

EMPLOYERS' FORUM OF INDIANA



RESULTS OF A FORUM PILOT PROJECT: NOVEL EMPLOYER-LEVEL POPULATION HEALTH REPORTS



Indiana Health
Information Exchange



INDIANA UNIVERSITY



Indiana Health Information Exchange

EMPLOYERS' FORUM OF INDIANA

Better Outcomes. Delivered.

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Indiana Health Information Exchange

Through information exchange, we improve health and healthcare.

- One of the nation's largest HIEs

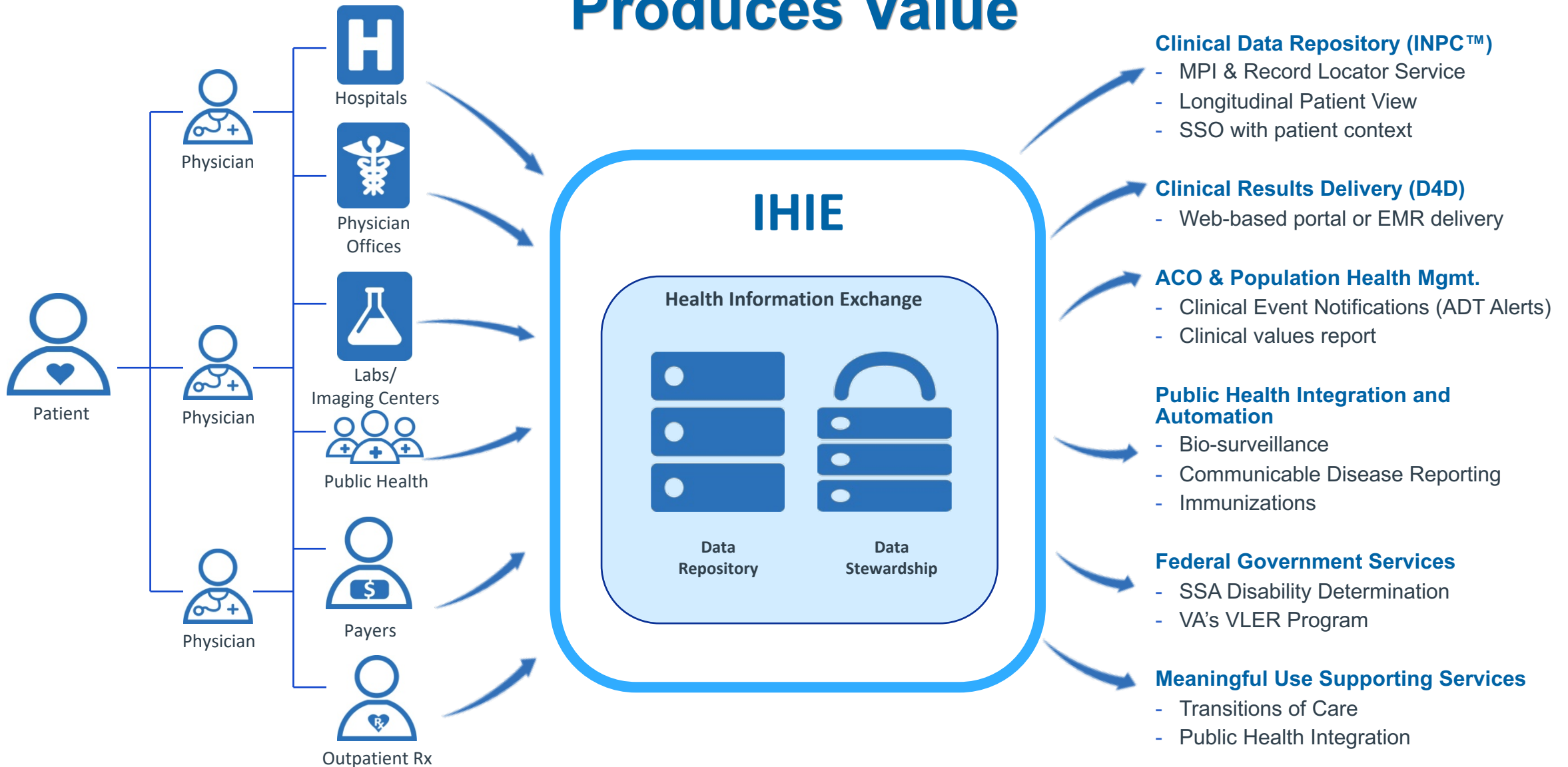
CONNECTION TO 117 hospitals, representing 38 health systems	OVER 16,869 practices	OVER 47,047 providers	OVER 14,745,384 patients	OVER 12,373,482,618 clinical data elements
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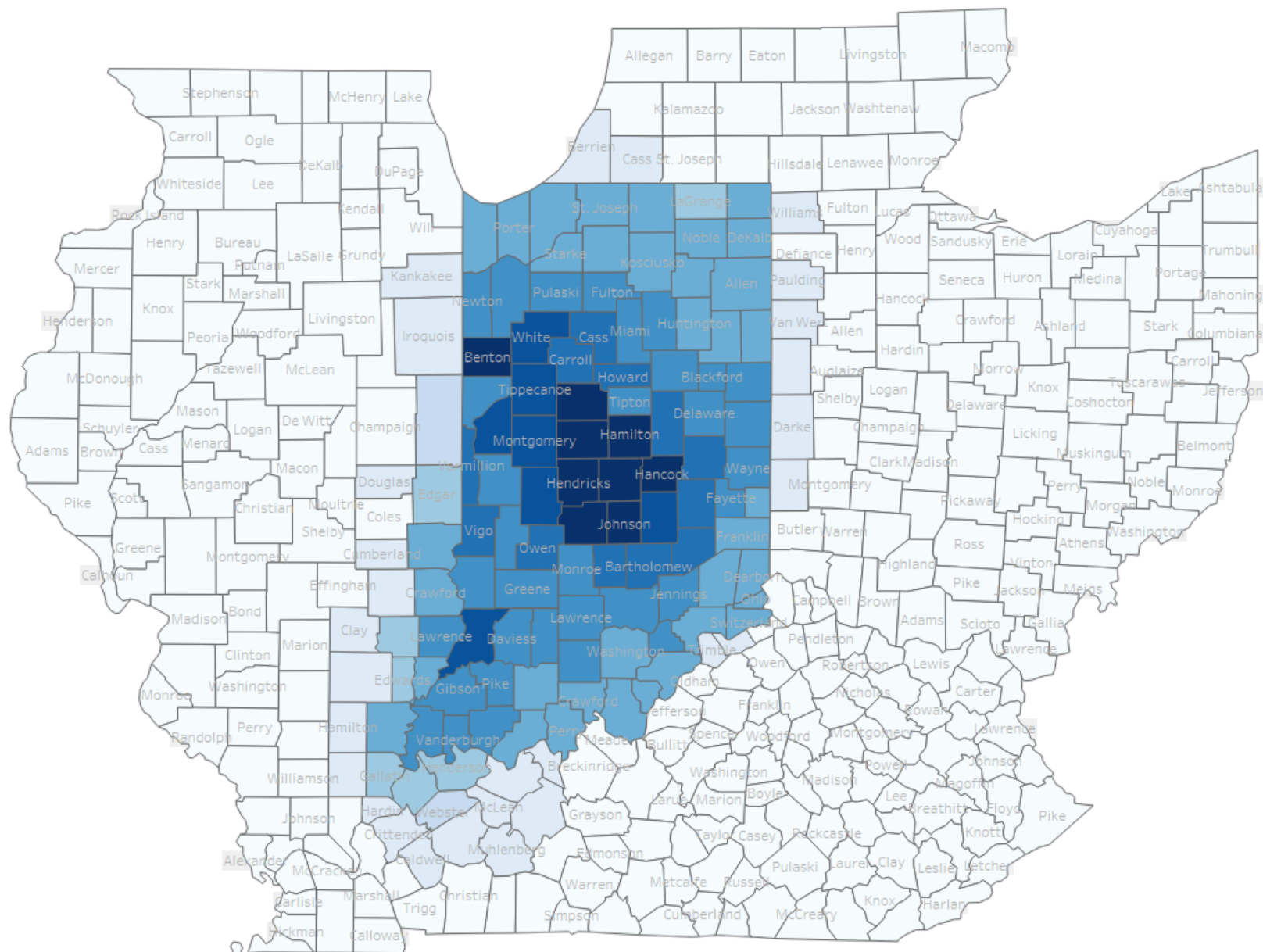
- Board composition: Hospital System CEOs, Healthcare Associations, Academia, State, Community
- Regenstrief Institute partnership
- 501(c)3 supporting organization

