Large Population Health
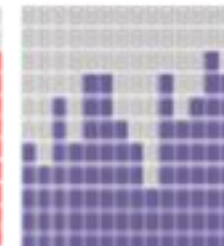
Tarrant County Chronic Disease Population Projections.

Tables with the projected number of adults with selected chronic diseases for the years 2020, 2030, and 2050.

Tarrant County Public Health
Division of Epidemiology and Health Information

Population Projections and Chronic Disease Estimates for Tarrant County
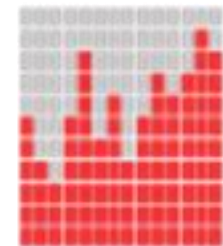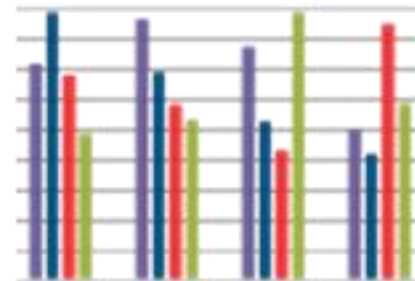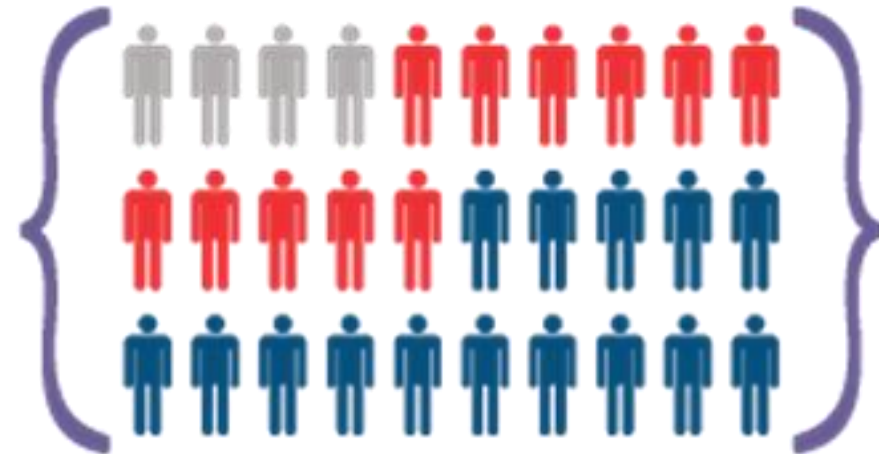
Data source: Texas Demographic Center
Data provided by: Division of Epidemiology and Health Information, Tarrant County Public Health

Figure 1. Projected population distribution, Tarrant County, 2020

2020 Total Population Estimate: 2,143,603

Age Group (in years): 85 and Over, 80 to 84, 75 to 79, 70 to 74, 65 to 69, 60 to 64, 55 to 59, 50 to 54, 45 to 49, 40 to 44, 35 to 39, 30 to 34, 25 to 29, 20 to 24, 15 to 19, 10 to 14, 5 to 9, 1 to 4, Under 1

Baby Boomers

Number of persons in population: 125,000 75,000 25,000 25,000 75,000 125,000

Figure 2. Projected population distribution, Tarrant County, 2030

2030 Total Population Estimate: 2,506,454

Female   Male

Age Group (in years): 85 and Over, 80 to 84, 75 to 79, 70 to 74, 65 to 69, 60 to 64, 55 to 59, 50 to 54, 45 to 49, 40 to 44, 35 to 39, 30 to 34, 25 to 29, 20 to 24, 15 to 19, 10 to 14, 5 to 9, 1 to 4, Under 1

Baby Boomers

Number of persons in population: 125,000 75,000 25,000 25,000 75,000 125,000

Data source: Texas Demographic Center
Data provided by: Division of Epidemiology and Health Information, Tarrant County Public Health

Figure 3. Projected population distribution, Tarrant County, 2050
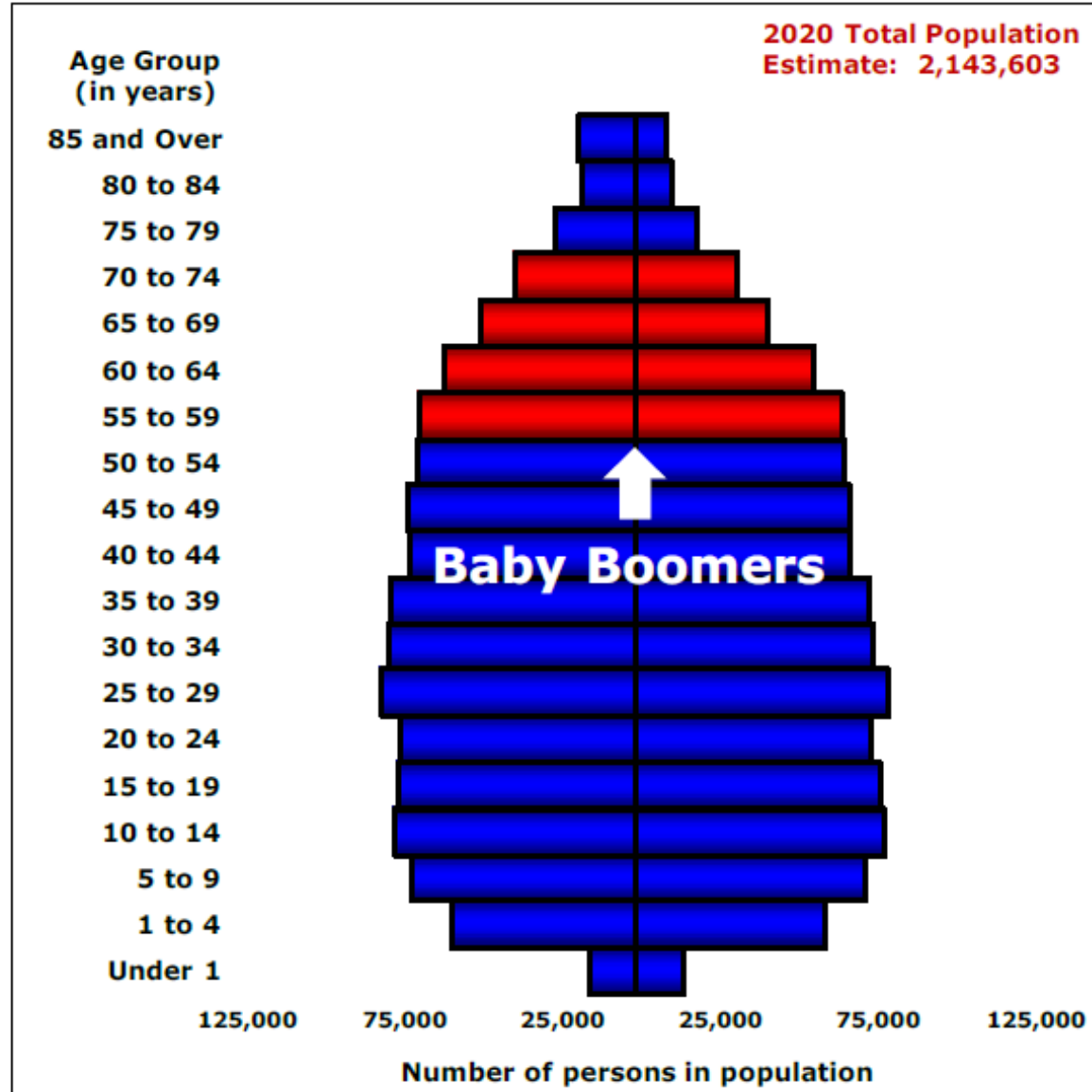

