



A SERVICE OF
nrc
HEALTH

The Business of Disease, Illness & Wellness

Brian Silverstein, MD
Chief Population Health Officer
Innovaccer

PREPARED FOR

The Governance Institute Leadership Conference
January 2022



1

Agenda

Disease & Illness

Health & Wellness

Business Models

Next Steps



2

Disease & Illness Is Big Business



90% of the nation's \$3.8 trillion in annual health care expenditures are for people with chronic and mental health conditions.



<https://www.cdc.gov/chronicdisease/about/costs/index.htm>

TGI | January 2022

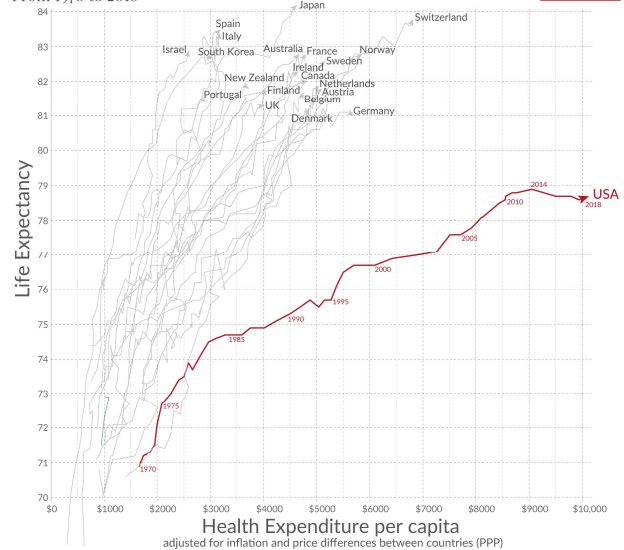
Page 3

3

We Have A Systemic Problem

- The U.S. spends nearly twice as much as the average OECD country — yet has the lowest life expectancy
- The U.S. has the highest chronic disease burden and an obesity rate that is two times higher than the OECD average
- Americans had fewer physician visits than peers in most countries
- Americans use expensive technologies, such as MRIs, and specialized procedures
- Compared to peer nations, the U.S. has among the highest number of hospitalizations from preventable causes and the highest rate of avoidable deaths

Life expectancy vs. health expenditure Our World in Data
From 1970 to 2018



Organization for Economic Co-operation and Development (OECD)

TGI | January 2022

Page 4

4

COVID Has Been Devastating To Some Age Groups

2019 US 10 Leading Causes of Death by Age Group

Total number of COVID United States (through January 14, 2022): **Cases 64,285,467**