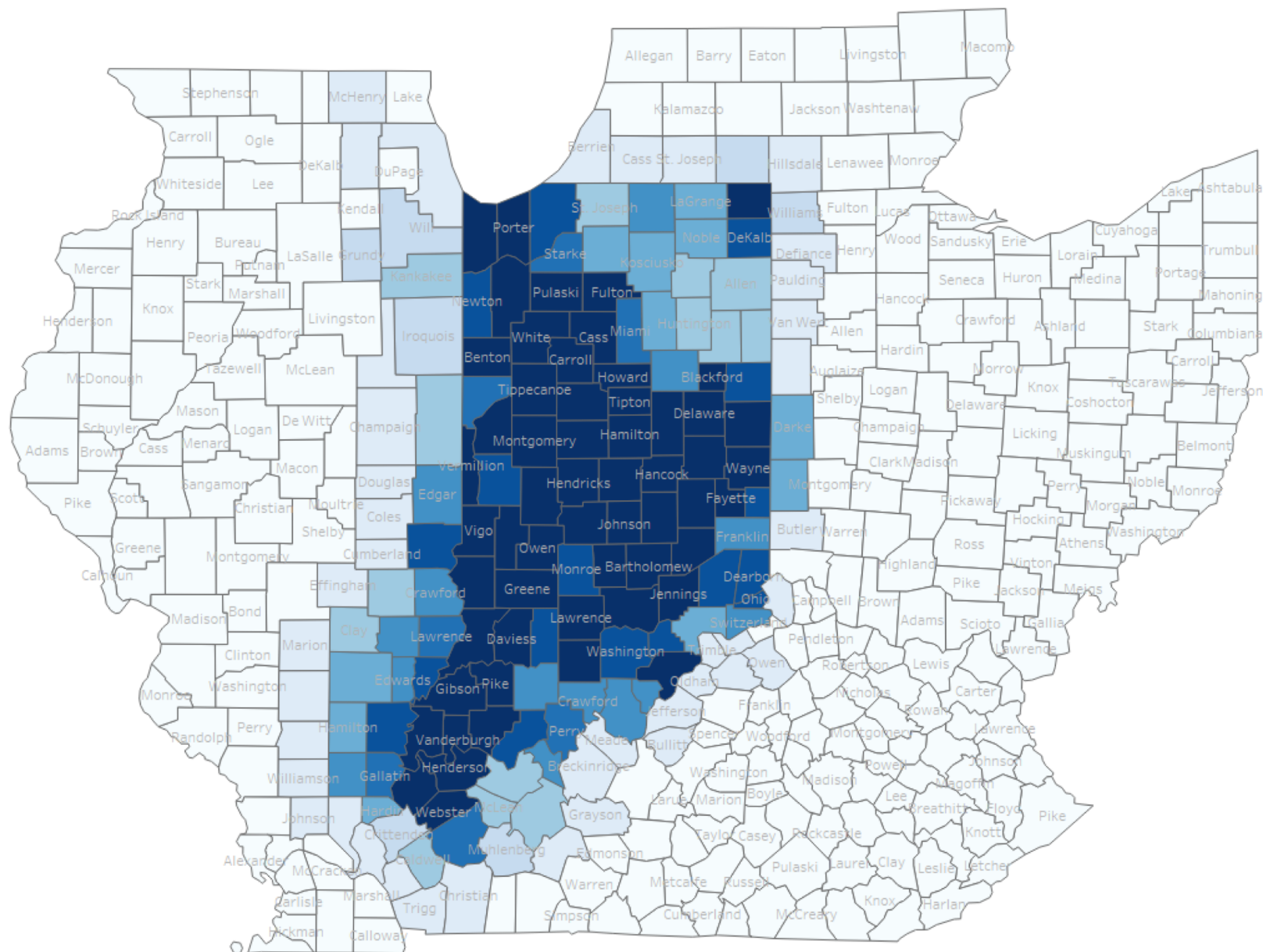
Health Data Sources

How HIE Produces Value

Value-Added Services







Percentage of Indiana population
with an encounter in the INPC

2018

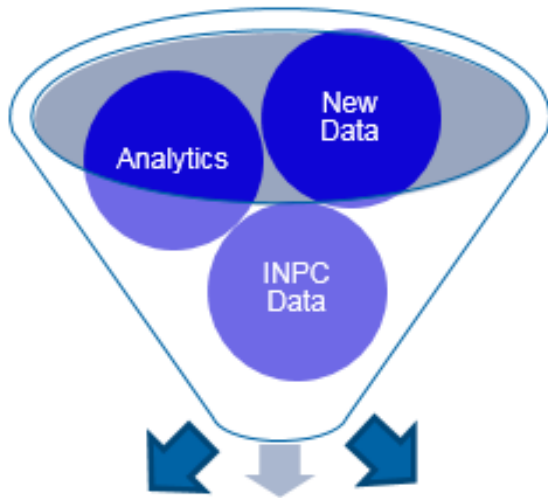
County Prevalence

0-1% 1-4% 5-9% 10-19% 20-39% 40-59% 60-74% 75-89% 90-100%



Indiana Health Information Exchange

Extract Value from Our Unique Data Assets



Extract Value from Our
Unique Data Assets

- **Acquire data of strategic value and optimize data assets**
 - *Some new value propositions require IHIE to identify and add new data types to the INPC, and some existing and new data streams will require transformations to be optimally useable in IHIE products*
- **Deliver differentiating products leveraging unique data assets**
 - *The INPC is the key asset upon which IHIE will build new products and capabilities--the unique inter-organizational, patient-centered, population-wide nature of the INPC is the determining factor in selecting products to develop*
- **Build analytics to meet population health and industry needs**
 - *Population health is the fastest growing IHIE product profile and additional solutions can be enabled through new and greater analytics capabilities, which can also meet a demand for health data analytics in new segments of healthcare and business*



Project Scope

- This is a proof of concept prepared for Monarch Beverage, Indiana University and Cummins. The purpose is to demonstrate the ability to glean clinical insight into a specific population from the clinical data repositories (CDR).
- The analyzed population consists of individuals insured through Monarch Beverage, Indiana University and Cummins. IHIE analyzed the CDR to answer questions about the cohort pertaining to diabetes, obesity, hypertension, hyperlipidemia, and other chronic conditions from 2014 to 2018. The analysis includes clinical point-of-care data from hospitals, clinic, claims, and other types of providers.
- Both discrete/structured data and non-discrete/unstructured data were analyzed, using Natural Language Processing (NLP) technology extracting the information from the non-discrete/unstructured data.

Data Governance

- We will contract with the appropriate entity to ensure HIPAA compliance
 - Self Funded Plan as Covered Entities
 - Each employer may have some unique relationships (analytics, onsite clinics, etc)
- Indiana Network for Patient Care (INPC) Management Committee
 - Representative Governance Committee that governs the operation of the INPC, creates and authorizes policies and procedures
 - Current approved use cases allows for IHIE to provide data to Health Care Payers and Health Plans

Dashboards



Executive

- Trends over time
- Results vs Indiana Averages
- Condition Spend
- Location breakdown