An Aging Nation
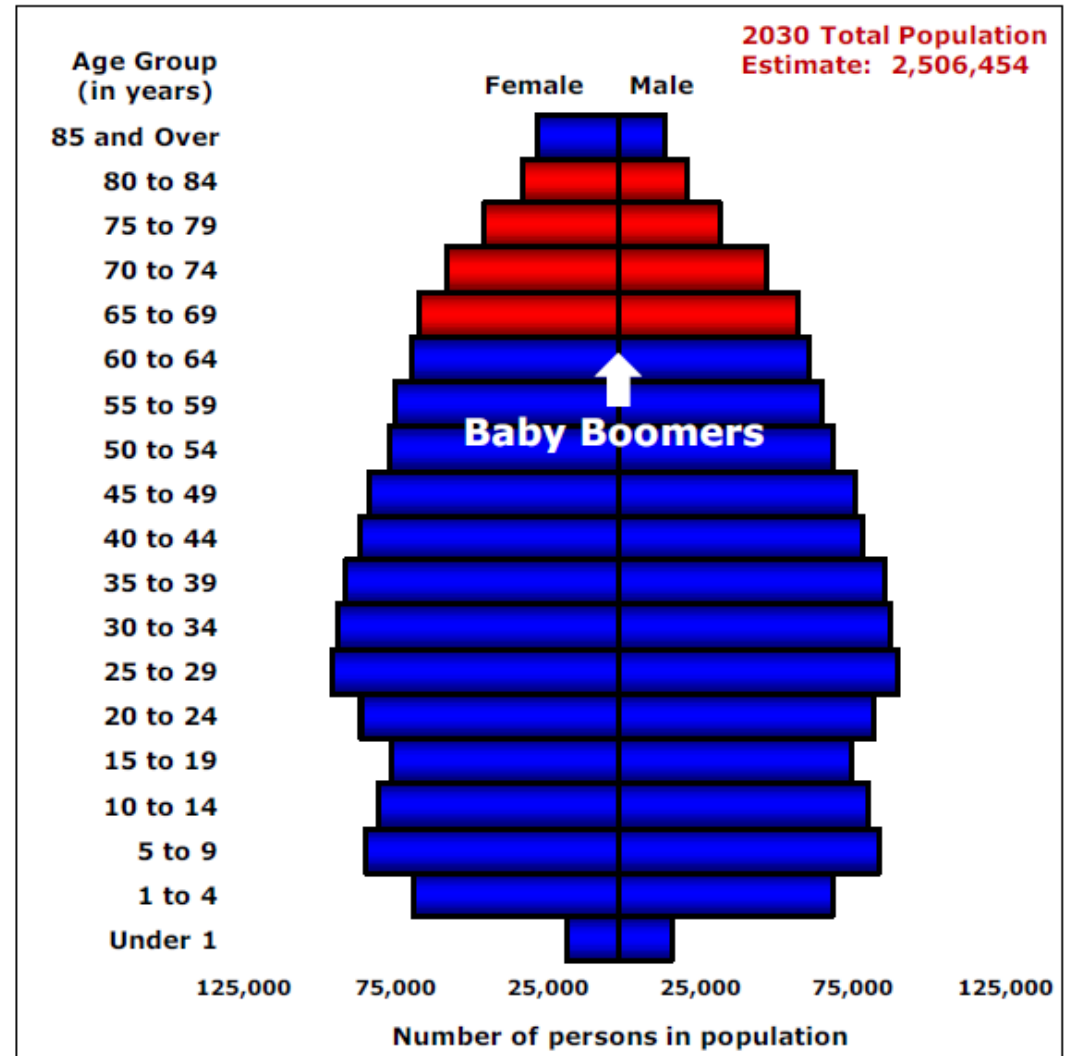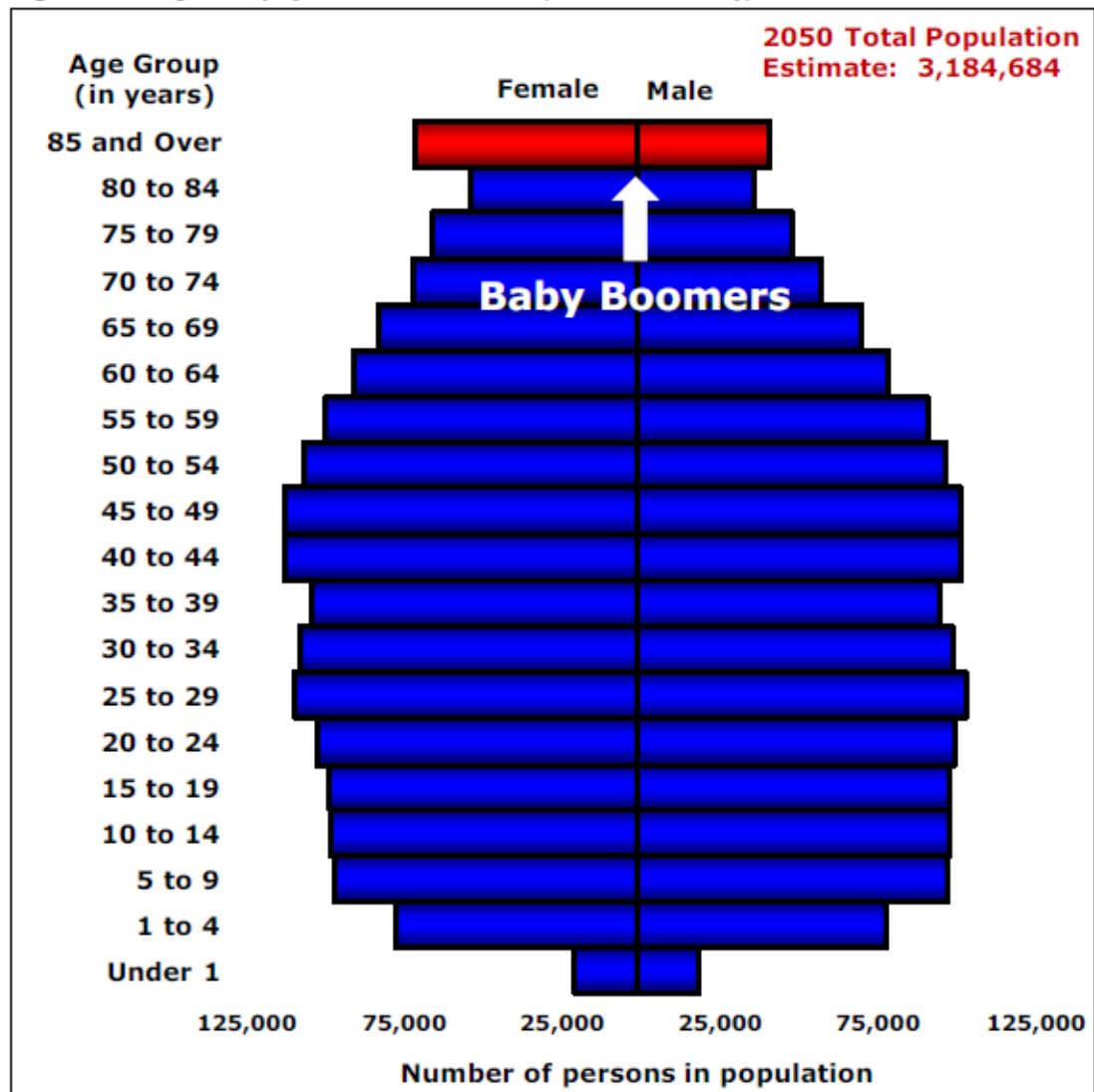Projected Number of Children and Older Adults

