2020 US/Healthcare Economy

- 2020 Total US GDP = \$ 20.5 Trillion (Down \$ 750 Billion/3.5% Decrease)
- 2020 Healthcare Expenditures = \$ 4.01 Trillion Base (Up by \$ 200 Billion/Positive 5%)\*
- Healthcare 19.6%+ of GDP

\*CMS Estimates

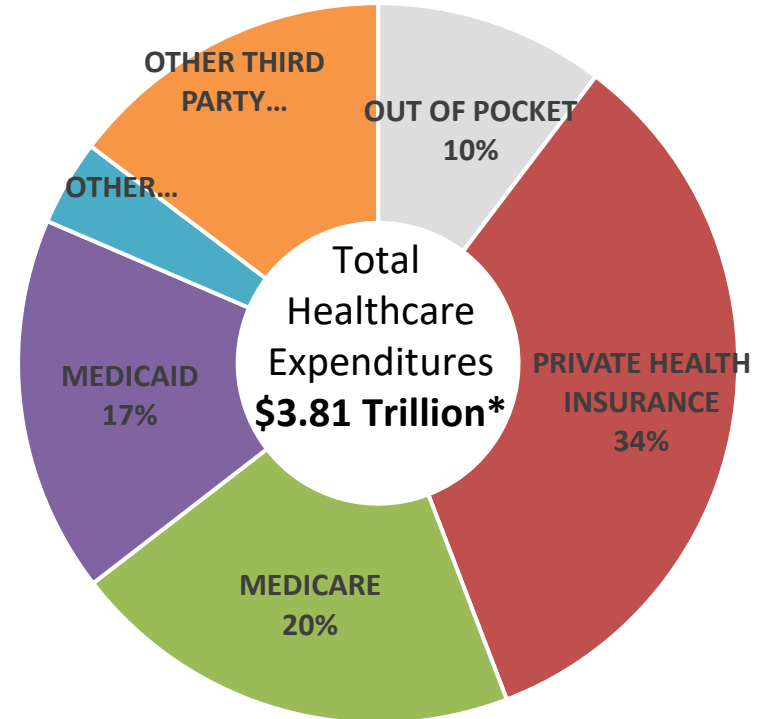
# Introduction and Context for Discussion – Pre COVID19/2019

US Economy 2019(GDP) = \$ 21.3 Trillion with Healthcare Spend = \$ 3.81 Trillion/ 17.9+% GDP

US Unemployment 2019 = 3.6% of Population

## Healthcare Spending ↑5% 2018-2019

- Directly Contracted Commercial ASO/Value Based Plans (Long Delayed) – HAVEN, Walmart, United, BCBS, etc.
- Post Acute Care Sub Specialization- e.g., Home Health Care, Tele monitoring
- Pharma/Device Cost Escalation – Biologics/Biosimilars, Immunotherapy, Nano engineered Drugs
- Utilization Trends – Demographics/Aging Population/Medicaid and VA Expansion
- Alternative Care Sites – ASC's/OBL's/MSO's/etc.



\* Source: CMS

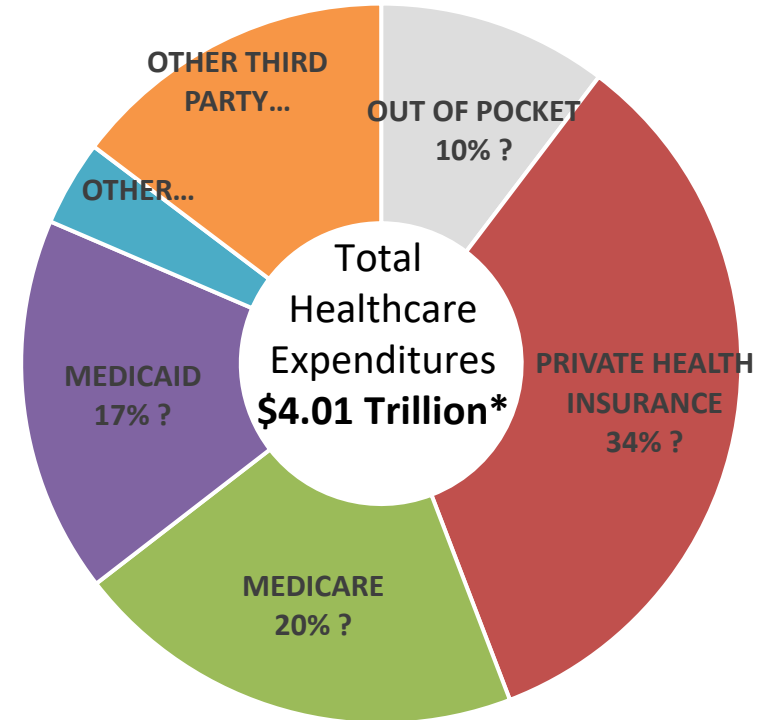
# Introduction and Context for Discussion – Mixed COVID19 Year/2020

US Economy 2020/GDP = \$ 20.5 Trillion with Healthcare Spend = \$ 4.01 Trillion/ 19.6% GDP

US Unemployment = 3.6%(Jan) to 14.7%(April) to 7% (Dec) – 11 Million Job Loss Variation

## Healthcare Spending “\$200B/↑5% 2019-2020”

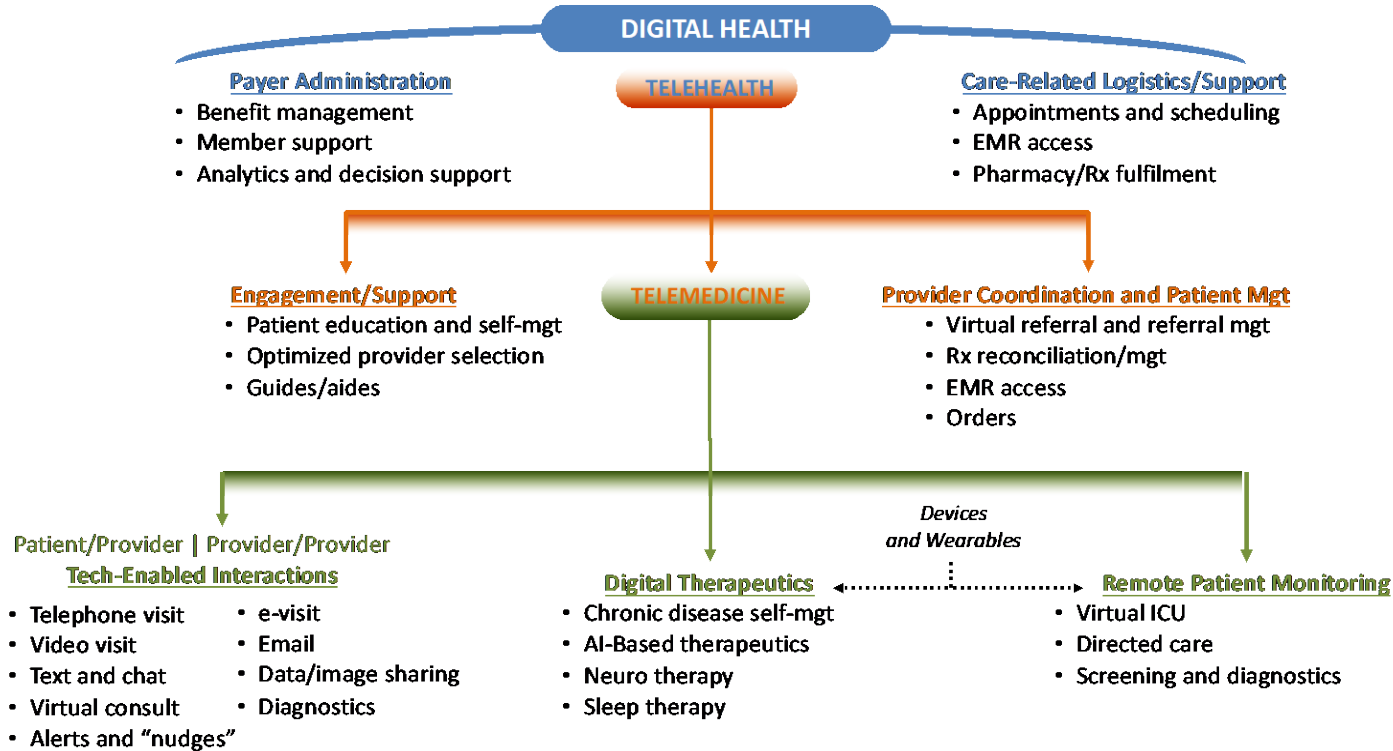
- Significant Fluctuations of YOY 2019 – 2020 Expenditures in Health Care Spending means aggregate losses/gains to different parts of the Healthcare Economy
- Job Loss/Job Status Fluctuation – Individuals laid off but did not lose insurance or Individuals laid off and go from Private Health Insurance to ACA, Medicaid or No Coverage
- Primary Care Pivot to Digital/Telemedicine
- Specialists “Elective Procedures” on Hold
- Surge Capacity Crisis for Hospitals with financial losses
- mRNA Technology pivots from mRNA Cancer Dx and Vaccines to COVID19 mRNA Genetically engineered vaccines
- Utilization Trends – Demographics/Aging Population Disease Burden Increases without routine care
- ACA Uncertainties with Biden Administration Changes



\* Source: CMS/OMB/NY Times- US Workforce = 153 MM with 4 MM/9.5MM unemployed not willing to work due to COVID exposure 4/21

# Introduction and Context for Discussion – Digital Health

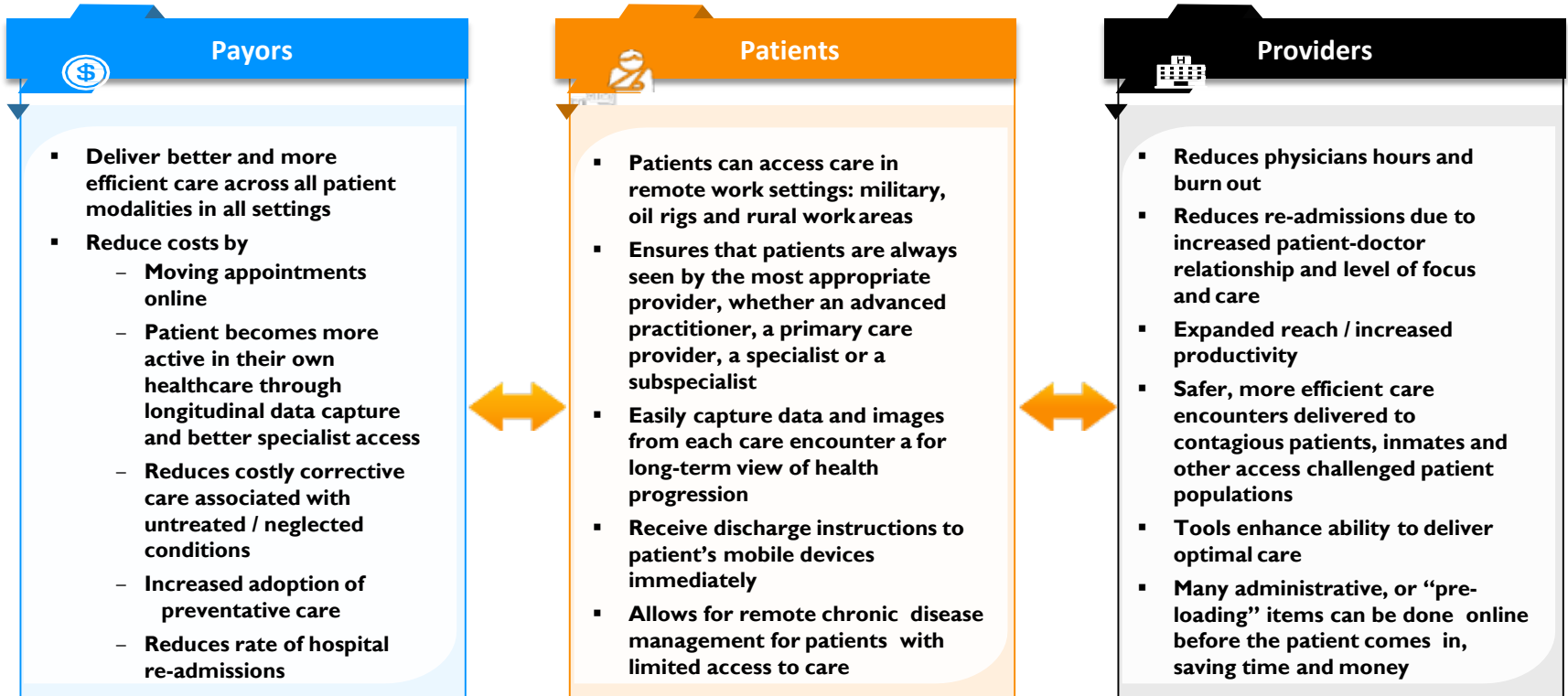
## Digital Health/ Telehealth/ Telemedicine/ Tele Monitoring



# Introduction and Context for Discussion – Digital Health

Will Digital Health/Telehealth/Telemedicine/Tele Monitoring Companies Be FAANG+M Targets?