Demographics

- Trend by Gender, Age, Condition
- Dashboard breakdowns



Member List

- Detailed cohort analysis
- Filtered by cost, condition, year



Condition Control

- Control Levels by Condition
- Trends over time

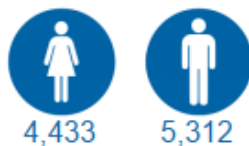


Executive Dashboard

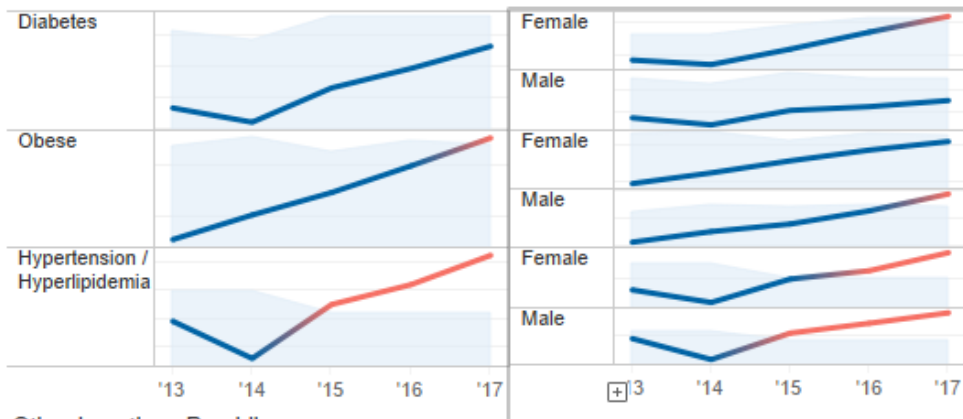
Executive Dashboard

Prepared for: Company Name

Population Size: 9,745



Condition Trends vs. Indiana Average



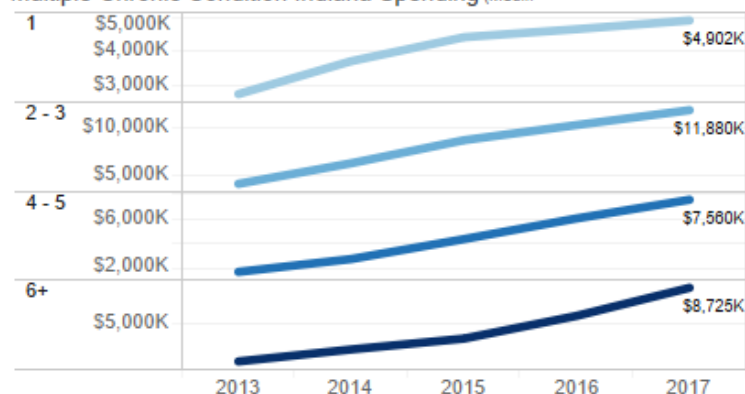