Admissions **3,941,648**

COVID Deaths **844,841**

General excess deaths **952,707**

Rank	AGE GROUPS										All Ages
	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	
1	Congenital Anomalies 4,301	Unintentional Injury 1,149	Unintentional Injury 74	Unintentional Injury 778	Unintentional Injury 11,753	Unintentional Injury 24,516	Unintentional Injury 24,070	Malignant Neoplasms 35,537	Malignant Neoplasms 11,755	Heart Disease 531,583	Heart Disease 659,041
2	Short Gestation 3,445	Congenital Anomalies 416	Malignant Neoplasms 371	Suicide 334	Suicide 5,954	Suicide 8,059	Malignant Neoplasms 10,695	Heart Disease 31,138	Heart Disease 80,837	Malignant Neoplasms 435,462	Malignant Neoplasms 599,601
3	Unintentional Injury 1,149	Malignant Neoplasms 285	Congenital Anomalies 192	Malignant Neoplasms 404	Homicide 4,774	Homicide 5,241	Heart Disease 10,499	Unintentional Injury 23,359	Unintentional Injury 24,892	Chronic Low Respiratory Disease 133,246	Unintentional Injury 173,040
4	SIDS 1,248	Homicide 284	Homicide 155	Homicide 191	Malignant Neoplasms 1,388	Malignant Neoplasms 3,577	Suicide 7,525	Liver Disease 8,098	Chronic Low Respiratory Disease 18,743	Cerebro-vascular 129,193	Chronic Low Respiratory Disease 156,979
5	Maternal Pregnancy Comp. 1,245	Heart Disease 133	Heart Disease 91	Congenital Anomalies 189	Heart Disease 872	Heart Disease 3,495	Homicide 3,446	Suicide 8,012	Diabetes 15,508	Alzheimer's Disease 120,090	Chronic Low Respiratory Disease 150,005
6	Placenta Cord Membranes 742	Influenza & Pneumonia 122	Chronic Low Respiratory Disease 69	Heart Disease 87	Congenital Anomalies 390	Liver Disease 1,112	Liver Disease 3,417	Diabetes Mellitus 6,348	Liver Disease 14,385	Diabetes Mellitus 62,397	Alzheimer's Disease 121,489
7	Bacterial Sepsis 603	Perinatal Period 57	Influenza & Pneumonia 52	Chronic Low Respiratory Disease 81	Diabetes Mellitus 248	Diabetes Mellitus 887	Diabetes Mellitus 2,228	Cerebro-vascular 5,153	Cerebro-vascular 12,931	Unintentional Injury 60,527	Diabetes Mellitus 87,647
8	Respiratory Distress 424	Septicemia 53	Cerebro-vascular 37	Influenza & Pneumonia 71	Influenza & Pneumonia 175	Cerebro-vascular 585	Cerebro-vascular 1,741	Chronic Low Respiratory Disease 3,592	Suicide 9,235	Nephritis 42,230	Nephritis 51,565
9	Circulatory System Disease 406	Cerebro-vascular 52	Septicemia 36	Cerebro-vascular 48	Chronic Low Respiratory Disease 168	Complicated Pregnancy 532	Influenza & Pneumonia 951	Nephritis 2,269	Nephritis 5,857	Influenza & Pneumonia 40,399	Influenza & Pneumonia 40,399
10	Necrotizing Enterocolitis 354	Benign Neoplasms 49	Benign Neoplasms 31	Benign Neoplasms 35	Cerebro-vascular 158	HIV 486	Septicemia 812	Septicemia 2,176	Septicemia 5,672	Parkinson's Disease 34,435	Suicide 47,511
COVID DEATH TOTAL (2021)		124	53	151	1,534	6,517	16,408	37,695	76,062	308,278	446,824
ALL CAUSE DEATH TOTAL (2021)		18,379	3,562	5,618	36,736	78,827	119,584	207,570	460,366	2,420,609	3,351,251
POPULATION (2020)		3,745,000	15,713,000	42,257,000	43,165,000	45,866,000	42,935,000	41,356,000	43,259,000	54,303,000	332,601,000

https://www.cdc.gov/mmwr/volumes/70/wr/mm7014e1.htm#F1_down
TGI | January 2022 <https://www.cdc.gov/nchs/covid19/mortality-overview.htm>

Page 5

5

Crisis Can Bring Rapid Changes

Pandemic	% of population	Death toll (Millions)	Population Billions	Year of Pop. Est.
BLACK DEATH	51%	200	0.39	1300¹
PLAGUE OF JUSTINIAN	19%	40	0.21	500
SMALL POX	12%	56	0.46	1500
ANTONINE PLAGUE	2.6%	5	0.20	200
SPANISH FLU	2.5%	45	1.82	1919
THE THIRD PLAGUE	1.0%	12	1.26	1850
HIV/AIDS	0.7%	30	4.46	1981
COVID-19	0.07%	5.5	7.90	2022 (January)

SOURCE: CDC, WHO, BBC, Wikipedia, Historical records, Encyclopaedia Britannica, Our world in data

TGI | January 2022

Page 6

6

Improvements In Disease & Illness Have Come From Public Health

- Vaccination
- Motor-vehicle safety
- Safer workplaces
- Control of infectious diseases
- Decline in deaths from coronary heart disease and stroke
- Safer and healthier foods
- Healthier mothers and babies
- Family planning
- Fluoridation of drinking water
- Recognition of tobacco use as a health hazard