## Comprehensive Care Integration

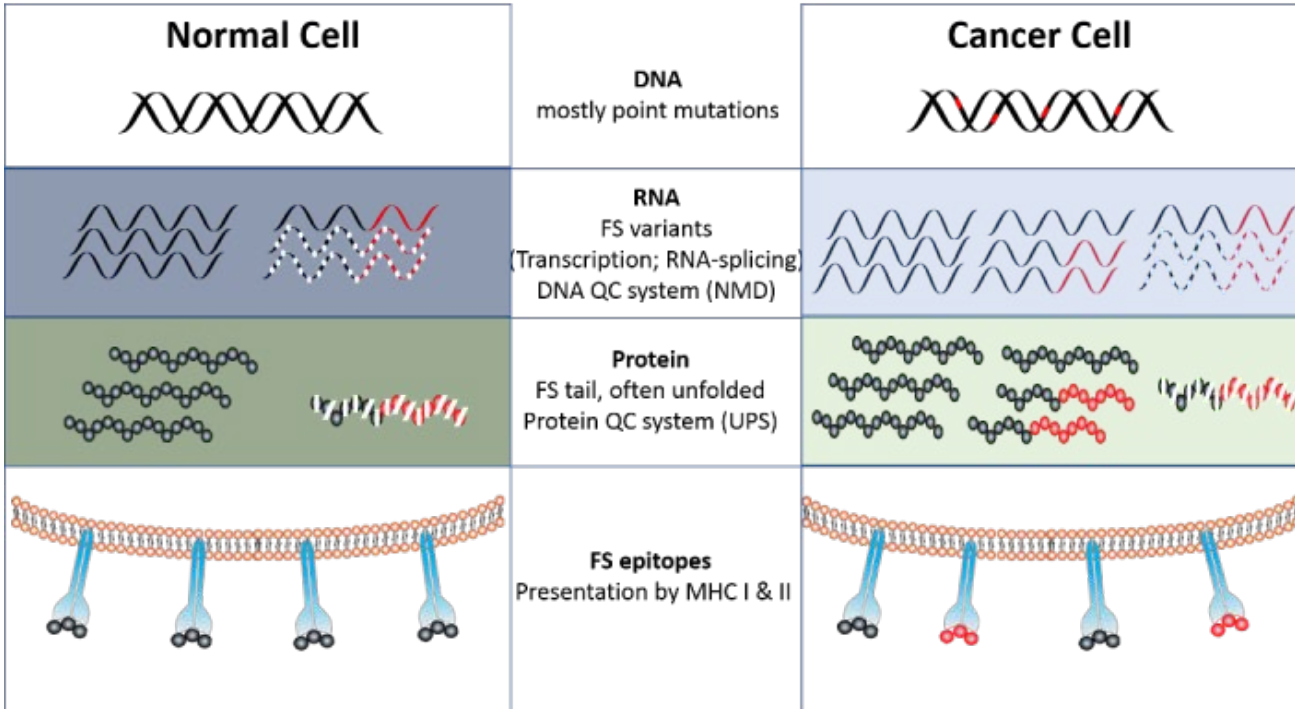




# Introduction and Context for Discussion – mRNA Dx and Vaccines

mRNA Cancer Technology Transitions to **COVID19 Pandemic mRNA Dx and Vaccines**

– Early Detection of Cancer Made Possible by Discover of Recurrent RNA Variants in Tumors



**IN TUMORS:**

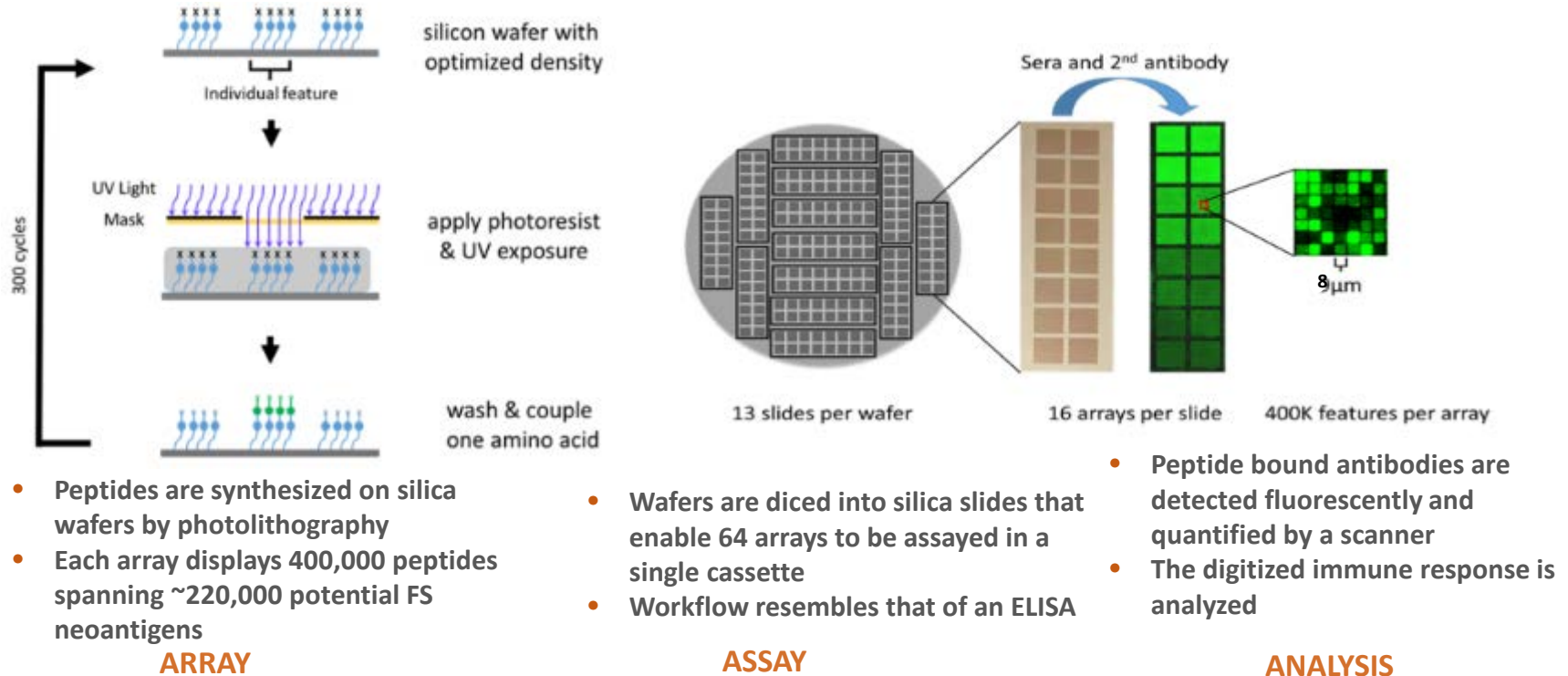
**DNA Mutations are Personal**

**RNA Variants are Recurrent**

# Introduction and Context for Discussion – mRNA Chip/Wafer Advances

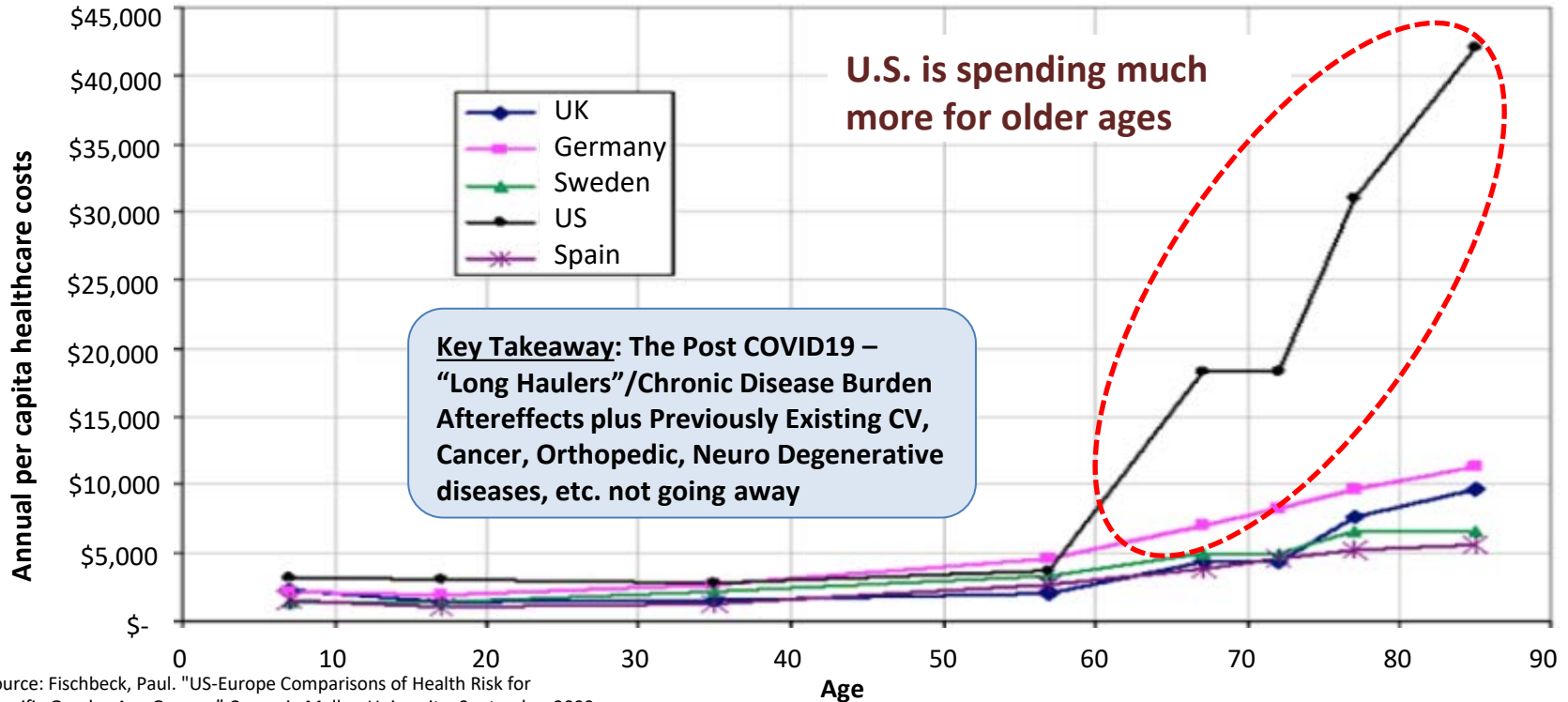
Will Pharmaceutical Giants That Develop mRNA COVID19 Dx, Therapeutic and Vaccine Technology Rise in the Food Chain?