Other Locations Providing Treatment



Top 10 Other Locations



Multiple Chronic Condition Indiana Spending (Medi..



Obesity Level of Detail

- ☐ By Obesity Class
- ☒ As Obesity

Include Depression Rx

- ☐ Yes
- ☒ No

Use Last Known Value

- ☒ Yes
- ☐ No

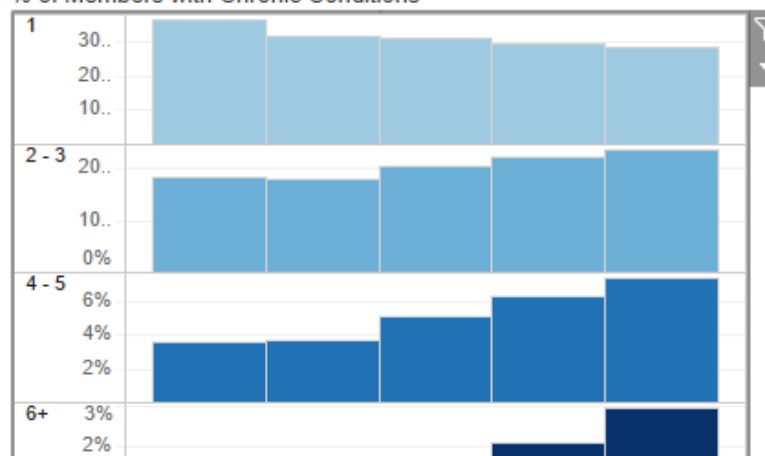
Denominator

- ☐ Population
- ☒ Population w/ Data

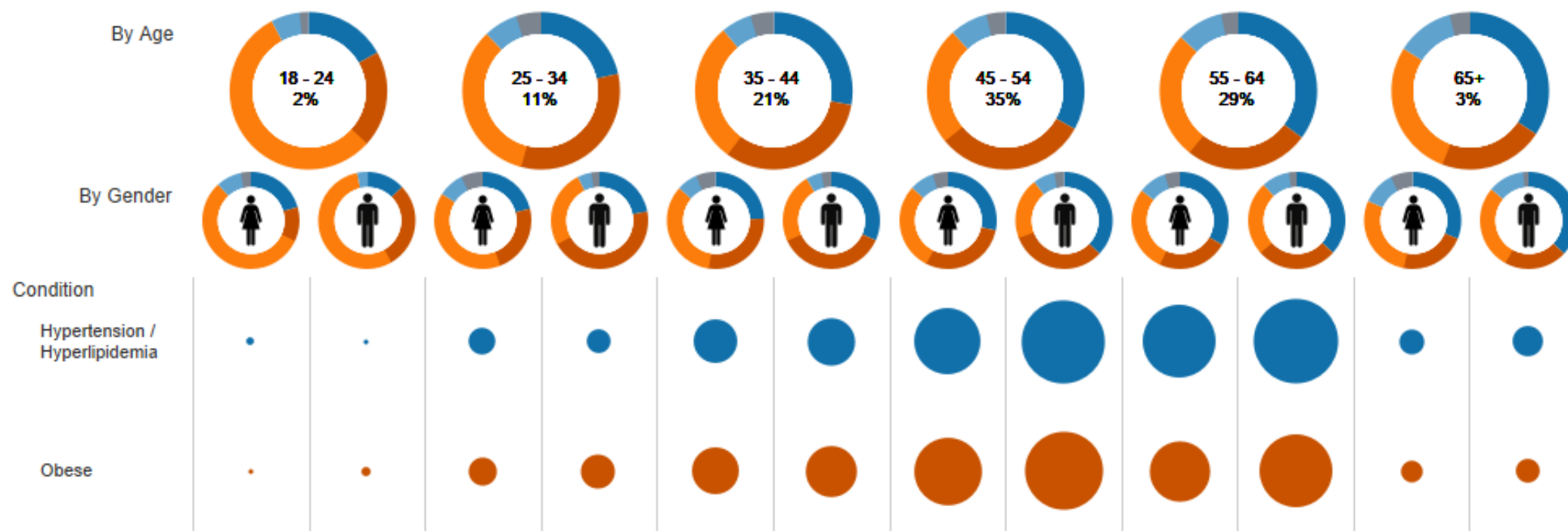
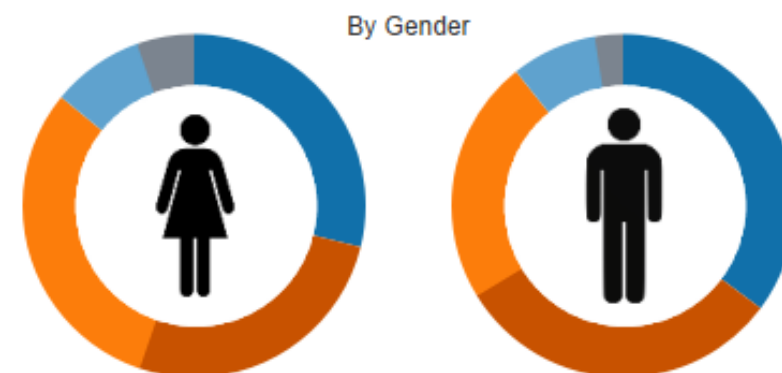
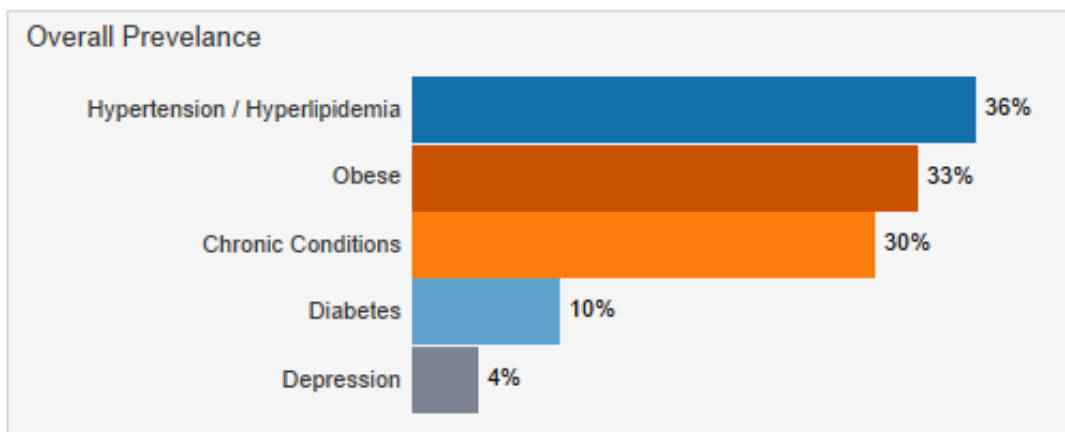
Above Below Avg Indicator..