Figure 4. Projected race/ethnicity distribution, Tarrant County, 2020-2050
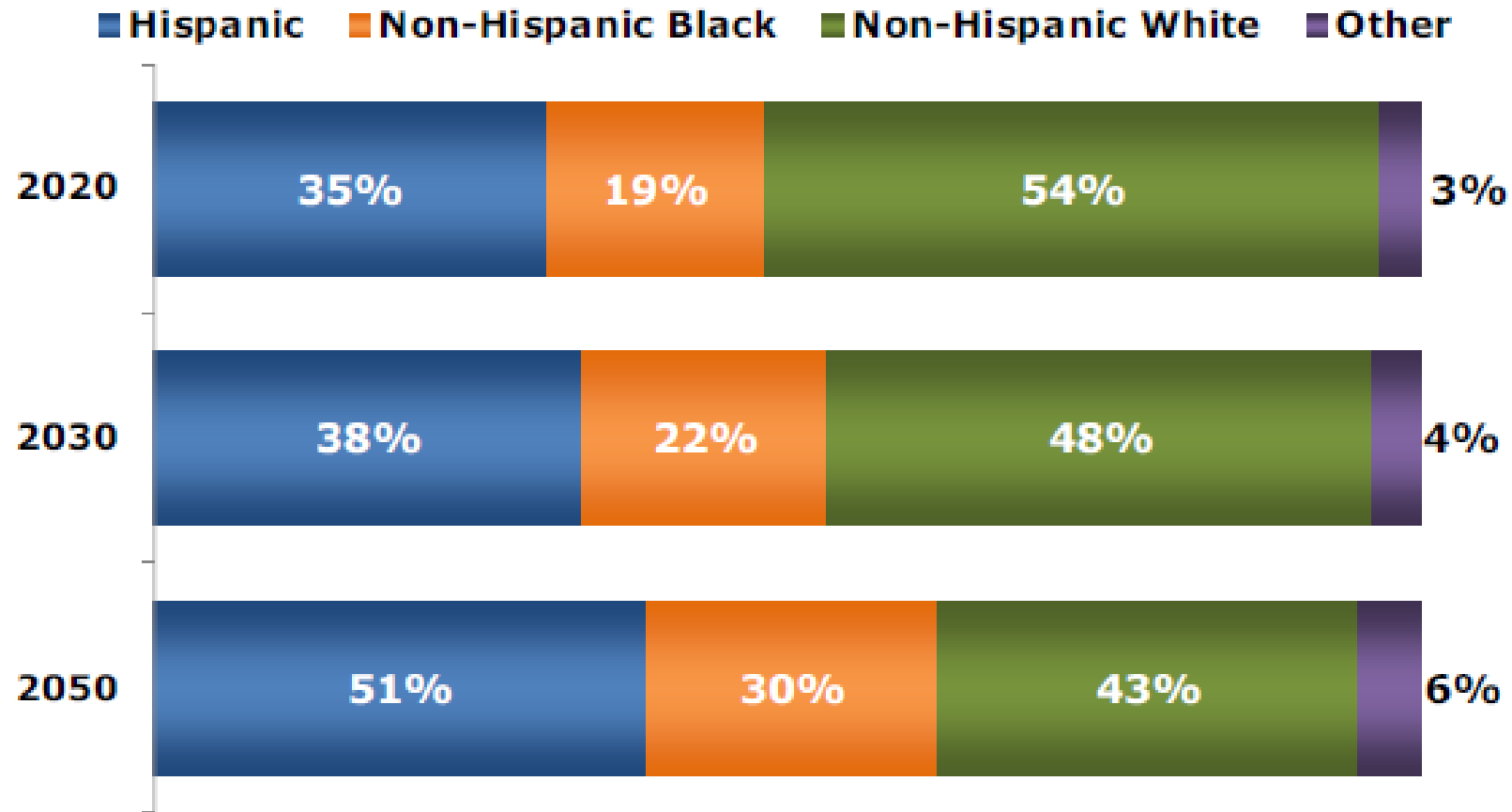
Data source: Texas Demographic Center
Data provided by: Division of Epidemiology and Health Information, Tarrant County Public Health
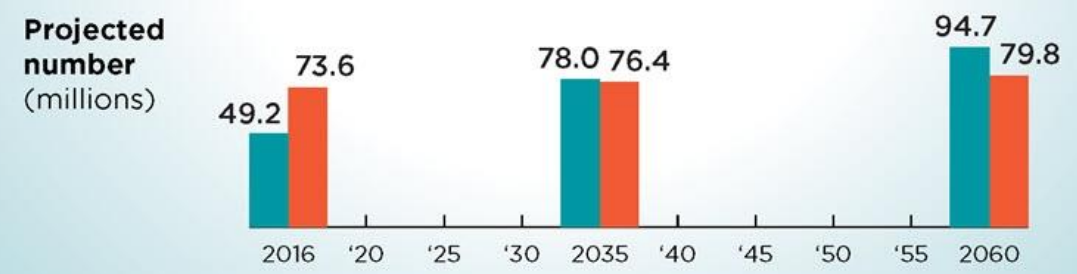
Table 1. Projected number of overweight/obese Tarrant County adults, 2020-2050