## ImmunoSignature Peptide Arrays Can Capture All the Diversity of Antibodies to Tumor Peptides



# Introduction and Context for Discussion – Disparities/Disease Burden

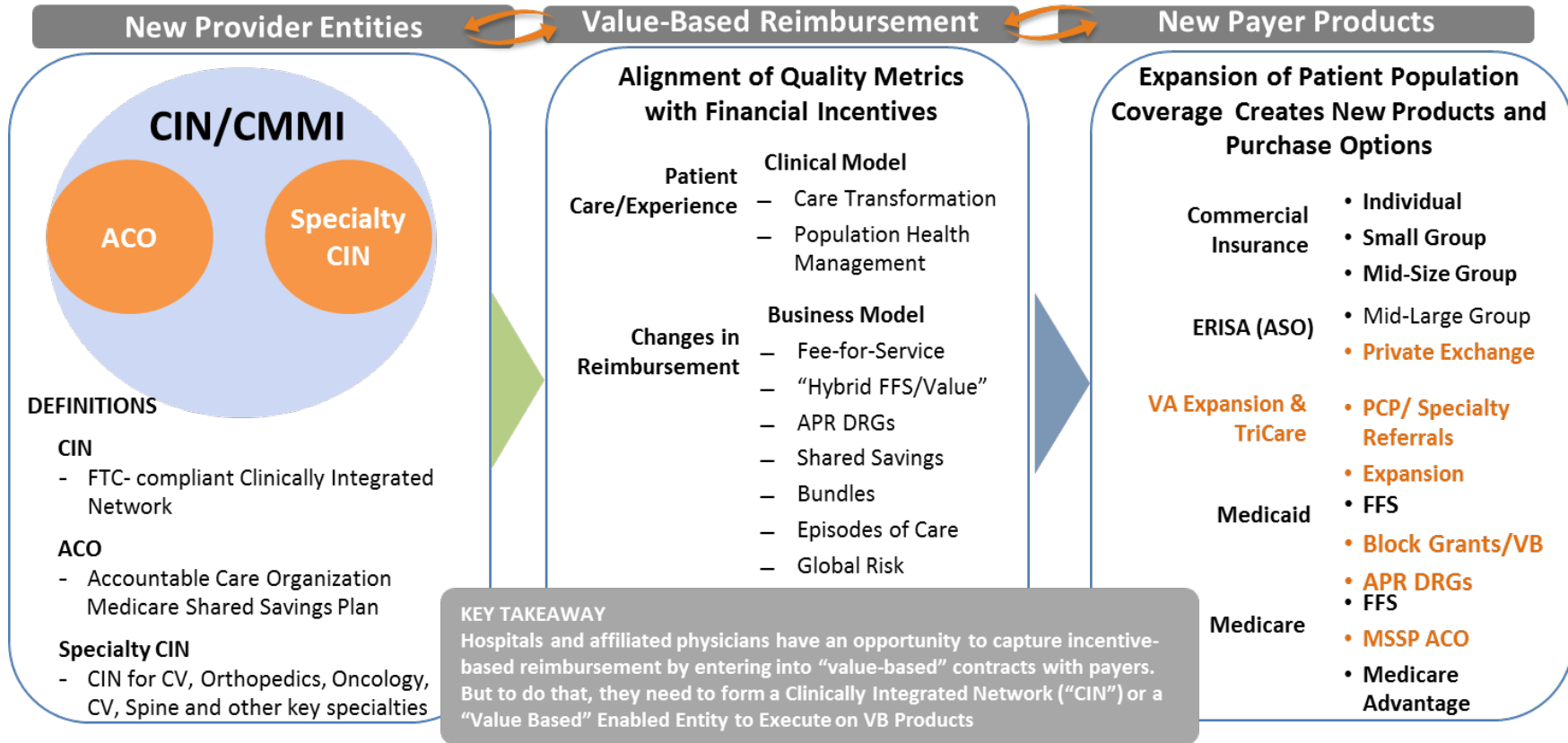
Major Senior/Vulnerable Population Exposure, Disparate Healthcare Access, Congregate Living Risk and Differential Risk Profile for Morbidity/Mortality and a Chronic Untreated Disease Burden Growing



Source: Fischbeck, Paul. "US-Europe Comparisons of Health Risk for Specific Gender-Age Groups." Carnegie Mellon University: September 2009

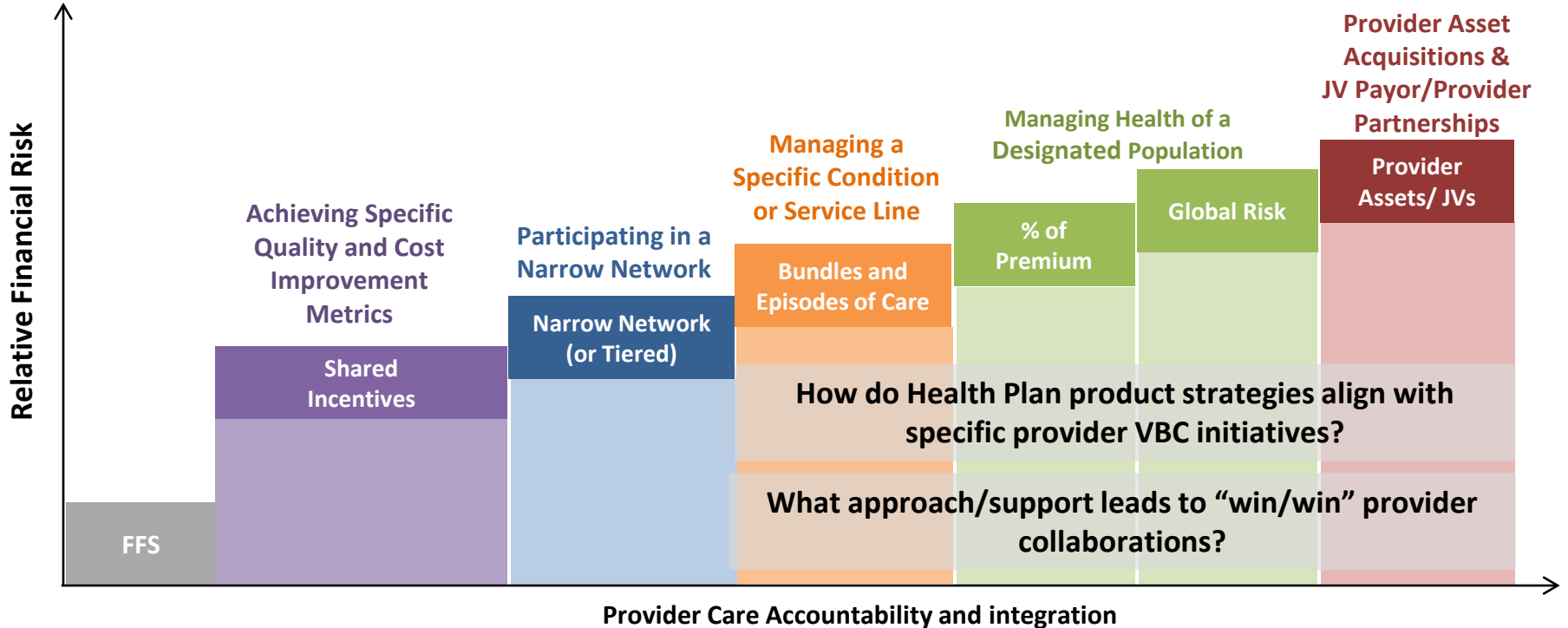
# Introduction and Context for Discussion – Value Based Contracting Continues

CIN's, Value Based Contracts, and Risk Based Contracts All Stressed by Pandemic



# Introduction and Context for Discussion – Big Actuarial Questions

Payor/Provider Glide Path to Global Risk Continues But on a Highly Variable Geographic and Product Specific Basis



# Foundational Healthcare Trends Disrupted

- Disruption of the “Healthcare Food Chain” and Its Consequences
- Aggregator Strategies and Critical Mass Continue to Rule the Day but Differently than Pre-Pandemic