7

Agenda

Disease & Illness

Health & Wellness

Business Models

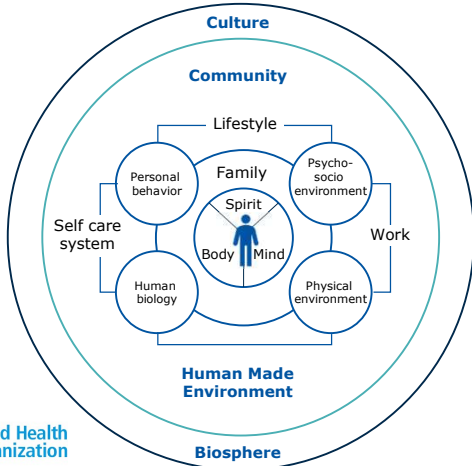
Next Steps



8

Health is a State of Being, Whereas Wellness is Living a Healthy Lifestyle

Health is a state of complete physical, mental and social well-being

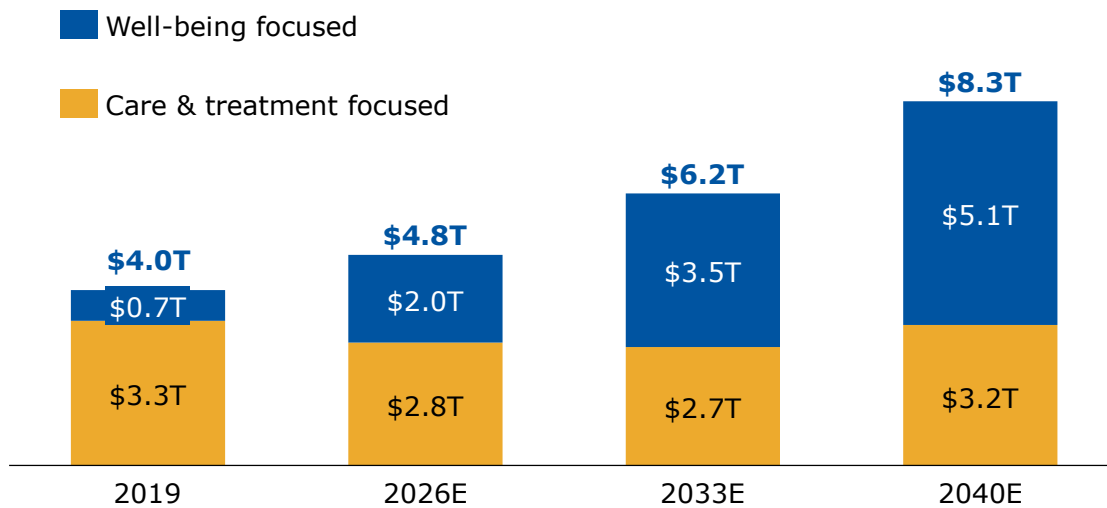


Wellness is multidimensional and holistic, encompassing lifestyle, mental and spiritual well-being, and the environment



9

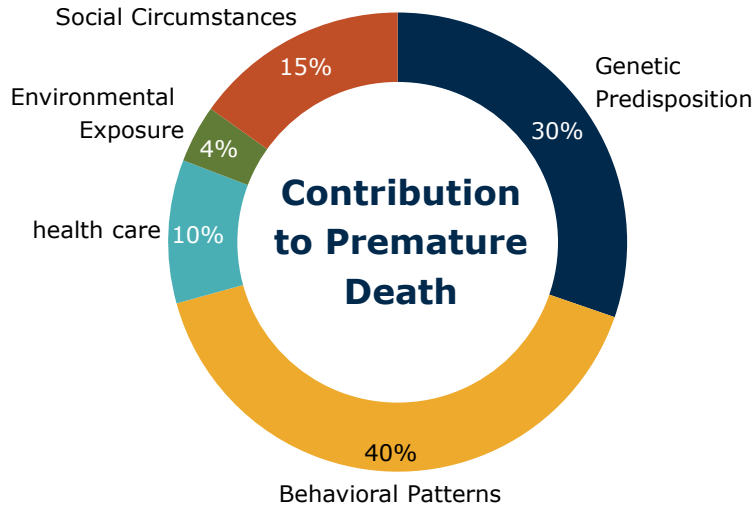
Medical Spending May Shift From Disease & Illness to Health & Wellness