- ▲ Indiana Average
- ▼ Indiana Average

% of Members with Chronic Conditions

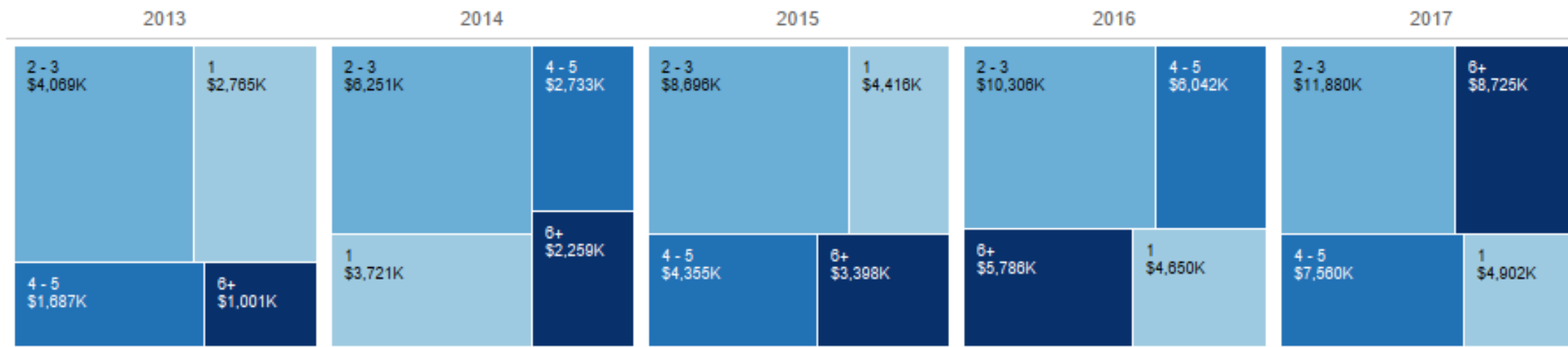


Demographic Dashboard





Member List Dashboard



Select a square above to display a list of the members.

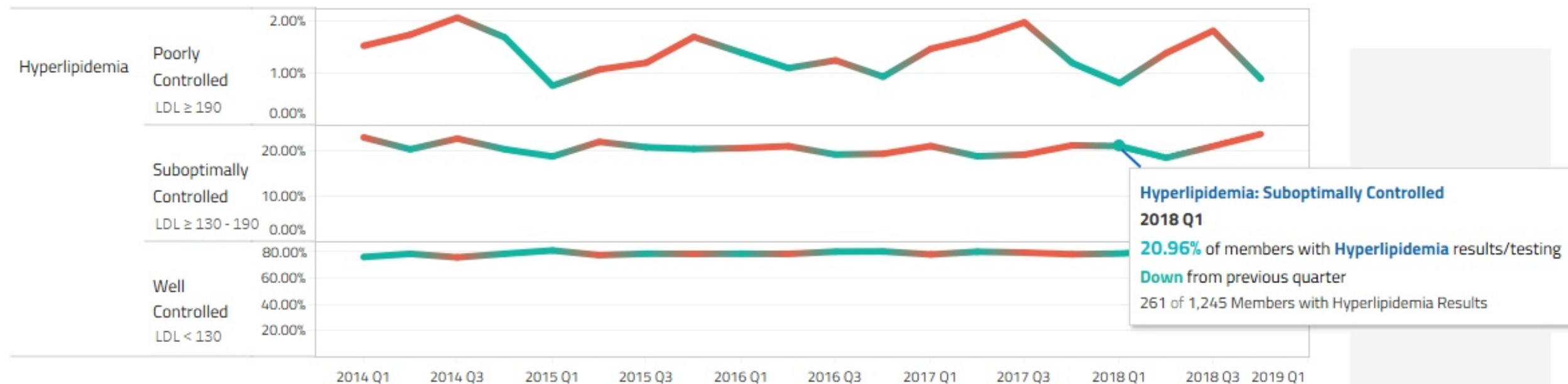
Current Display: Members from 2015 with 6+ Condition(s).