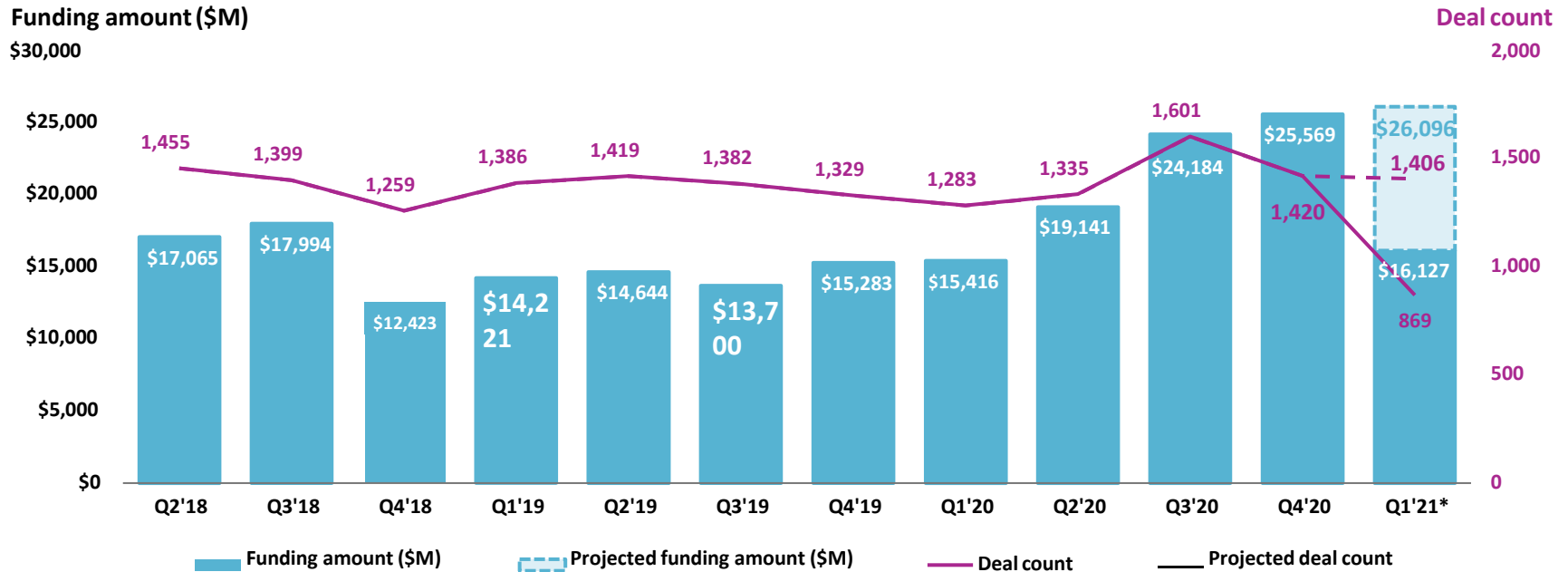
MAY 2021

The Future of Post Pandemic Healthcare

# Disruption of the “Healthcare Food Chain” and Its Consequences

## Q1'21 Projected Healthcare Transactions Funding Increase

Quarterly global healthcare funding and deal count, Q2'18 – Q1'21\*

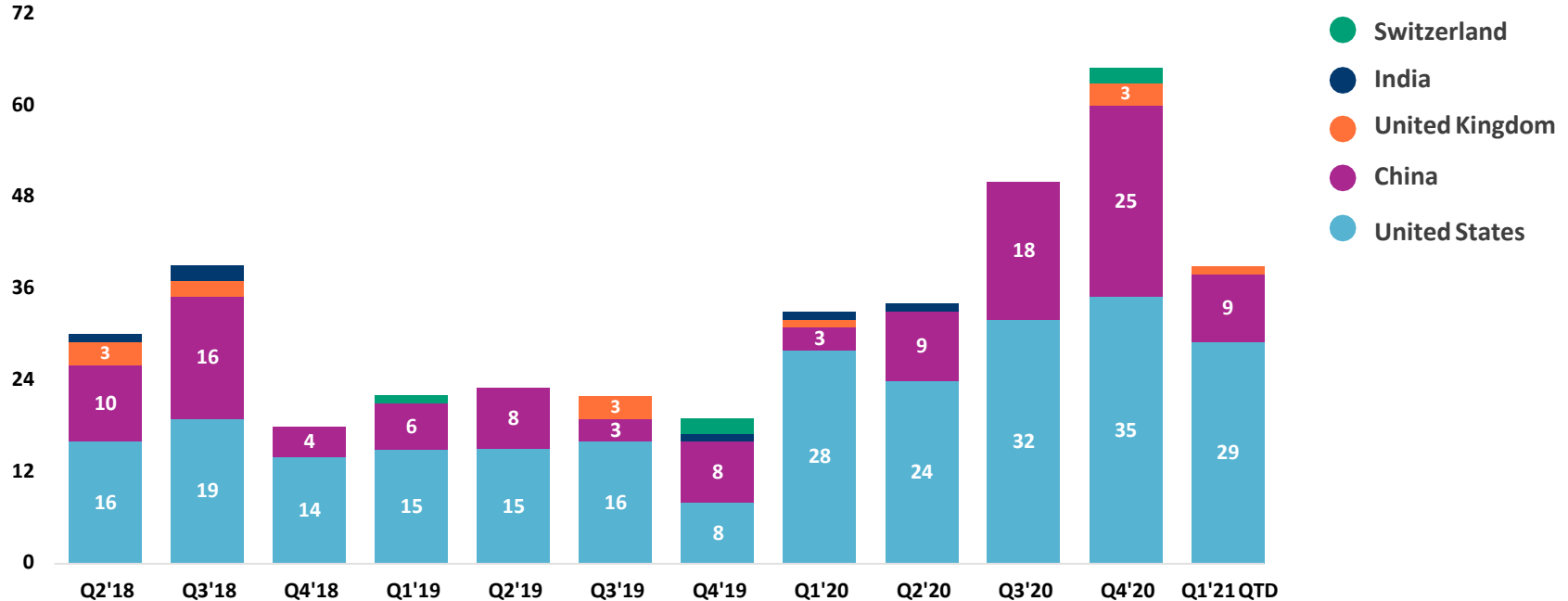


CBINSIGHTS \*Q1'21 full-quarter data is based on a run rate as of 2/25/21.

# Disruption of the “Healthcare Food Chain” and Its Consequences

## US & China see 38 mega-rounds in Q1’21 so far

Quarterly healthcare mega-round deal count by country, Q2’18 – Q1’21 QTD (2/25/21)



Note: Includes countries with 5+ healthcare mega-rounds since Q2'18. Mega-rounds are rounds worth \$100M+.

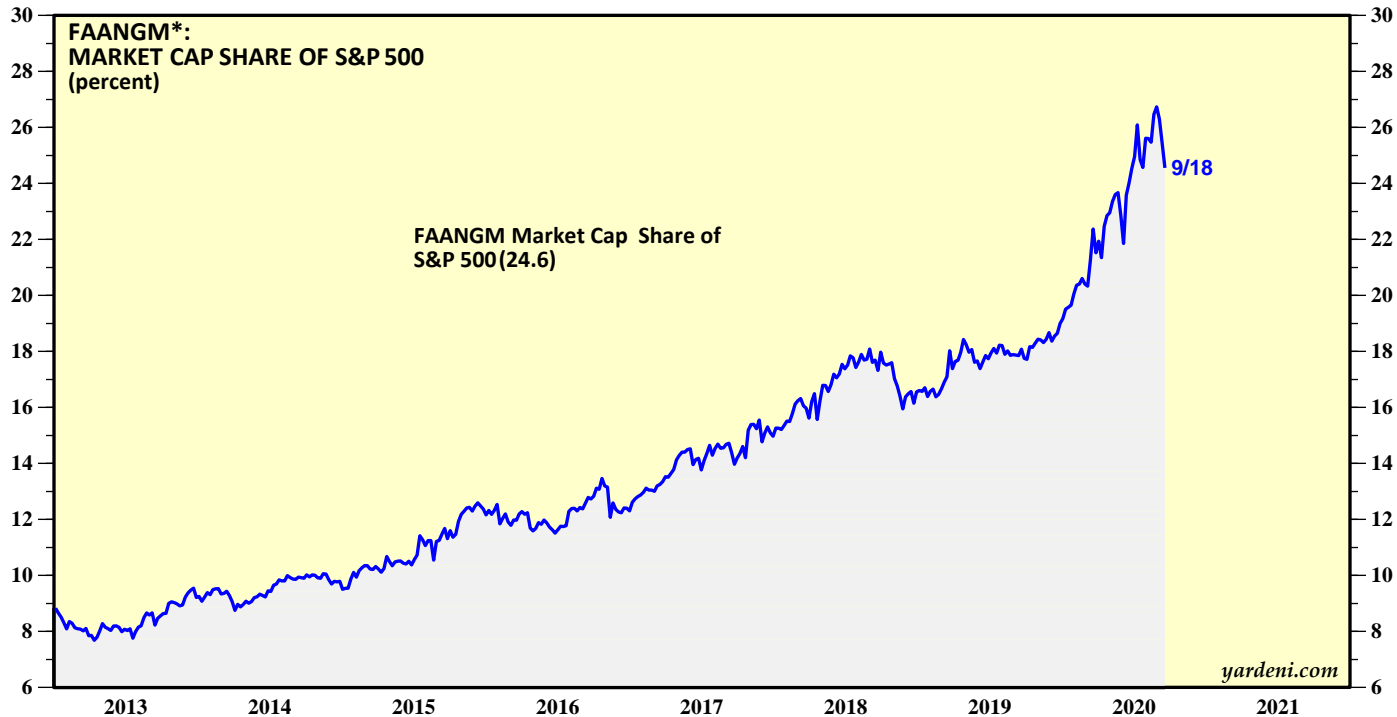
CBINSIGHTS \*Q1'21 full-quarter data is based on a run rate as of 2/25/21.



# Disruption of the “Healthcare Food Chain” and Its Consequences

Facebook, Apple, Amazon, Netflix, Google & Microsoft Market Cap

FAANG+M Portfolio Contribution of \$12+ Trillion Analysis to S&P 500



\* FAANGM stocks include Facebook, Amazon, Apple, Netflix, Google (Alphabet), and Microsoft. Both classes of Alphabet are included. Source: Standard & Poor's and I/B/E/S data by Refinitiv.

# Disruption of the “Healthcare Food Chain” and Its Consequences

– Who Will Be the Shark(s) in the Community Pool in 2021? FAANG+M



## FAANG + Microsoft

- Facebook → Data, Data, Data, etc.
- Apple → Medical Clinics, Wearables
- Amazon → Amazon Care, Prescriptions, Cloud, etc.
- Netflix → Minimal Healthcare Entry
- Google/Alphabet → Oscar, Fitbit, Deep Mind, Calico, Verily, AmWell, One Medical - \$100MM+ Bets
- Microsoft → Azure Blue Cloud, Nuance- \$19.7B Acquisition 4/21

Market Capitalization

\$ 2 Trillion+ - \$ 1.5 Trillion+

- Aetna/CVS → Whole Health/Minute Clinics
- Blue Cross → Direct to CIN, Medicaid, IU
- Cigna → Express Scripts / MD Groups
- Humana → Kindred / MA / TriCare/ Iora
- Target/Walmart → PCPs in stores, Pharma, MeMD
- United Health/Optum → VA CCN, PCPs, ASCs, MSOs
- Equality Health → Social Determinants/ Members
- Kaiser → Customer Experience, SDOH
- VA → VA Hospitals vs VA CCN
- Merck, Pfizer, J&J, Amgen → mRNA COVID, mRNA, Cancer
- Leidos, IBM, etc. → Big Data - COVID, Cancer, member experience, AI, etc.

Market Capitalization

\$ 500 Billion+ - \$200 Billion+

# Disruption in the “Healthcare Food Chain” and Its Consequences

## Types of Healthcare Transactions and Enablers

- 1. Vertical & Horizontal Integrators** – Summit/CityMD, CVS Health/Aetna, Optum/DaVita Medical Group, Cigna and Express Scripts(Civica Rx), etc. These hybrid organizations are trying to lower costs of the supply chain by owning more of it and extending those savings to consumers. The challenge? **Execution risk is very high and capital intense but some hybrid models survived COVID very well . COVID IMPACT – Variable/ Scale matters – Summit, United Health, etc. doing well.**
- 2. Employer Sponsored Initiatives** – HAVEN -JPMorgan/Berkshire Hathaway/Amazon Abandoned Due to Execution Failure. Combinations such as this are setting out to limit the growth of their own healthcare costs. The challenge? **Previous employer lead initiatives have had variable success and sustainability (e.g., SCE, Ford, Macy, Kaiser, etc.) and always require geographic concentration and scope of services scale. COVID IMPACT – Variable/HAVEN abandoned, Blackstone doing well.**
- 3. Technology Invaders** – FAANG+M, Lyft and Uber live in this class. These deals will command more space in the healthcare industry, and they have an advantage in their understanding of modern consumer expectations and new currently non existent healthcare relevant technologic advances. The challenge? **Technology invaders need technology that is applicable and actually provides real synergy in both the clinical and business facing applications. COVID IMPACT – Variable/Mostly Positive Because of Business/Valuation Shift to Big Tech. AmWell and Google start Collaboration**
- ✓✓ **Inflection Point – April 12, 2021: Microsoft pays \$19.7B for Nuance (Health Care AI Company- Voice and Text Recognition). First \$19+Billion FAANG+M healthcare acquisition and likely raises stakes for other FAANG+M companies.**
- 4. Health Retailers** – Retailers including Walmart (MeMD), CVS Health, Amazon and Rite Aid want to gain market share by functioning as healthcare providers directly or as referral conduits. The challenge? **Scope of care, complexity of treatment, virtual medicine (tele health, tele monitoring, etc.) complicate the patient/provider/payer relationships. COVID IMPACT – Variable/Mostly Positive in healthcare consumables/ pharmaceuticals and vaccine distribution role.**

# Aggregator Strategies and Critical Mass Continue to Rule the Day

## – Determine Organizational “Keepage/Leakage”

### TopCo./HoldCo. Aggregators



### Data Analytics in Healthcare



- **Descriptive Analytics**
- **Diagnostic Analytics**
- **Predictive Analytics**
- **Prescriptive Analytics**

### Market Share/ Revenue/ Income

Fee For Service

- Increased Price/Cost
- Increased Population Utilization
- Less Appropriate Facility Based Care

**“Keepage/Leakage”**

Value Based Care/  
Global Risk

- Decreased Aggregate Price/Cost
- Decreased Population Utilization
- More Appropriate Facility Base Care
- “Triple Aim” Optimization

# Aggregator Strategies and Critical Mass Continue to Rule the Day

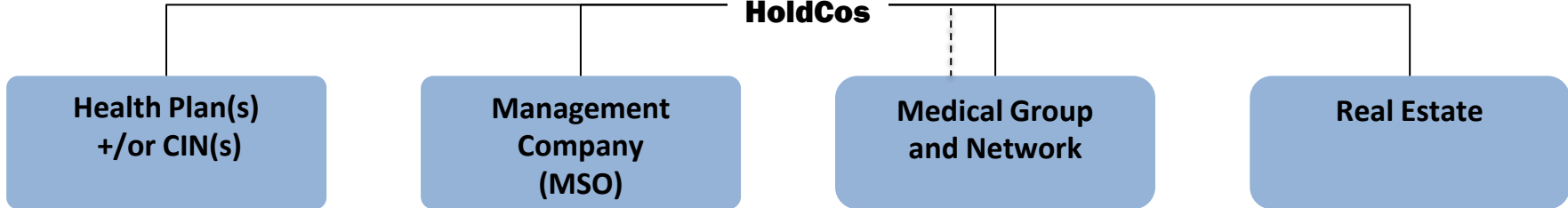
## – Aggregators Emerge in Scale and Sponsorship

TopCo Functions as an aggregator of one or more business organizations



- Private Equity
- For-Profit Health Insurance/Optum
- Health Plans
- Hospital Systems
- Physician Organizations
- Large Technology/Employer Companies