Source: Deloitte Insights

10

The State Of US Health



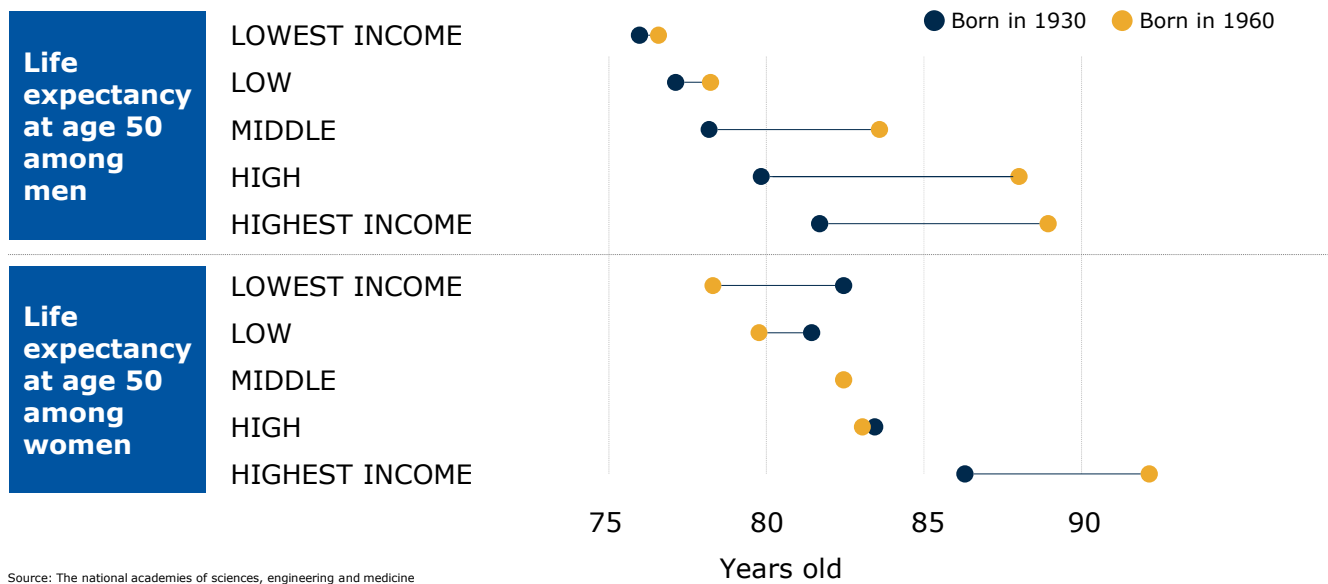
Key drivers of health status

-  Obesity
-  Physical Inactivity
-  Smoking
-  Stress
-  Aging

Schroeder S. N Engl J Med 2007;357:1221-1228

11











Health Equity Is Real



Source: The national academies of sciences, engineering and medicine

12

Adverse Childhood Experiences Matter

Abuse	Neglect	Household Dysfunction		ACE-related odds of having a physical health condition					
 Physical	 Physical	 Mental Illness	 Incarcerated Relative	Health condition	0 ACEs	1 ACEs	2 ACEs	3 ACEs	4+ ACEs
 Emotional	 Emotional	 Mother treated violently	 Substance Abuse	Arthritis	100%	130%	145%	155%	236%
 Sexual		 Divorce		Asthma	100%	115%	118%	160%	231%
				Cancer	100%	112%	101%	111%	157%
				COPD	100%	120%	161%	220%	399%
				Diabetes	100%	128%	132%	115%	201%
				Heart Attack	100%	148%	144%	287%	232%
				Heart Disease	100%	123%	149%	250%	285%
				Kidney Disease	100%	83%	164%	179%	263%
				Stroke	100%	114%	117%	180%	281%
				Vision	100%	167%	181%	199%	354%

13

Agenda

Disease & Illness

Health & Wellness

Business Models

Next Steps



14

Value Based Health Care Is Different

Value-Based Health Care Benefits

Patients

Lower costs & better outcomes



Providers

Higher Patient Satisfaction Rates & Better Care Efficiencies



Payers

Stronger Cost Controls & Reduced Risks



Suppliers

Alignment of Prices with Patient Outcomes



Society

Reduced Healthcare Spending & Better Overall Health



NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society

TGI | January 2022

Page 15

15

Payment Is Slowly Encouraging The Business Model To Shift

Volume of Services Provided



Fee For Service (FFS)

↑ Quality
 ↑ Patient Experience
 ↓ Cost
 Pay for Performance

Value Based Payments



Bundled Payments



Shared Savings (ACO Model)



Partial or Full Capitation

	FFS	Link to quality & Value	APMS built on fee-for-service architecture	Population-based payment
2019	39%	25%	31%	5%
2025	1%	32%	50%	15%