Overweight or Obese	Percentage of adult population (2015)	Projected number of adults who are overweight or obese based on 2015 prevalence		
		2020	**2030**	**2050**
Overall	**66.0**	**1,057,581**	**1,262,355**	**1,639,023**
Gender				
Female	60.7	504,393	605,057	792,793
Male	71.0	547,719	650,261	835,872
Race/Ethnicity				
Hispanic	72.9	301,560	397,513	582,711
Non-Hispanic Asian	30.1	29,785	44,580	86,494
Non-Hispanic Black	71.8	187,394	251,878	378,568
Non-Hispanic White	63.5	502,978	517,310	495,569
Other/Multiracial	62.2	22,822	33,463	55,361

Adults aged 18+ who have a body mass index (BMI) of 25.0 or greater based on self-reported height and weight

Data source: Tarrant County Behavioral Risk Factor Surveillance System Data Book, 2015

Data analyses: Division of Epidemiology and Health Information, Tarrant County Public Health

Table 3. Projected number of Tarrant County adults with arthritis, 2020-2050

Arthritis	Percentage of adult population (2015)	Projected number of adults with arthritis based on 2015 prevalence		
		2020	2030	2050
Overall	20.8	333,298	397,833	516,541
Gender				
Female	24.6	204,416	245,213	321,297
Male	16.6	128,058	152,033	195,429
Race/Ethnicity				
Hispanic	10.1	41,780	55,074	80,732
Non-Hispanic Asian	@	@	@	@
Non-Hispanic Black	26.1	68,120	91,560	137,613
Non-Hispanic White	24.9	197,231	202,851	194,325
Other/Multiracial	20.7	7,595	11,136	18,424

Adults aged 18+ who have been diagnosed by a healthcare provider with some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia

Data source: Tarrant County Behavioral Risk Factor Surveillance System Data Book, 2015

Data analyses: Division of Epidemiology and Health Information, Tarrant County Public Health

Table 2. Projected number of Tarrant County adults with high blood pressure, 2020-2050

High Blood Pressure	Percentage of adult population (2015)	Projected number of adults with high blood pressure based on 2015 prevalence		
		2020	2030	2050
Overall	30.1	482,321	575,710	747,494
Gender				
Female	25.4	211,064	253,187	331,745
Male	35.1	270,774	321,467	413,227
Race/Ethnicity				
Hispanic	24.7	102,175	134,686	197,434
Non-Hispanic Asian	14.6	14,447	21,624	41,954
Non-Hispanic Black	39.8	103,876	139,620	209,847
Non-Hispanic White	31.2	247,133	254,175	243,492
Other/Multiracial	22.6	8,292	12,159	20,115

Adults aged 18+ who have been diagnosed with high blood pressure by a healthcare provider

Data source: Tarrant County Behavioral Risk Factor Surveillance System Data Book, 2015

Data analyses: Division of Epidemiology and Health Information, Tarrant County Public Health

Heart Disease	Percentage of adult population (2015)	Projected number of adults with heart disease based on 2015 prevalence		
		2020	2030	2050
Overall	**5.9**	**94,541**	**112,847**	**146,519**
Gender				
Female	3.8	31,576	37,878	49,631
Male	8.2	63,258	75,101	96,537
Race/Ethnicity				
Hispanic	2.9	11,996	15,813	23,181
Non-Hispanic Asian	@	@	@	@
Non-Hispanic Black	7.2	18,792	25,258	37,962
Non-Hispanic White	7.0	55,446	57,026	54,630
Other/Multiracial	8.6	3,156	4,627	7,654

Adults aged 18+ who have healthcare provider-diagnosed heart attack, angina, or coronary heart disease

Data source: Tarrant County Behavioral Risk Factor Surveillance System Data Book, 2015

Data analyses: Division of Epidemiology and Health Information, Tarrant County Public Health