HoldCos



- Medicare Advantage Plans
- CMMI – Direct Contracting
- ACO/MSSPs
- Medicaid Plans
- Commercial Plans
- ASO—Large Employers Plans
- Payer Virtual Care Interface

- Delivery System or Health Plan/CIN Facing
- Risk Contract and Pop Health Analytics
- Delivery Virtual Care Interface
- MD Compensation Model
- Staffing and Recruitment Support

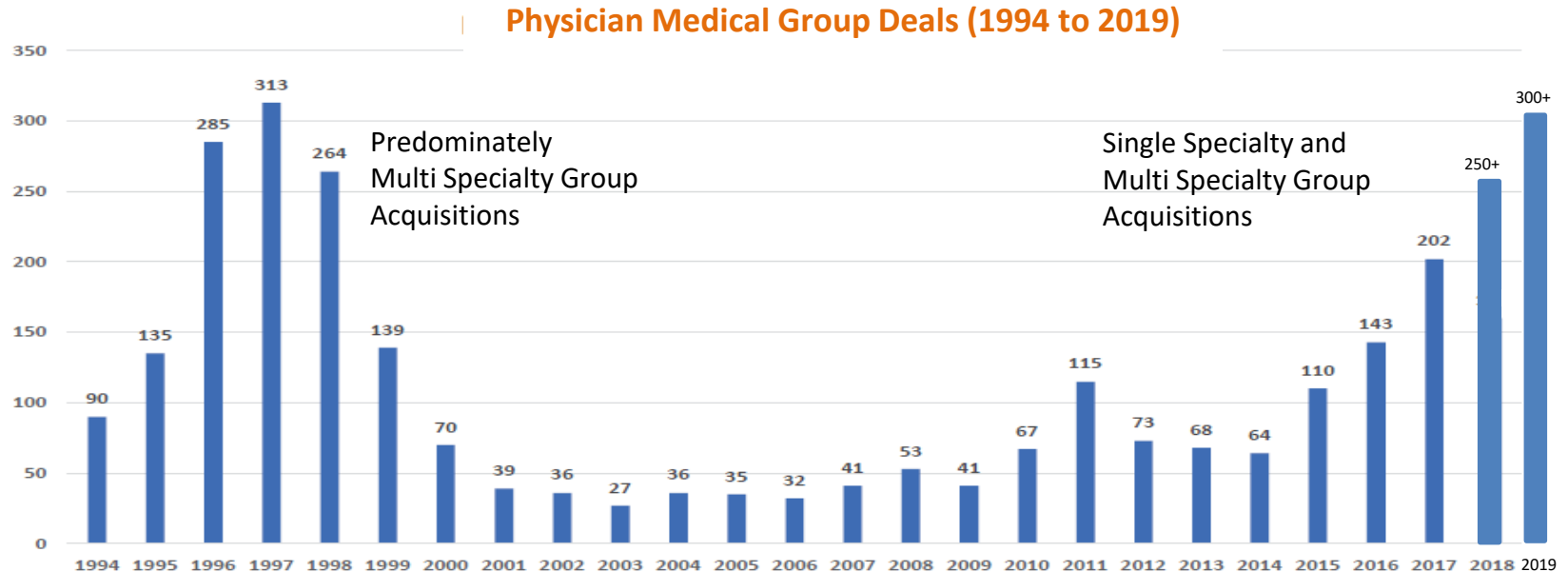
- Employed PCP and Specialty MDs
- Network MDs
- Urgent Care/Retail Services
- IPAs – Next Generation
- Workers Comp MDs

- Micro-Hospitals
- MOBs
- ASCs
- OBLs
- High Acuity Urgent Care Centers
- Retail Locations

# Aggregator Strategies and Critical Mass Continue to Rule the Day

## The Birth of “Unicorn” Physician Practice Management Companies- Case Studies

Volume of physician practice acquisitions has accelerated over the past three years



# Aggregator Strategies and Critical Mass Continue to Rule the Day

Private Equity to Publicly Traded Company Model

## Envision/KKR Model

**TopCo. = Envision/KKR**

Value - \$5.5 Billion  
Owner - KKR

**Health Plan(s)  
+/-or CIN(s)  
HoldCo.**

- Commercial – FFS
- Value Based Contracts
- Misc.

**Management Company  
(MSO)  
HoldCo.**

- Two Models
  - Distributive
  - Centralized
- Misc.

**Medical Group  
& Network  
HoldCo.**

- 25,000 Providers
- ED, Anesthesia, Other Specialties, etc.

**Real Estate  
HoldCo.**

- Misc.

# Aggregator Strategies and Critical Mass Continue to Rule the Day

Private Equity Model

Summit Medical  
Group/CityMD

**TopCo. = Summit Medical  
Group/City MD**

Value - \$4+ Billion  
Owner – Warburg +  
Physicians

**Health Plan(s)  
+/-or CIN(s)  
HoldCo.**

- Commercial
- Medicare Advantage
- MSSP
- Retail

**Management Company  
(MSO)  
HoldCo.**

- IT Platform
- Risk Contract Analytics
- Revenue Cycle Mgmt.
- Social Determinates of Health (SHOH)
- Wraparound Virtual Capabilities

**Medical Group  
& Network  
HoldCo.**

- 1400+ Summit Physicians  
Employed
- CityMD Physicians Employed  
and Part Time (100+ Locations)

**Real Estate  
HoldCo.**

- Big Box, Medium Box,  
Small Box
- MOBs
- ASCs
- High Acuity Urgent Care  
Centers
- Retail Locations



# Aggregator Strategies and Critical Mass Continue to Rule the Day

Publicly Traded Company Subsidiary Model

HealthCare Partners  
/Optum Model

**TopCo. = HealthCare  
Partners/Optum**

Value - \$4+ Billion  
Owner – Optum/UHG

**Health Plan(s)  
+/-or CIN(s)  
HoldCo.**

- Medicare Advantage
- Medicaid
- Commercial
- ASO

**Management Company  
(MSO)  
HoldCo.**

- IT Platform
- Risk Contract Analytics
- Revenue Cycle Mgmt.

**Medical Group  
& Network  
HoldCo.**

- 60,000 + Employed PCPs/UHG
- 100,000+ Network MDs/UHG

**Real Estate  
HoldCo.**

- Assorted Real Estate Assets

# Aggregator Strategies and Critical Mass Continue to Rule the Day

## OptumCare Acquisitions and Footprint



Source: <https://www.optumcare.com/about/about.html>

## Old and New Transformational Trends Evolve

- New Types of “Value Based” Products
  - The CIN/Federated Model, ASO/MSSP, CMMI, etc.
- The Super Consumer/Member/Patient Experience
  - Virtual and Non-Virtual Components
- mRNA and COVID19 Vaccines
  - Limited COVID19 Impact on Transformational Technology for Multiple Sectors

MAY 2021

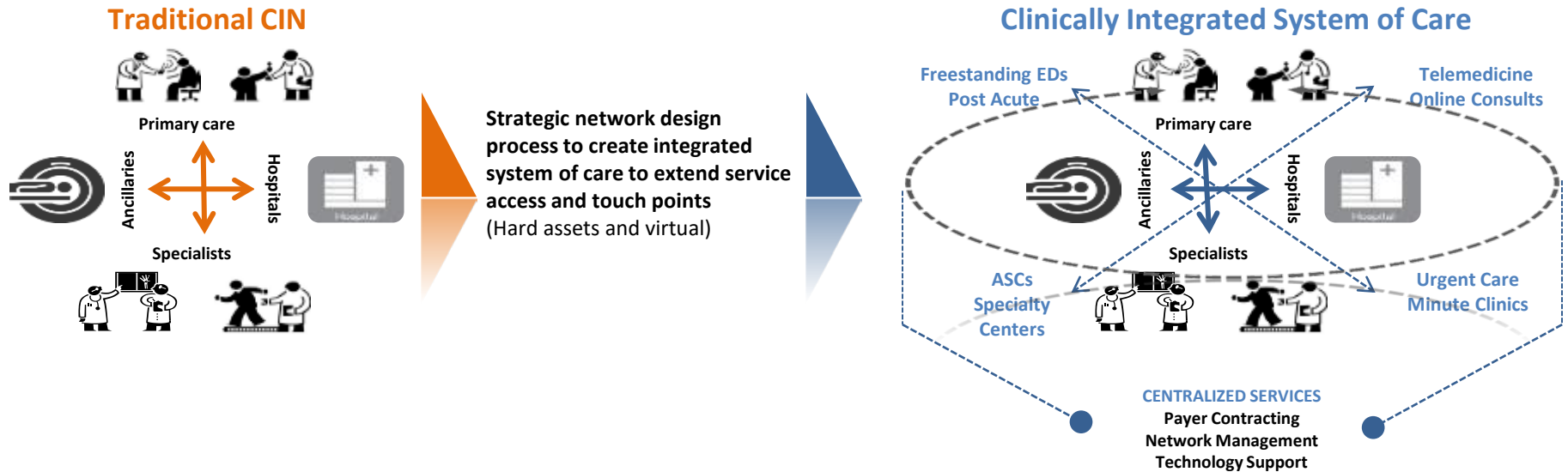
The Future of Post Pandemic Healthcare

# New Types of “Value Based” Products

## – CIN’s, Next Gen IPAs, ACOs/MSSPs, CMMI Direct Contracting, etc.

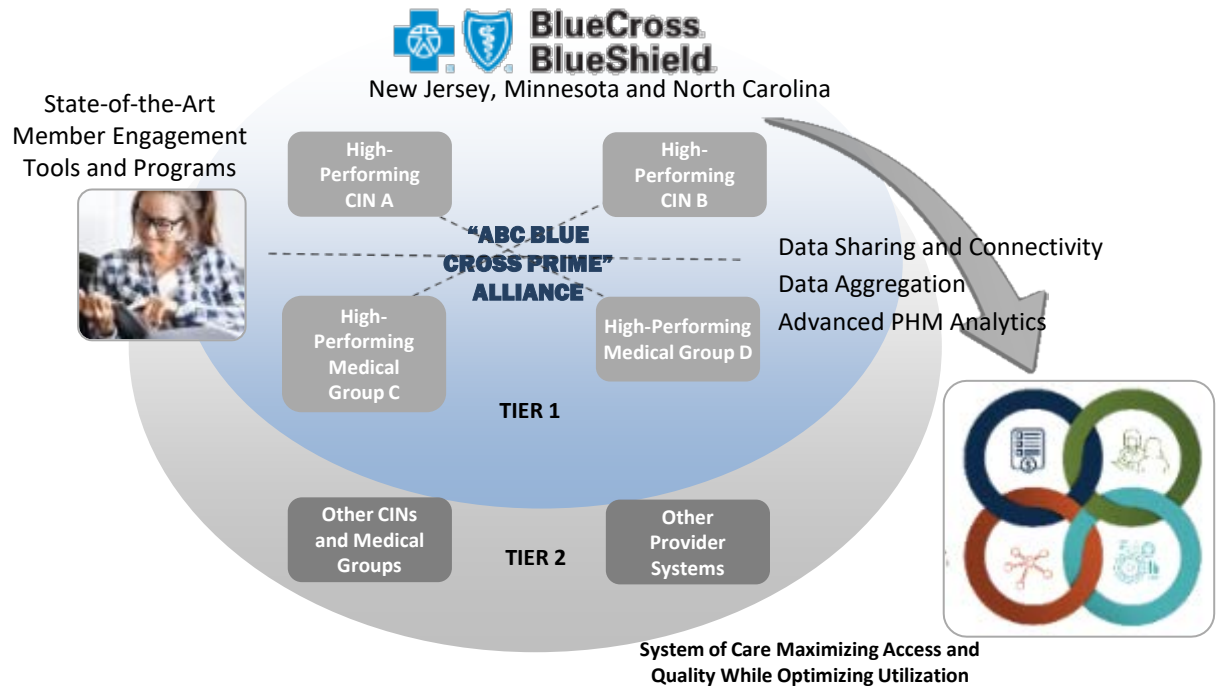
A clinically-integrated System of Care takes a more expansive view of care delivery, extending and integrating an array of member access points into network - United, Banner and Aetna already pursuing versions of this model