<https://hcp-lan.org/>

TGI | January 2022

Page 16

16

CMS & CMS Innovations Center Strategy

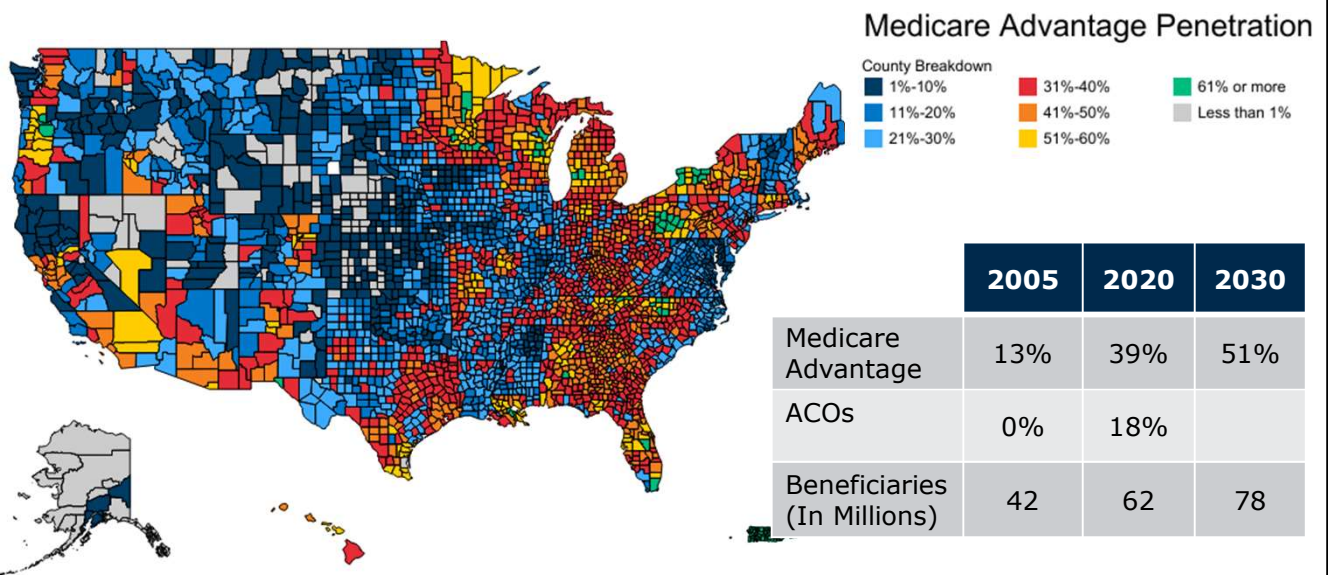
Lessons Learned Over the Last Decade

1. Ensure health equity is embedded in every model.
2. Streamline the model portfolio and reduce complexity and overlap to help scale what works
3. Tools to support transformation in care delivery can assist providers in assuming financial risk
4. Design of models may not consistently ensure broad provider participation.
5. Complexity of financial benchmarks have undermined model effectiveness.