Member Id	Member Condition Count by Yr	Age Group	Gender Code	Depression	Diabetes	Obese	Hypertension / Hyperlipidemia	Chronic Conditions
10218	12	65+	Female					
10914	11	65+	Female					
6269	10	55 - 64	Female					



Condition Control Dashboard

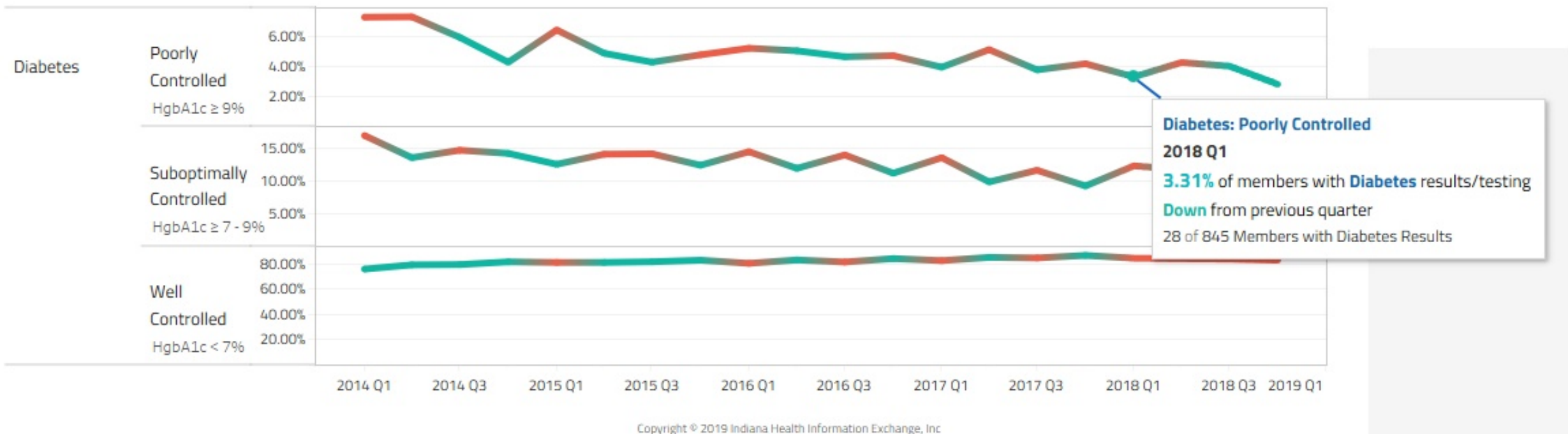
Condition Control Dashboard





Condition Control Dashboard

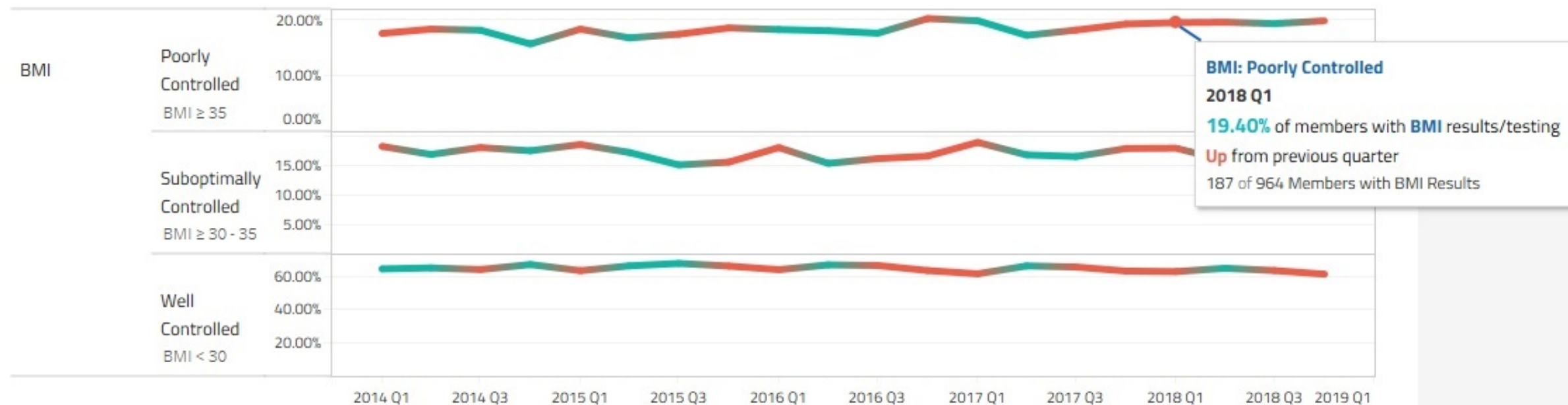
Condition Control Dashboard





Condition Control Dashboard

Condition Control Dashboard





Indiana Health Information Exchange

Thank You!

Drew Richardson

drichardson@ihie.org

317-644-1750 x5559



IHIE Dashboard Project

Christan Royer

What data was provided?

Membership submitted to IHIE from IU:

- IU HDHP Enrollment
- Membership as of 1/1/2019
- 35,924 total lives



What did IU see in our population?