### CLINICALLY INTEGRATED SYSTEM OF CARE OPTIMIZES AND INTEGRATES HEALTHCARE ACCESS POINTS ACROSS CONTINUUM



# New Types of “Value Based” Products – CIN/Federated Model

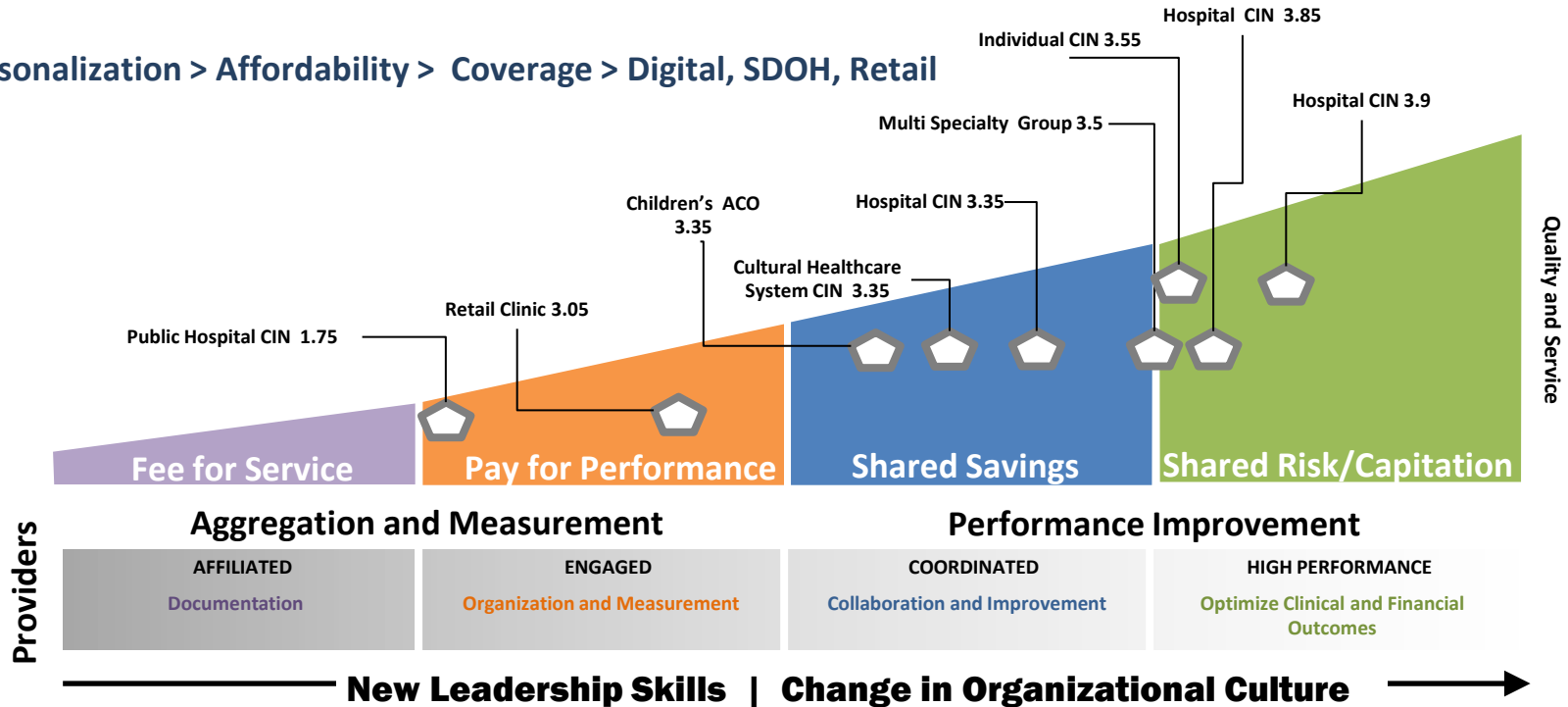
Multiple Blue Cross Plans including of New Jersey, Minnesota and North Carolina are developing aggressively priced commercial products that combine tiered physician networks (CINs, IPAs, etc.), provider incentives and a shared portfolio of member/provider engagement tools/programs to create an optimized customer/member/patient/provider experience with lower MLR and improved quality



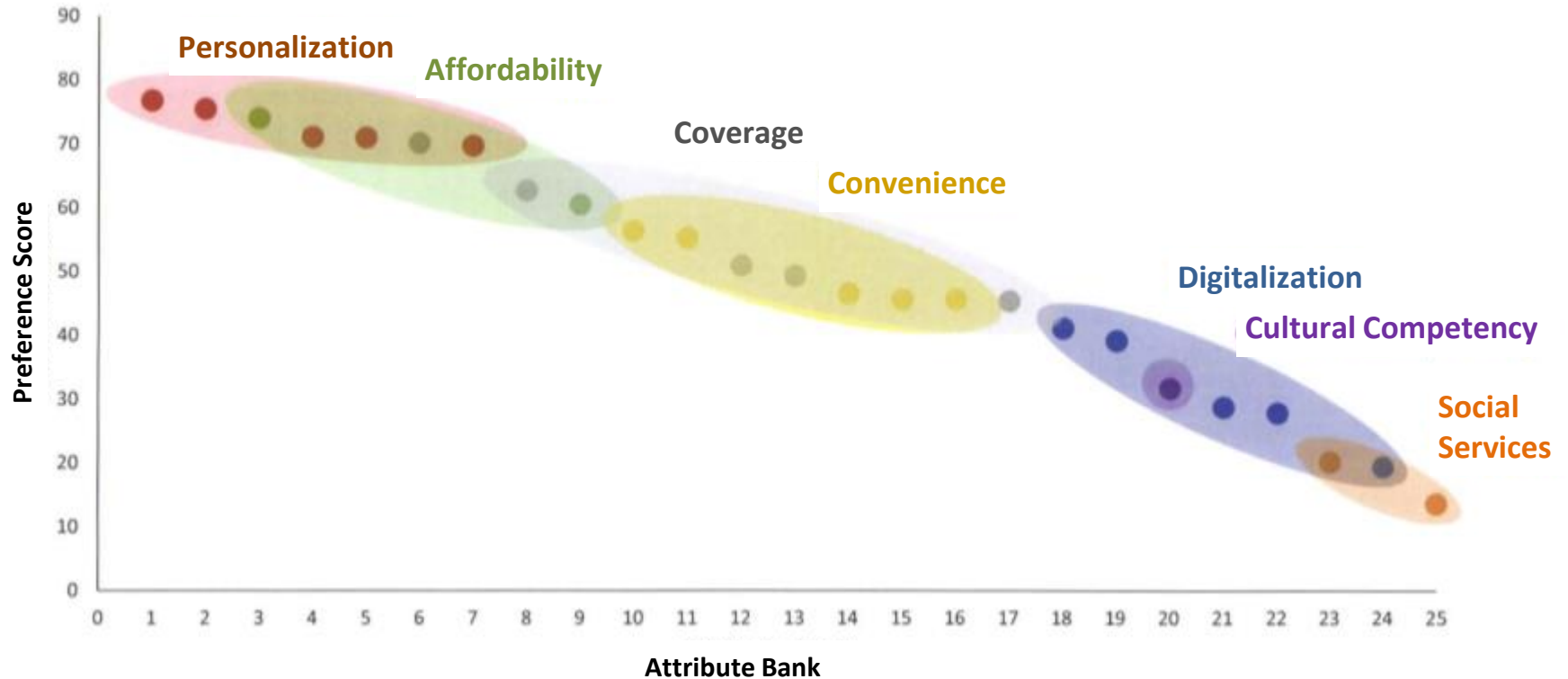
# New Types of “Value Based” Products

## Sampling of Assessed Provider Organizations for a Geographic Area

Personalization > Affordability > Coverage > Digital, SDOH, Retail



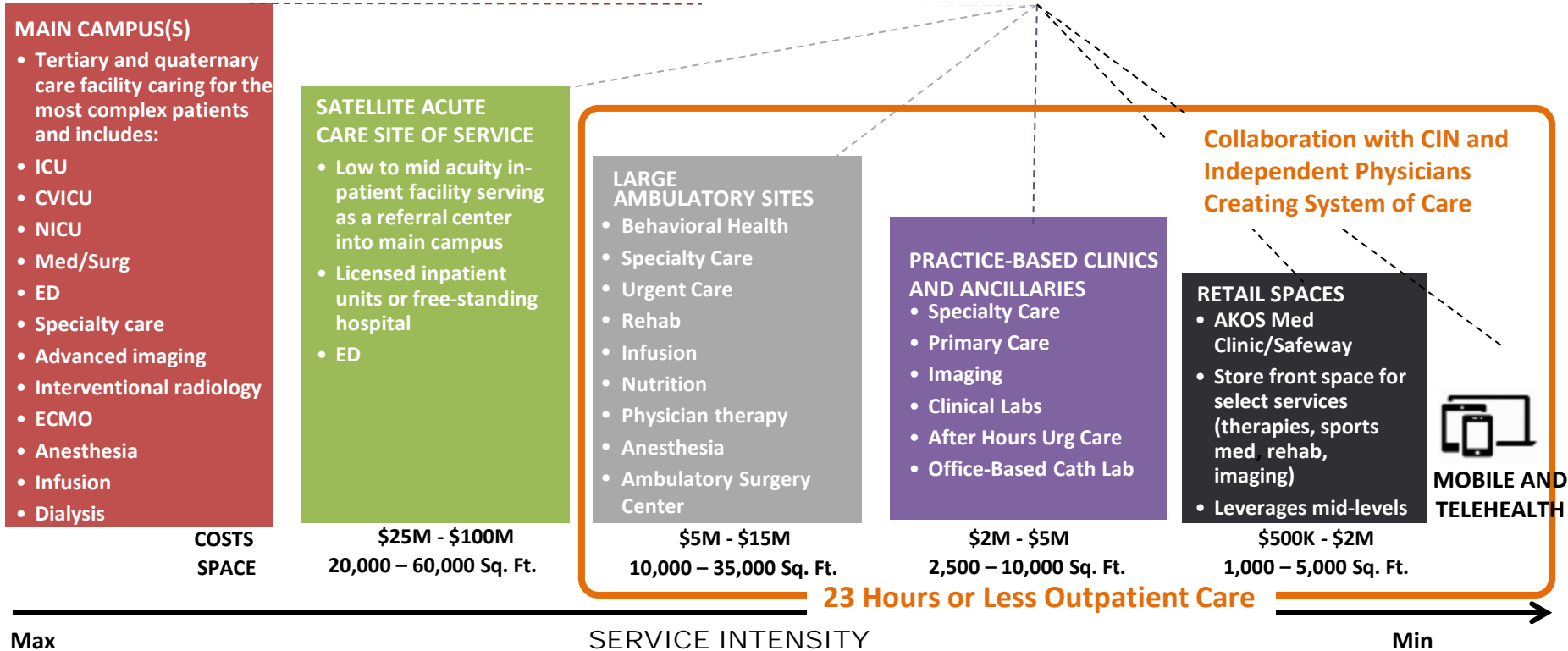
# Super Consumer/Member/Patient Experience



# Super Consumer/Member/Patient Experience

Healthcare “Micro Footprint” is a combination of different target population enhanced outpatient centers

## Right Care, Right Time, Right Cost/Facility



\* - See Memorial Hermann example in presentation Appendix



# Super Consumer /Member/Patient Experience

Healthcare “Micro Footprint” is also a combination of different population enhanced patient entry points