Diabetes	Percentage of adult population (2015)	Projected number of adults with diabetes based on 2015 prevalence		
		2020	2030	2050
Overall	10.6	169,854	202,742	263,237
Gender				
Female	9.8	81,434	97,686	127,996
Male	11.5	88,715	105,324	135,388
Race/Ethnicity				
Hispanic	12.4	51,294	67,615	99,117
Non-Hispanic Asian	@	@	@	@
Non-Hispanic Black	15.8	41,237	55,427	83,306
Non-Hispanic White	8.6	68,120	70,061	67,116
Other/Multiracial	7.2	2,642	3,874	6,408

Adults aged 18+ who have been diagnosed with diabetes by a healthcare provider

Data source: Tarrant County Behavioral Risk Factor Surveillance System Data Book, 2015

Data analyses: Division of Epidemiology and Health Information, Tarrant County Public Health

Depression	Percentage of adult population (2015)	Projected number of adults with depression based on 2015 prevalence		
		2020	2030	2050
Overall	**17.4**	**278,817**	**332,803**	**432,106**
Gender				
Female	22.2	184,473	221,289	289,951
Male	12.3	94,887	112,651	144,806
Race/Ethnicity				
Hispanic	14.2	58,740	77,431	113,505
Non-Hispanic Asian	@	@	@	@
Non-Hispanic Black	17.5	45,674	61,391	92,269
Non-Hispanic White	19.7	156,042	160,488	153,743
Other/Multiracial	22.1	8,109	11,890	19,670

Adults aged 18+ who have been diagnosed by a healthcare provider with depression, major depression, dysthymia, or minor depression

Data source: Tarrant County Behavioral Risk Factor Surveillance System Data Book, 2015

Data analyses: Division of Epidemiology and Health Information, Tarrant County Public Health

WHAT IS THE IMPACT OF CHRONIC DISEASE ON TEXAS?

PARTNERSHIP TO FIGHT CHRONIC DISEASE
A VISION FOR A HEALTHIER TEXAS

FightChronicDisease.org/Texas

Projected total cost of chronic disease 2016-2030 in Texas

$3.5 TRILLION

In 2015, 15.6 million people in Texas had at least 1 chronic disease, 6 million had 2 or more chronic diseases.

Chronic diseases could cost Texas $166 billion in medical costs and an extra $66.8 billion annually in lost employee productivity (average per year 2016-2030).

5% OF PEOPLE ACCOUNT FOR 50% OF HEALTH CARE SPENDING [1]
IN TEXAS...

HEALTH CARE COSTS ARE CONCENTRATED AMONG THOSE WITH MULTIPLE CHRONIC DISEASES

Annual Cost Per Person

- 0: $5K
- 1-2: $10K
- 3-4: $26K
- 5+: $44K

Number of Chronic Diseases (2015)
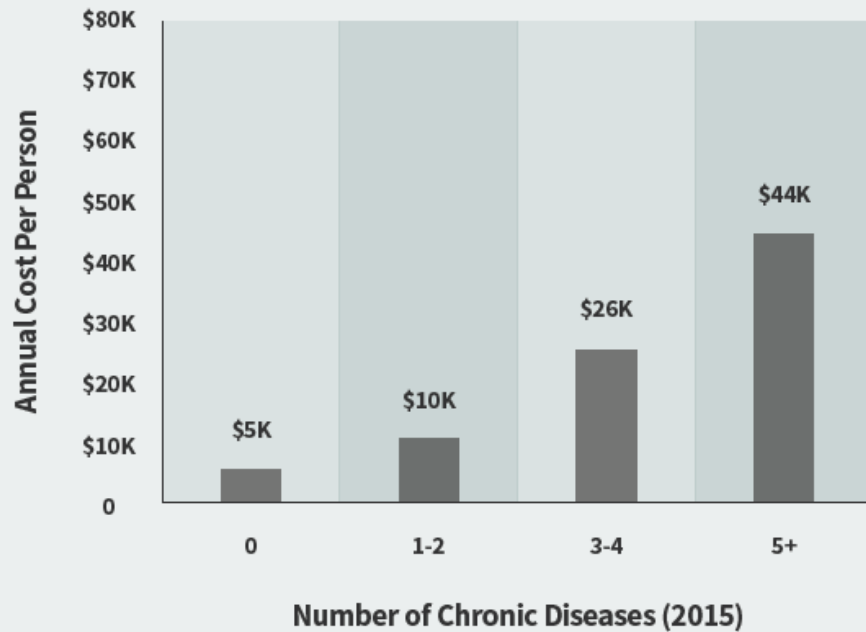
NUMBER OF PEOPLE WITH 3+ CHRONIC DISEASES IS GROWING

# of People with 3 or More Chronic Diseases

- 2015: 2.4 MILLION
- 2030: 8.9 MILLION
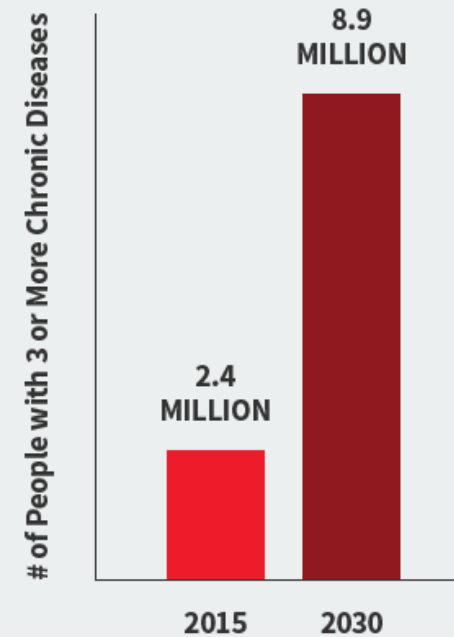
[1] SB Cohen, "The Concentration and Persistence in the Level of Health Expenditures over Time: Estimates for the U.S. Population, 2012- 2013." Statistical Brief #481. AHRQ, Sept. 2015. http://meps.ahrq.gov/mepsweb/data_files/publications/st481/stat481.pdf

$7,400 PER TEXAS RESIDENT

Projected **per person** medical and productivity cost of chronic disease in 2030 if current trends continue

Assuming modest changes in healthy behavior and care delivery:

Improve treatment rates
Increase physical activity
Reduce smoking
Reduce obesity

Assuming optimistic changes and new treatment breakthroughs:

Delay Alzheimer's onset
Improve cancer survival
Better treatment effectiveness
Improve care delivery

15 YEARS × **$436 BILLION** in Texas 2016–2030 if improvements are made in prevention and treatment.

$9.5 billion saved a year ➕ **$19.6 billion saved a year** ➖

Medical breakthroughs can and will transform lives and save health care costs over the next 15 years in Texas and across the United States.