- Dashboards show an increase in cost for members with chronic conditions.
- Dashboards show an increase in the number of members with multiple chronic conditions.
- Dashboards can help show if conditions are controlled and trends over time.



What did IU glean from the project?

- There are a lot of variables to consider when reviewing the data, so employers should know their population when looking at dashboards.
- Ultimately, this could be useful if you have an on-site clinic.
 - Gauge if strategies are working, such as implementation of a program to review impact in changes of chronic conditions over time. Shows if the strategy is a value add in the benefit plan design.
- Could help to support ROI discussions or lead to potential development of performance guarantees with a provider or vendor.



Thank You
Christan Royer
cmroyer@iu.edu



INDIANA UNIVERSITY
FULFILLING *the* PROMISE



Natalie Roberts | Senior Vice President





About Monarch

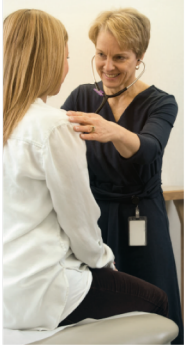


Our Philosophy





Our Philosophy



Current State

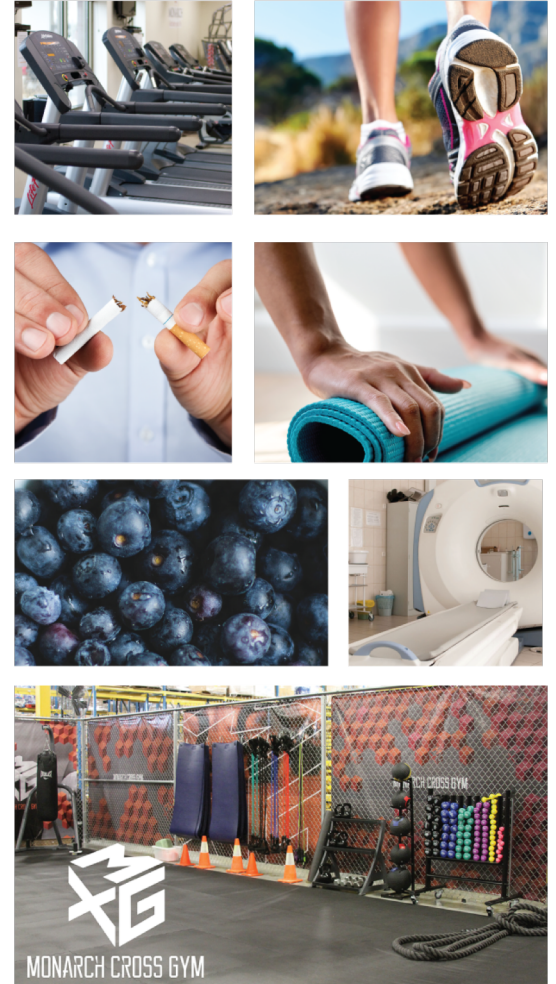




IHIE Pilot Program

Monarch's goal:

- Enhance our CM & UM with nurse navigators that are SME in our benefits, programs and culture
- Implement programs and tools that help us reduce wasteful and unnecessary healthcare costs
- Implement processes and protocols to help us evaluate and validate our partners
- Utilize real-time & historical data to enhance our Care (CM) and Utilization Management (UM) Programs





IHIE Pilot Program

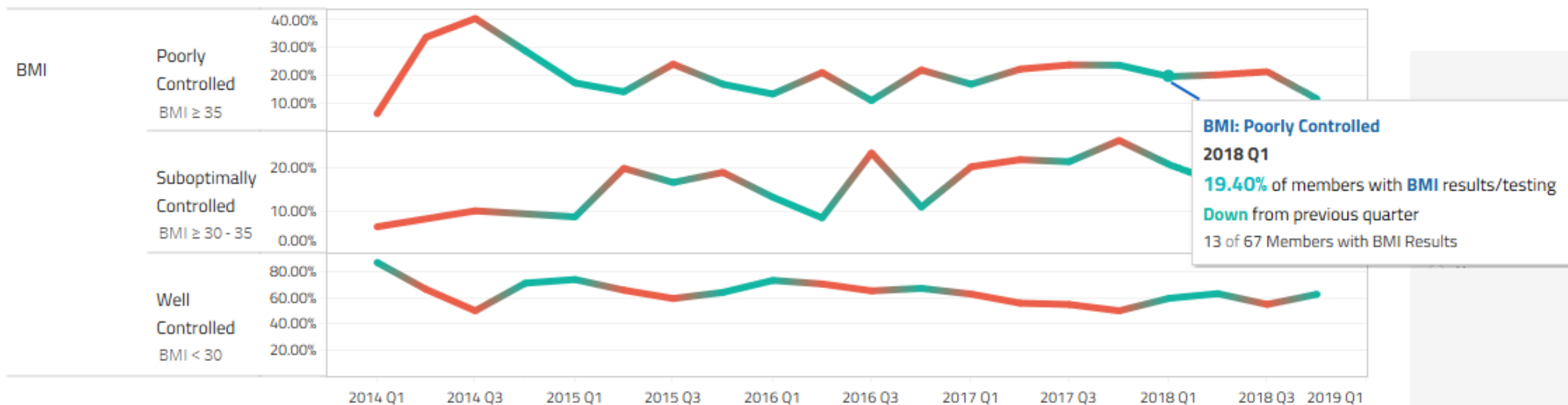
IHIE capabilities:

- Historical community view on each member to identify trends in aggregate or by individuals
- Integrate our medical & clinical claims data
- Historical view of members to identify high risk members or members with gaps in care
- Biometric data for care & disease management programs that is based on labs, RX and/or actual testing results not diagnosis codes
- Daily notification of ADTs and pre-determined test results that require immediate notification or interventions