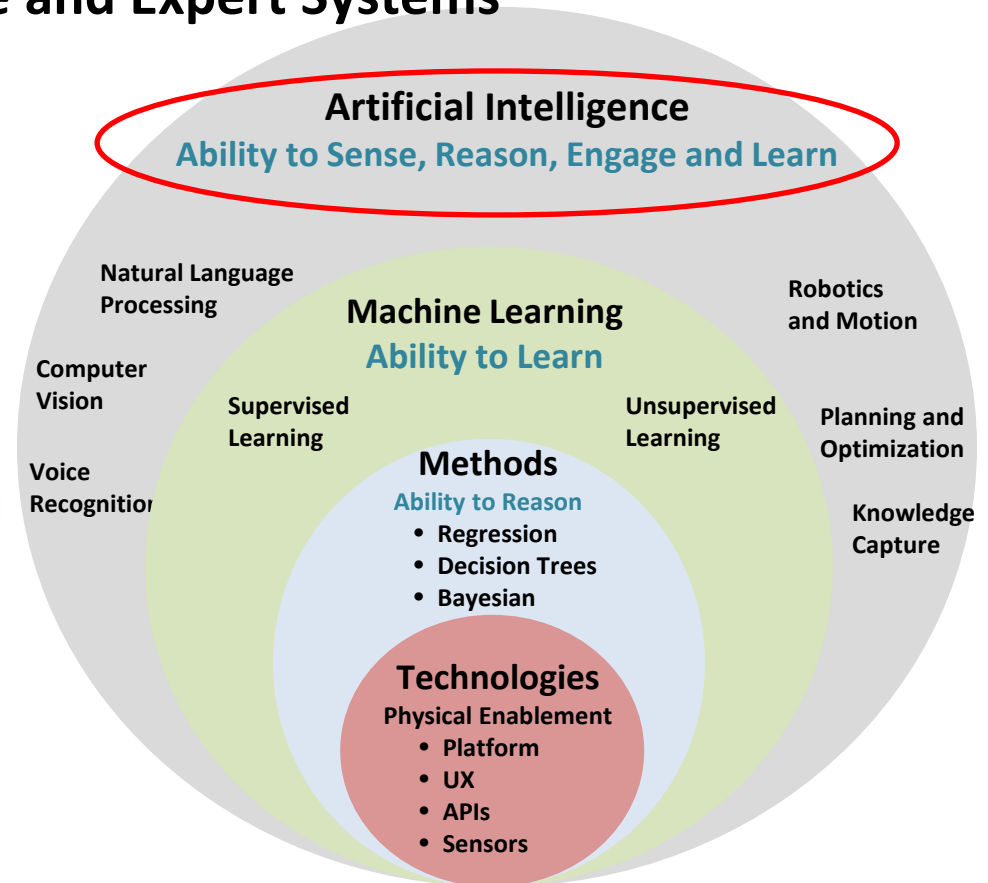
Type of Care		Telehealth	At Home Complex Care	Retail Clinic	Primary Care	Behavioral Health	Employer 1°Care/ Workers Comp On-site Clinics	Urgent Care	Hybrid/ED Urgent Care	ED
		Rash, HTN, Diabetes, nonspecific back pain, wellness visit	CHF, Diabetes, High ED Utilizers	Bronchitis, Ear Infections, Sore throat	Wellness & Screening Rash, Non-allergy HTN, Diabetes	1° Mental Health Issues, Addiction, Hybrid Health Problems	Employee Primary Care & Workers Comp On-site Care	Injury, Sprain, Bronchitis URI, Ear Infections, Sinus, UTI, Open wounds	Chest pain, Fever, Shortness of breath, bleeding	Chest pain, Fever, Shortness of breath, bleeding
Expectation of Patient	Convenience	High	High	High	Med	High	High	High	High	Low
	Intensity Level	+ - +++	+++	+	+ - ++	+ - ++	+ - ++	++	++ - +++	+++
	Cost	\$ - \$\$	\$\$	\$	\$\$	\$\$	\$	\$\$	\$\$ - \$\$\$	\$\$\$\$

Grow: This is the Universal - Channel strategy matters in both the volume and value worlds. Channels drive growth and growth drives organizational investments and economies of scale. All organizations--- even those in predominately value-based payment environments--- need to grow – Home Health

# The Super Consumer/Member/Patient Experience – Advanced Artificial Intelligence and Expert Systems



## What is Artificial Intelligence?



Source: James Bates, AdviNow

# The Super Consumer/Member/Patient Experience

– Digital Health / Telehealth / Telemedicine / Tele-Monitoring

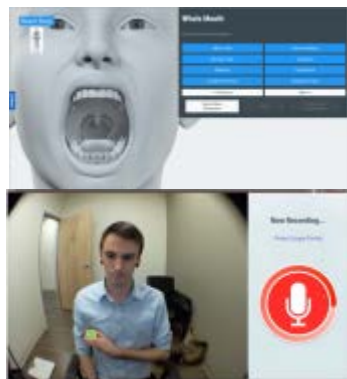
## AI Enabled Virtual Clinic



- Phone/ Medical Station
- ID/Insurance Card Scan, OCR
- Facial Recognition
- AI dynamic Q/A
- Care Coordination

2 Minutes

## AI-Driven Exam



- Chief Complaint Collected
- AI Completes Q&A
- AR Guided Medical Measurement
- Otoscope, Stethoscope, Blood Pressure, Thermometer, Pulse Oximeter, Scale
- AI Engagement until Diagnosis

10 Minutes

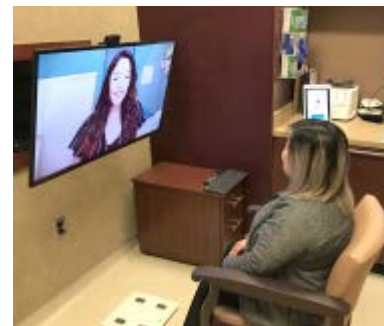
## Curated Working Diagnosis



- Diagnosis Probability & Justification
- Images, Sounds, Measurements
- AI Suggested Treatment Options
- AI Charts Patient

1 Minute

## Optimized Provider Consult



- Provider Verifies AI Collected Data
- Diagnosis & Treatment Confirmation
- AI Scribes EHR SOAP Notes
- AI Scribes Discharge Notes
- AI Orders Script, Lab, Images Ordered
- AI Completes Chart for Billing

2 Minutes

# The Super Consumer/Member/Patient Experience

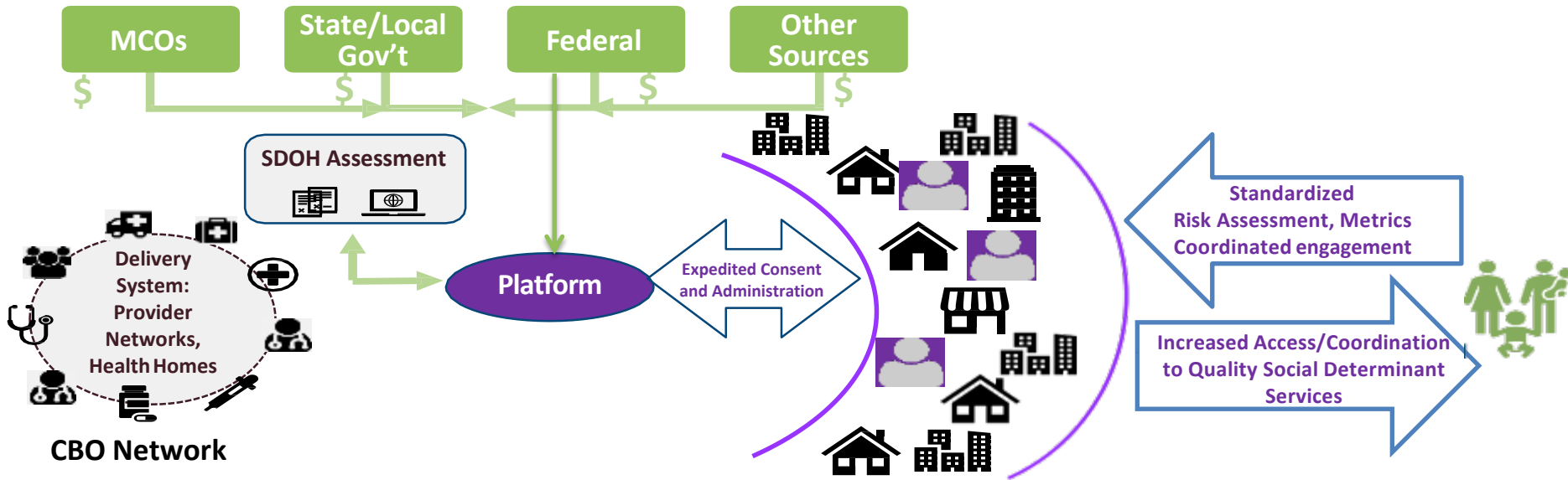
## Equality Health – “Culturally Focused” Programs Excellence – Case Study

- Equality Health is the nation's first integrated healthcare delivery system focused solely on improving care delivery for the underserved through the lens of their own culture
- Equality helps managed care organizations improve health outcomes transition to value-based care and better engage their most vulnerable members through culturally-relevant care
- Equality Health initially focused on the Hispanic/Latino community in Arizona with plans for southwest expansion



# The Super Consumer/Member/Patient Experience

## – Social Determinants of Health (SDOH) Care Guide/Data Base \*



\*Adapted from multiple SDOH sources including Equality Health

# The Super Consumer/Member/Patient Experience

Mayo Clinic Destination Medical Center – Minnesota, Arizona and Florida Campuses, National Medical School, Common Platforms, Innovation Centers, etc.



- Mayo Clinic is embarking upon a \$5.6 billion Destination Medical Center (DMC) project within the research and technology center of Discovery Square in Rochester, construction expected this next year. The DMC is slated to be a 10-20 year build-out project aimed at turning Rochester into America's healthcare capital. Given the initial receptivity of the Rochester initiative additional resources and focus are being directed to the Mayo Scottsdale and Florida Campuses.
- The Mayo Clinic DMC will be facilitated by the Rochester Area Foundation, Mortenson Co. in construction, and HCDG/SSB in leading Mayo's expressed focus in accessing **New Markets Tax Credit** financing. Because of the long-term, expansive nature in developing the DMC and attentive projects in the Discovery Square area, HCDG/SSB envisions this effort as running for many years with the opportunities for better than a decade's worth NMTC, state tax credits, opportunity zones and related transactions. The following graphic is a rendition of the overall project area in Rochester, MN.