	Texas	U.S.
Prevented Cases of Chronic Disease	16.4 Million	169 Million
Total Cost Avoided	$436 Billion	$6 Trillion
Lives Saved	1.1 Million	16 Million

NOTE: The above outcomes are averages of annual outcomes across 2016-2030. All estimates are based on a microsimulation analysis conducted by IHS Life Sciences. For additional information on methodology, please visit www.ihs.com/industry/life-sciences.html.

Population Health

"the science and art of preventing disease, prolonging life, and promoting health through the organized efforts and informed choices of society, organizations, public and private communities, and individuals."

Healthy living
Help people to live a healthy life in a healthy home environment

Prevention
Enable people to manage their own health

Diagnosis
Provide first time right diagnosis with personalized and adaptive care pathways

Treatment
Enable more effective therapies, faster recovery and better outcomes

Home care
Support recovery and chronic care at home

Connected care and health informatics
Enable consumer–patient–provider connectivity, optimized care coordination and improved population health

Robert Wood Johnson & University of Wisconsin Public Health Institute

What's Missing in Most Population Health Solutions
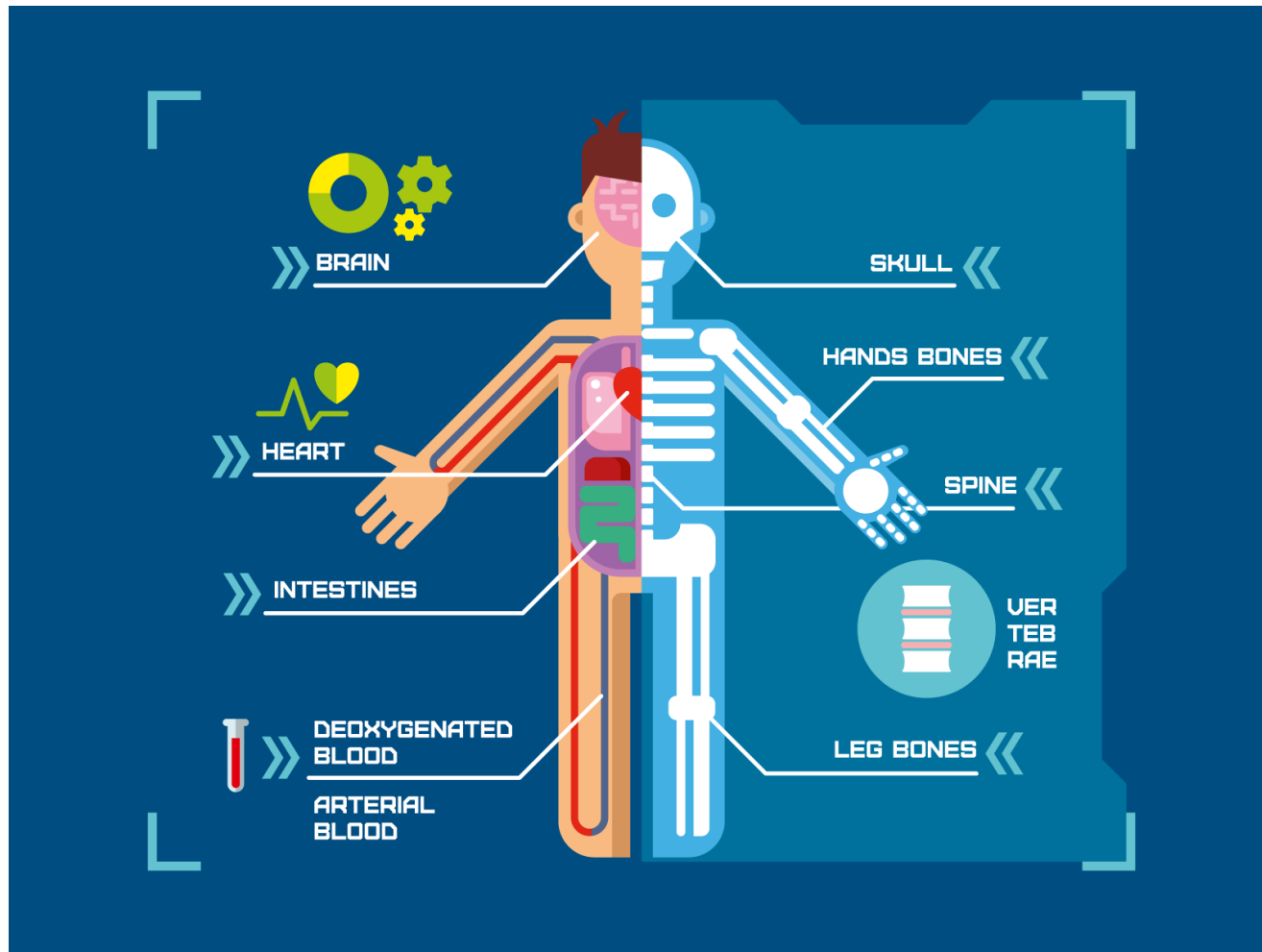
More than Math

$$ROE = COA/TPI$$

The Quality of Care (QoC) plus Experience (E) divided by the Cost of Care (CoC),

$$HV = (QoC+E)/CoC,$$

then the fundamental equation of population health will be the calculation of Return on Engagement (ROE), that is the Clinical Outcome Achieved (COA) divided by the Total Patient Investment in a Patient's Health by the Healthcare System (TPI).