17

Seniors Are Migrating to New Models



18

Spectrum of Primary Care Models

Traditional Primary Care	PCP Aggregators / VBC	Access Models	Adjacent						
<p>acclaim ADVOCATE ACP AUSTIN REGIONAL CLINIC</p> <p>Billings Clinic Boice-Willis Clinic BRIGHTON HEALTH GROUP</p> <p>Buffalo Medical Group CAREMOUNT CAREPOINT Health</p> <p>Central Ohio Medical Center CARELINE ZOOMcare Charles River CHRISTIE CLINIC</p> <p>continuum Crystal Run HealthCare EVERETT HEALTH CARE</p> <p>eventus FamilyCare Family CARE Ferrowell</p> <p>FLORIDA ELITE MEDICAL GROUP Florida Medical Clinic GONZALEZ GRANGER</p> <p>GRAVES GILBERT CLINIC GRASSLE NEWPORT HARBIN HATTESBURG CLINIC</p> <p>Heritage Medical HMG INTERMED</p> <p>The Jackson Clinic THE IOWA CLINIC Lexington Clinic Mankato Clinic</p> <p>Maui Medical Group YMBMG MILLENNIUM OGDEN CLINIC OREGON ELITE</p> <p>ORLANDO PO Health Praxis Medical Group Premier PREVEA</p> <p>QUEST MEDICAL GROUP PREMIER medical group Premier REVERA Health</p> <p>SIGNATURE Skylands Springfield SUMMIT Toledo Clinic</p> <p>UTICA PARK CLINIC VANCOUVER CLINIC WATSON CLINIC WESTMED Westmont Health</p>	<p>agilon health alegis care Alignment Healthcare</p> <p>Canol health CareMore ChenMed</p> <p>CLAREMEDICA Community Concerto Health</p> <p>Complete Health CONUVIA ENHANZ</p> <p>EQUALITY HEALTH ESSE GENUINE HEALTH HERITAGE PROVIDER NETWORK</p> <p>HNI healthcare MA IMC HEALTH</p> <p>INNOVACAR iorahealth island DOCTORS LEON</p> <p>iorahealth island DOCTORS LEON</p> <p>MILLENNIUM CARE MEDICAL OAK STREET HEALTH</p> <p>P3 Health Partners Palm Partners in Primary Care</p> <p>WELLMED PRIVIA primary partners</p> <p>SunMed The Villages of Health VillageMD</p>	<p>Care Concentra healthstat EHE</p> <p>crossover HealthSmart Manhattan MDVIP</p> <p>iorahealth one medical OurHealth PASADENA</p> <p>PARADO HEALTH PINNACLE CARE Fromio Health vera</p> <p>QuadMed Carbon Health FORWARD</p> <p>MD2 MDVIP MedLion one medical</p> <p>TALADENA partner PEAKMEE SOLLIS</p> <p>PINNACLE CARE CVS Health CVS minute clinic RITE AID Regis The Little Clinic</p> <p>RadiClinic Telegrams heart care clinic Walmart Care Clinic</p>	<p>HOME DIRECT</p> <p>Nageland Healthcare alegis care Canol health ChenMed</p> <p>CONTESSA Community Concerto Health DMHC</p> <p>Landmark VPA</p> <p>TELEHEALTH</p> <table border="1"> <thead> <tr> <th>Primary and Specialty</th> <th>Platform</th> <th>Subspecialty</th> </tr> </thead> <tbody> <tr> <td> <p>General</p> <p>Abound CareMD CareLife CareVista CareWise CareWise CareWise CareWise</p> <p>CardHealth CareVista CareVista CareVista CareVista</p> <p>HEALTHLINK HealthVista HealthVista HealthVista HealthVista</p> <p>MED24/7 MedVista MedVista MedVista MedVista</p> <p>Specialty</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> </td> <td> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> </td> <td> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> </td> </tr> </tbody> </table>	Primary and Specialty	Platform	Subspecialty	<p>General</p> <p>Abound CareMD CareLife CareVista CareWise CareWise CareWise CareWise</p> <p>CardHealth CareVista CareVista CareVista CareVista</p> <p>HEALTHLINK HealthVista HealthVista HealthVista HealthVista</p> <p>MED24/7 MedVista MedVista MedVista MedVista</p> <p>Specialty</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p>	<p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p>	<p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p>
Primary and Specialty	Platform	Subspecialty							
<p>General</p> <p>Abound CareMD CareLife CareVista CareWise CareWise CareWise CareWise</p> <p>CardHealth CareVista CareVista CareVista CareVista</p> <p>HEALTHLINK HealthVista HealthVista HealthVista HealthVista</p> <p>MED24/7 MedVista MedVista MedVista MedVista</p> <p>Specialty</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p>	<p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p>	<p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p> <p>Abound CareMD CareMD CareMD CareMD CareMD</p>							