# COVID19 Vaccines

– Limited COVID19 Impact on Transformational Technology for Multiple Sectors

## In 1992, The First Report of Gene/Nucleic Acid/DNA Vaccination Offered to Revolutionize Vaccines

nature

[Explore our content](#) ▾ [Journal information](#) ▾ [Subscribe](#)

[nature](#) > [letters](#) > [article](#)

Published: 12 March 1992

### Genetic immunization is a simple method for eliciting an immune response

De-chu Tang, Michael DeVit & Stephen A. Johnston

*Nature* 356, 152–154(1992) | [Cite this article](#)

443 Accesses | 1198 Citations | 12 Altmetric | [Metrics](#)

#### Abstract

To produce an immune reaction against a foreign protein usually requires purification of that protein, which is then injected into an animal. The isolation of enough pure protein is time-consuming and sometimes difficult. Here we report that such a response can also be elicited by introducing the gene encoding a protein directly into the skin of mice. This is achieved using a

- Introduction of a plasmid encoding a foreign Protein creates an immune response
- Vaccines would be simple and inexpensive
- Their production would be standardized
- New vaccines could be developed very quickly
- No cold chain required
- Gene Vaccines Were IDEAL

# COVID19 Vaccines

- Limited COVID19 Impact on Transformational Technology for Multiple Sectors
- But Gene Vaccines Encountered the “Simian Barrier”

**They Work Great in Any Animal**



**West Nile Virus Vaccine**



**Melanoma Cancer Vaccine**

**Except Humans and Monkeys. 100s of Clinical Trials, NO Success**

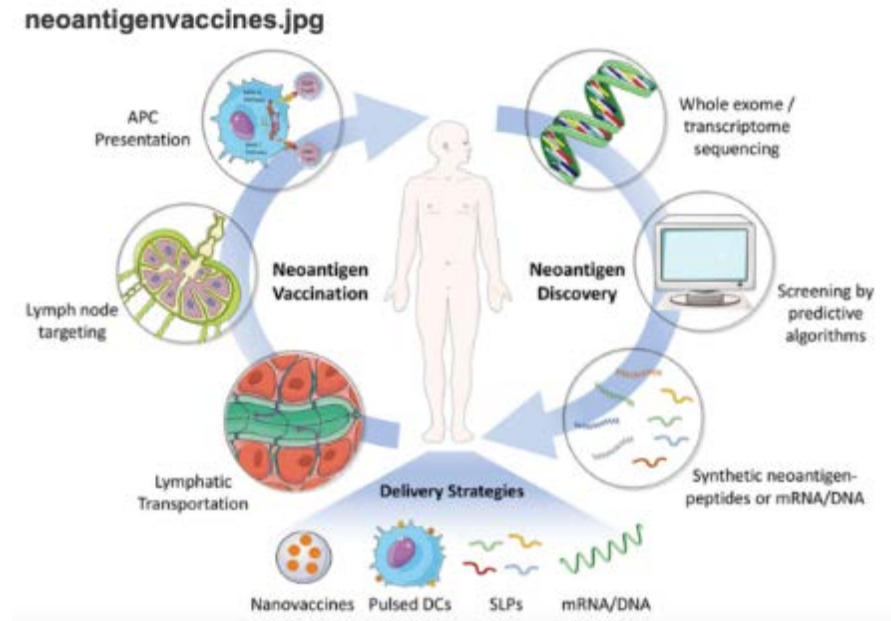


# COVID19 Vaccines

– Limited COVID19 Impact on Transformational Technology for Multiple Sectors

Solution: Skip the DNA, Go Straight to RNA

## Personal Cancer Vaccines Strategy of Moderna/BioNtech



**Faced with Needing to Make Vaccines for Each Person Fast Moderna/BioNtech Developed Technologies to Quickly Scale RNA Production**

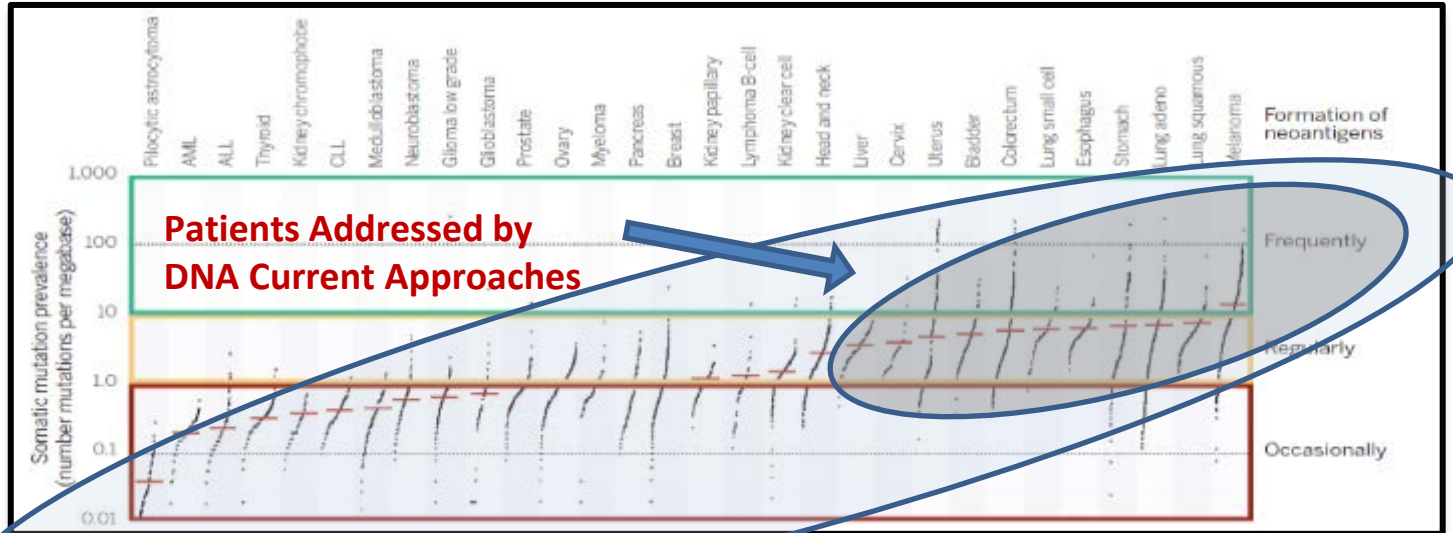
# COVID19 Vaccines

– Limited COVID19 Impact on Transformational Technology for Multiple Sectors

RNA Neo-epitopes Drive New Cancer Diagnosis and Treatment Models

Production of Personalized Cancer Vaccines for “Hot and Cold Cancers”

**RNA Neo-epitope Approach Could Address All Patients**



**Patients Addressed by DNA Current Approaches**

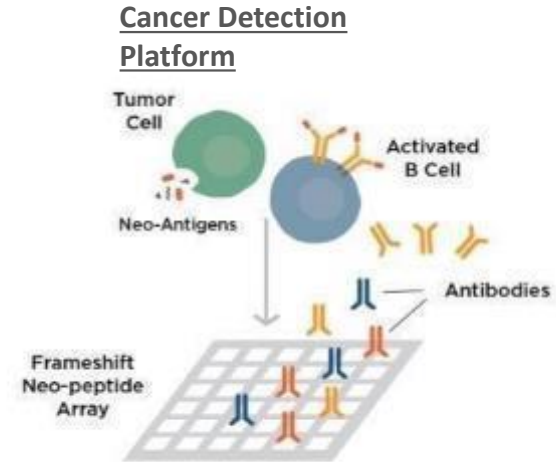
# COVID19 Vaccines

– Limited COVID19 Impact on Transformational Technology for Multiple Sectors

RNA Frameshift Errors Enables Development of New Diagnostics and Vaccines Effective Against Cancer

## Approach

- Tumor cells release frameshift peptides, which are neoantigens to a patient's immune system; B cells produce antibodies specific to the neoantigen
- CALVIRI produces microarrays with all possible RNA-error generated frameshift peptides, and a small sample of patient blood is applied
- Peptide/antibody binding profiles associated with a cancer serve as a diagnostic; bound peptides serve as compositions for both therapeutic and preventative cancer vaccines



## APPLICATIONS



# Conclusions, Critical Takeaways and Relevance – 2021/2022

MAY 2021

The Future of Post Pandemic Healthcare

# Conclusions, Critical Takeaways and Relevance – 2021/2022



**FAANG+M Creating Multi-Layered Direct/ Indirect Effects in Healthcare**

- FAANG + M – Facebook, Apple, Amazon, Netflix, Google + Microsoft with 25%+ of the S&P Value pushing aggressively into healthcare and healthcare adjacencies– delivery, insurance, distribution, pharma, device, platform development, etc. First individual \$ 19+ Billion FAANG+M acquisition occurred 4/21 – Signals key inflection point.

**TopCo. / HoldCo.**

**Aggregators of All Types Making Inroads**

- Physician “Unicorns” – Summit/CityMD, Envision, and DaVita Are the First Private/Then Sometimes Publicly held \$ 4 Billion+ non-Mayo Clinic, non-Cleveland Clinic, PPM entities with Regional/National Impact. Optum/ Private Equity Organizations actively purchasing PCP practices, will hit 60,000 employed MDs this year driving up prices for large groups repeatedly over the billion dollar mark.



**Digital Health / Telehealth /Telemedicine/ Tele monitoring + Development of Adaptive Artificial Intelligence**

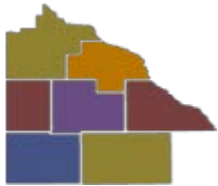
- “Tele Everything” plus Adaptive artificial intelligence and expert systems to enhance and support high performing, population-specific clinically integrated health plans/delivery systems. Early adopters already in the market largely for administrative function simplification – registration, eligibility, payment, etc.

# Conclusions, Critical Takeaways and Relevance – 2021/2022



**Development of Directly Contracted “Value Based” Products – The “Federated” Model, CINs, ACOs, CMMI**

- Value Based Health Plans –BCBS Prime Products, UnitedHealthcare NexusACO, AetnaCVS Whole Health Branded Products, etc. will drive an increasingly “Federated Approach” to Value Based Contracting with Providers on a continuum of reimbursement structures ranging from “Shared Savings Upside/Downside Models” to “Percent of Premium/Capitation Models”



**Super Consumer/ Member/ Patient Experience with Multiple “Front door” and Destination Enhancements**

- The Super Consumer /Member/ Patient Experience will be altered by Facilities, Digital Technology Wraparounds, and Virtual Complex Care.
- Destination Medical Centers similar to Mayo – Rochester, Scottsdale and Florida development plans will become common with Medical Center, Medical School and Community Expenditures exceeding \$ 10+ Billion over the next 10 years at certain institutions alone.



**Next Generation mRNA COVID19 and Cancer Therapies**

- mRNA frame shift array technology will accelerate COVID19 Vaccine Development, but the real benefit will be early Dx, Treatment, and Vaccines for multiple cancers not anticipated using legacy DNA tools. First, Prophylactic Cancer Vaccine results will be in Dog Trials 2021.

# Conclusions, Critical Takeaways and Relevance – 2021/2022

1. Post COVID19 pandemic changes in the US economy will be profound and upset multiple healthcare sectors for an extended multi year period.
2. Some of these unknowns/variables in terms of Post COVID19 include:
  - a) What does a “new normal” look like societal, clinical and financial
  - b) Virus Variant Dynamic and potential for an endemic homeostatic environment
  - c) Vaccination distribution and adoption challenges
  - d) MLR volatility with “long haulers” and shifts in disease burdens/disparities
3. The “Law of Unexpected Consequences” can set the stage for unexpected acceleration of positive clinical developments (e.g., Digital Health adoption , mRNA Dx, Rx and Vaccines, etc.).
4. Advances in mRNA technology will mirror the introduction of “Biologics” 20 years ago with similar “game changing” impacts on human healthcare.



# Every market disadvantage is the key to understanding your market advantage

*Jacque Sokolov, MD*



Jacque J. Sokolov, MD  
5665 N. Scottsdale Rd., Ste. 110  
Scottsdale, AZ 85250  
Phone: (480) 427-3943  
[www.ssbsolutions.com](http://www.ssbsolutions.com)

For a longer version of this presentation please contact us at [spearce@sbmail.com](mailto:spearce@sbmail.com)



# Overview of SSB Clients and Services

## CLIENT CATEGORIES



### Academic Medical Centers/ Teaching Hospitals/Health Systems Health Systems

AAMC  
Regional non-profit systems  
For-profit hospital systems  
Community hospitals (urban/rural)



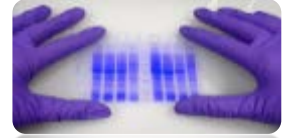
### Physician Organizations

Large groups  
Intermediate-sized groups  
National associations



### Health Plans

Commercial  
Medicare  
ERISA plans  
Healthcare exchanges



### Healthcare Suppliers

Healthcare IT  
Pharma/Biotech  
Medical Devices

# SSB SOLUTIONS

## STRATEGIC ADVISORY SERVICES

### Clinical Integration Planning and Implementation

ACOs, CIOs and Specialty CIOs  
Population health management  
Care management and clinical quality  
Shared savings and bundled payment Initiatives  
Governance and management  
Physician communications

### Market-Driven Physician Alignment

Physician employment  
Service line Co-management  
Specialty institutes and Centers of Excellence  
Professional services agreements

### Payer Strategies and Contracting

Transitioning to value-based reimbursement  
Risk analysis  
Performance assessment  
Network development

### Strategic Partnering and Collaboration

Introductions and assessment of strategic fit  
Due diligence  
Integration planning  
Leadership recruiting  
Post-integration advisory services