Improve people perception of HIV
Improve people perception of HIV
Inform general public of HIV research
More research on HIV
More accessible HIV clinics
Help informal caregivers
Financial aids for sick people
Specific job opportunities for sick people
Help to obtain social welfare / administrative papers
Adapt price to patients' revenue
Non ART medications
Transportation
Consultations and tests
Coordination between hospital and clinics
Have non integrated pregnancy care for HIV women
Have non HIV physicians in HIV clinics
Have non HIV meds in HIV clinics pharmacy
Advance prescriptions
Choose appointment days
Group exams and visits on same days
Shorter visit interval
Longer visit interval
Treatment should be more discreet
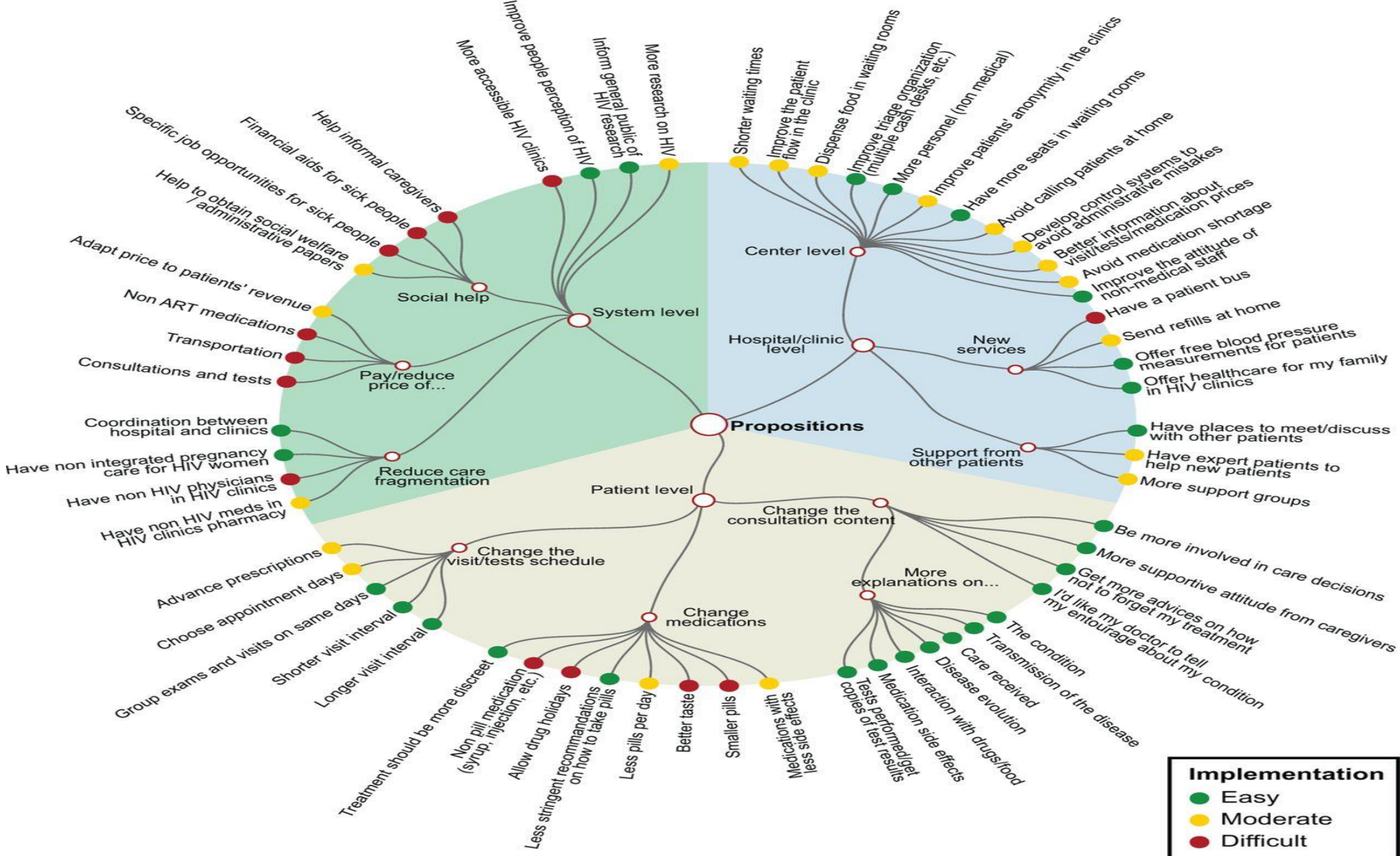Non pill medication (syrup, injection, etc.)
Allow drug holidays
Less stringent recommandations on how to take pills
Less pills per day
Better taste
Smaller pills
Medications with less side effects
Tests performed/get copies of test results
Medication side effects
Interaction with drugs/food
Disease evolution
Care received
Transmission of the disease
The condition
I'd like my doctor to tell my entourage about my condition
Get more advices on how not to forget my treatment
More supportive attitude from caregivers
Be more involved in care decisions
More support groups
Have expert patients to help new patients
Have places to meet/discuss with other patients
Offer healthcare for my family in HIV clinics
Offer free blood pressure measurements for patients
Send refills at home
Have a patient bus
Improve the attitude of non-medical staff
Avoid medication shortage
Better information about visit/tests/medication prices
Develop control systems to avoid administrative mistakes
Avoid calling patients at home
Have more seats in waiting rooms
Improve patients' anonymity in the clinics
More personel (non medical)
Improve triage organization (multiple cash desks, etc.)
Dispense food in waiting rooms
Improve the patient flow in the clinic
Shorter waiting times

Social help
System level
Pay/reduce price of…
Reduce care fragmentation
Patient level
Change the visit/tests schedule
Change medications
More explanations on…
Change the consultation content
Support from other patients
New services
Hospital/clinic level
Center level
Propositions

Implementation
Easy
Moderate
Difficult

Health Catalyst Approach to Large Population Health

✓ One approach for all patients does not work

✓ Relationship building and care management provides health systems with tools

✓ Clinical Analytics

Historically the data we had in the past was information required for reporting rather than what we needed for change management or real process improvement.