TGI | January 2022

Page 19

19

Agenda

Disease & Illness

Health & Wellness

Business Models

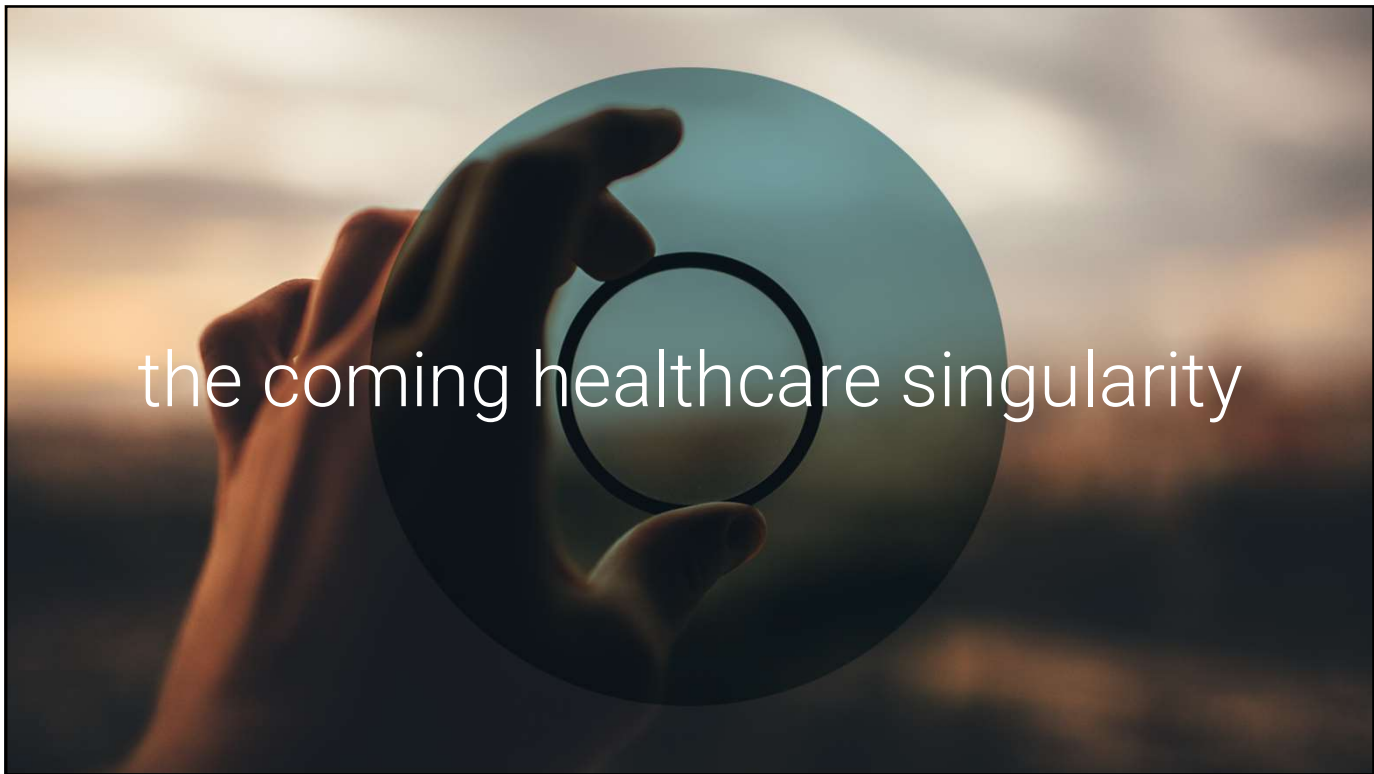
Next Steps



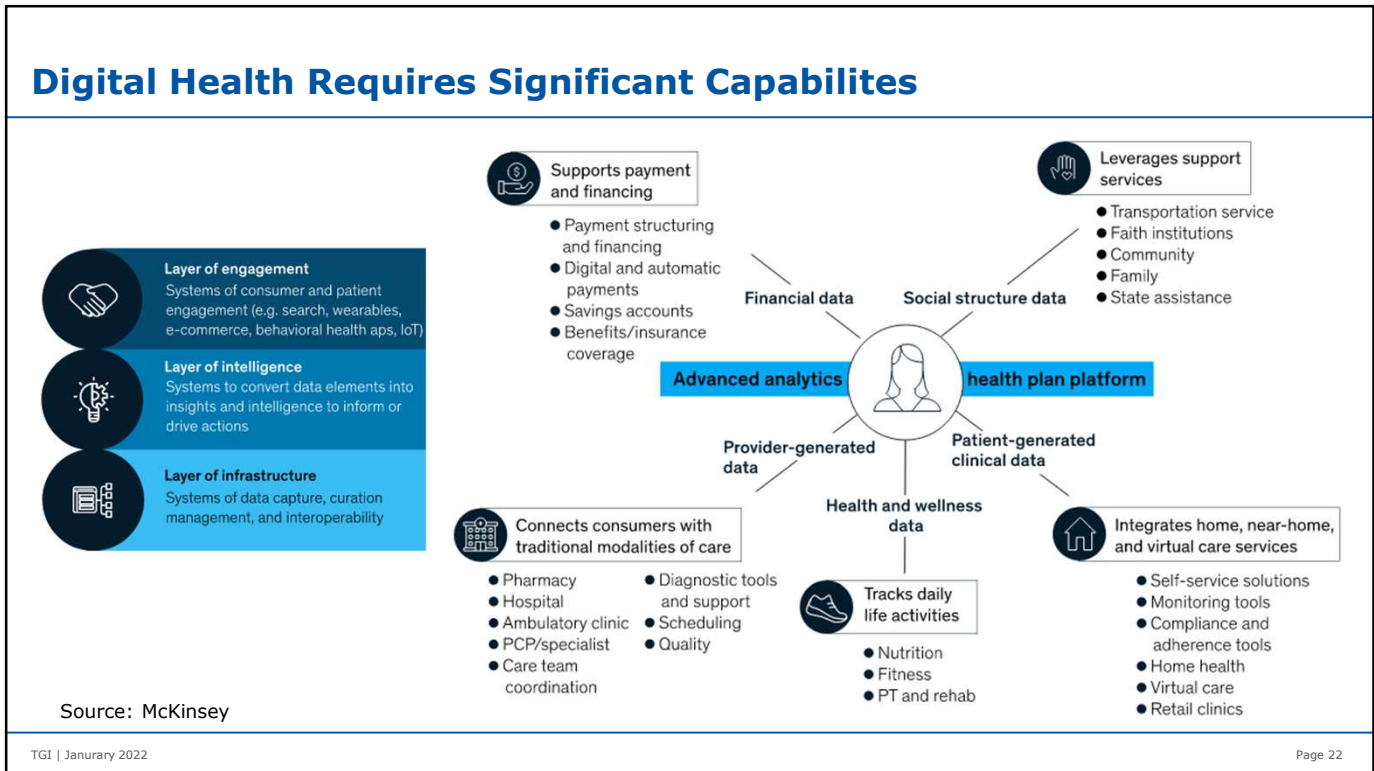
TGI | January 2022

Page 20

20



21



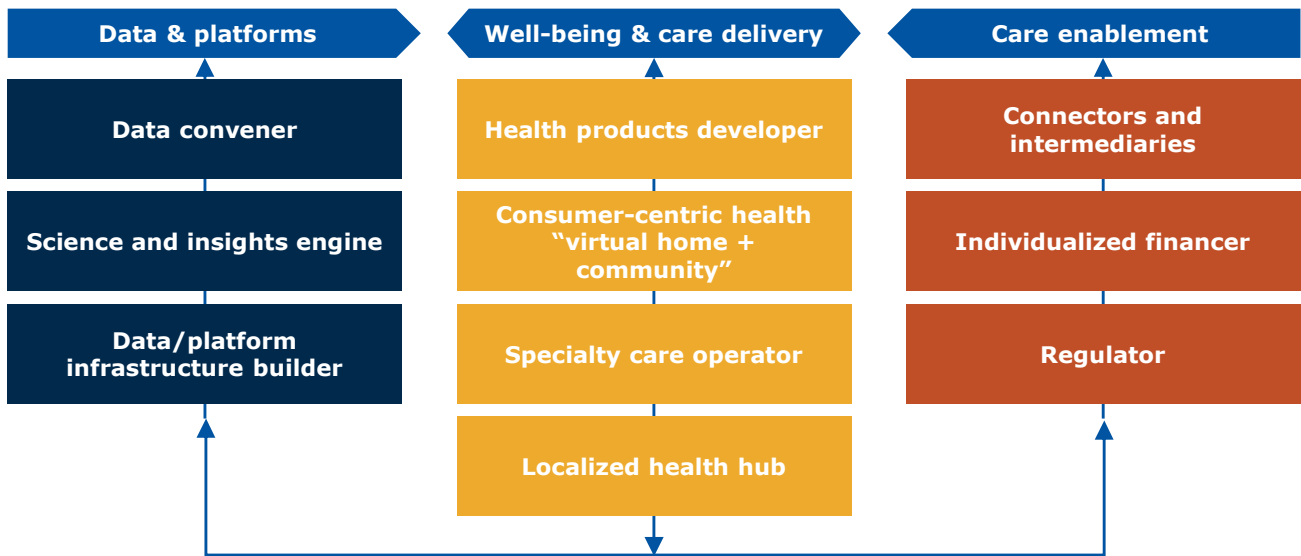
22



The EHR Is Dead. Long Live The EHR Platform









23

Winning Business Archetypes



24

Valuation of Medicare Advantage Focused Firms

Entities		Type of entity	Est. # of patients	Valuation	\$/Person
Oak Street Medical		PCP Group	90,000	\$13B	\$196,000
Agilon Health		PCP MSO	170,000	\$11.4B	\$67,000
Clover Health	Clover Health	MA Insurer	57,000	\$3.5B	\$61,000
Alignment Health	 Alignment Healthcare	MA Insurer	81,000	\$4.2B	\$52,000
Iora Health		PCP Group	38,000	\$2.1B	\$55,000
Village MD		ACO PCP Company	500,000	\$10 Billion - Target	\$20,000
Devoted Health		MA Insurer	17,000	\$3B	\$176,000
CANO Health		PCP Group & MSO	103,000	\$4.4B	\$43,000
Bright Health		Insurer	220,000	\$11.3B	\$51,000

<https://www.healthaffairs.org/doi/10.1377/hblog20210927.6239/full/>

25

Digital Transforms Business In Ways That Seem Impossible

Why Cambridge Analytica



Starting from Scratch

When we started on the campaign (second week of June) the Trump Campaign had no speakable data infrastructure.

- No database of record
- Many disparate data sources
- No data science program (models)
- No proper digital marketing apparatus
- Research being done by up to 5 pollsters at one point

Any most importantly: No unifying data, digital and tech strategy.



26

**THANK
YOU**