It didn't give us insight about how to improve care across large populations.
Now we have access to the kind of information that we need to drive our plans for improving our workflow and managing our populations."

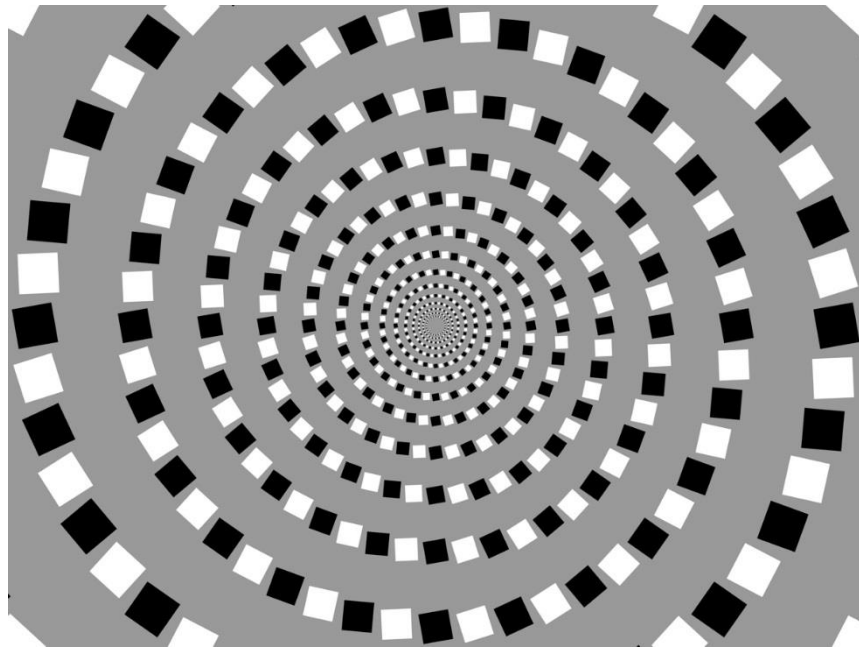One approach for all patients does not work

Relationship building and care management provides health systems with tools
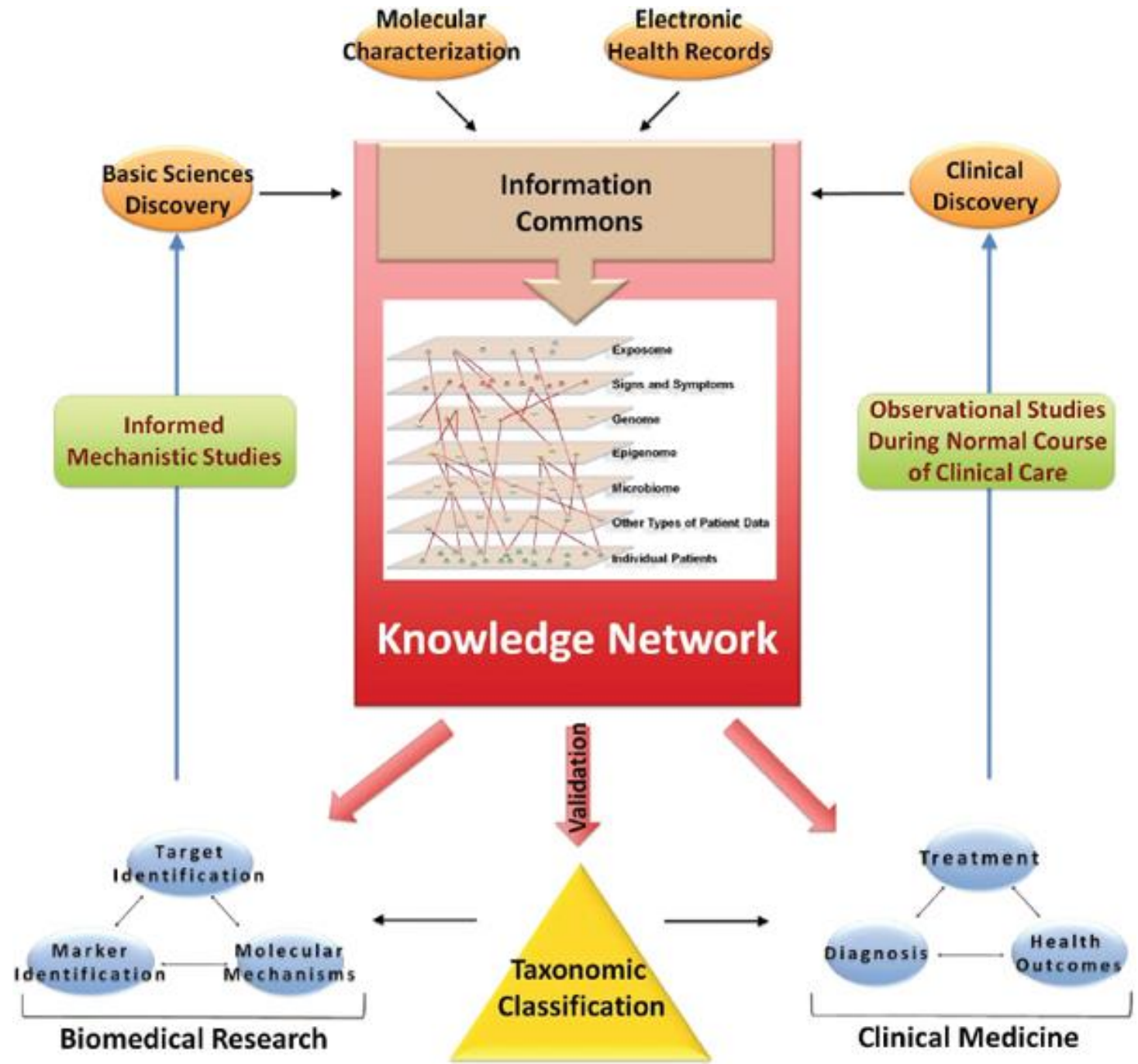
Clinical Analytics

Comprehensive information network

Highly dynamic, continuously incorporating newly emerging information

Observe, record, tabulate, communicate.
—Sir William Osler (1849–1919)