Care Management Program

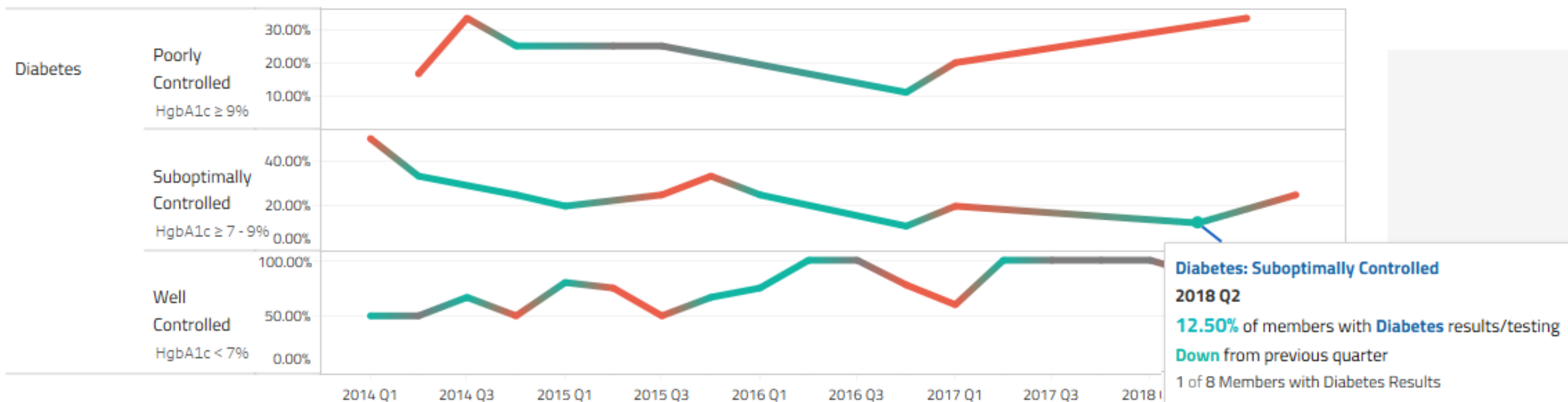
Condition Control Dashboard





Care Management Program

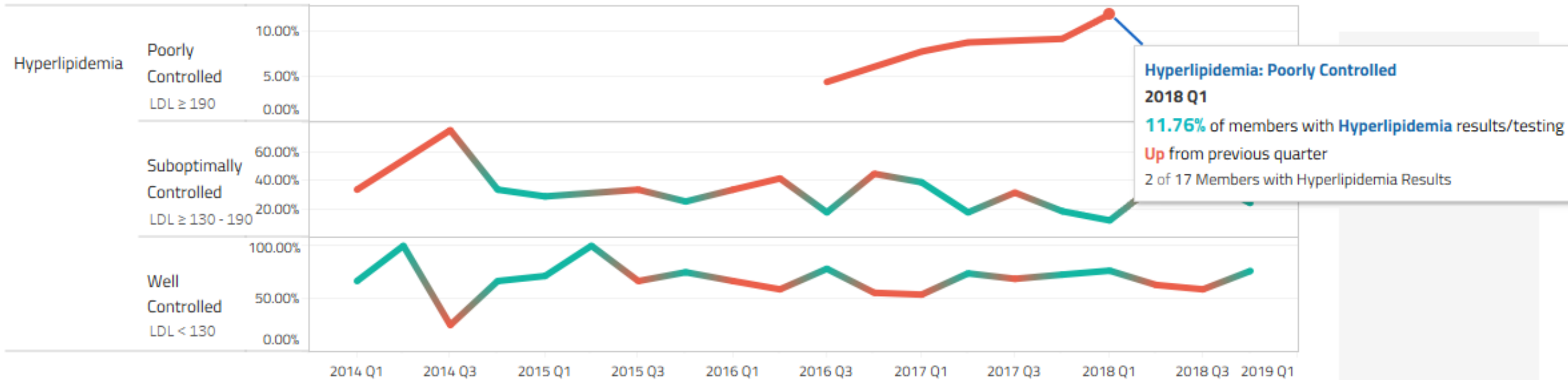
Condition Control Dashboard





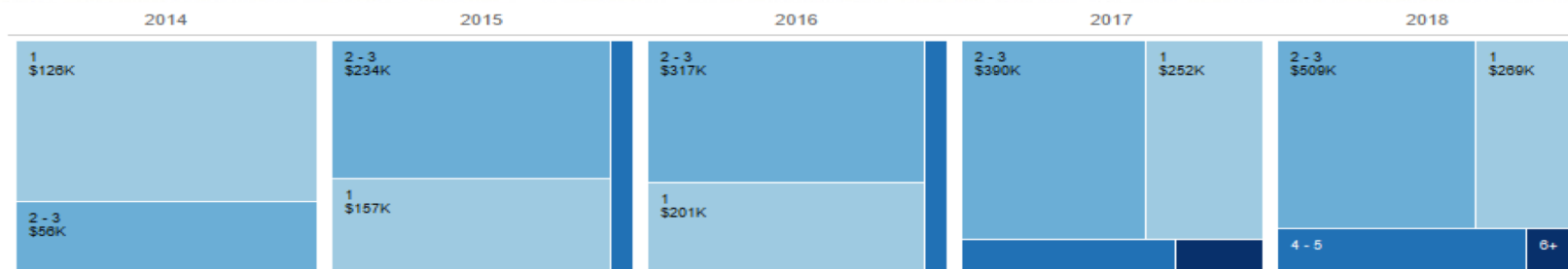
Care Management Program

Condition Control Dashboard





Care Management Program



Select a square above to display a list of the members.
Current Display: Members from 2018 with 2 - 3 Condition(s).

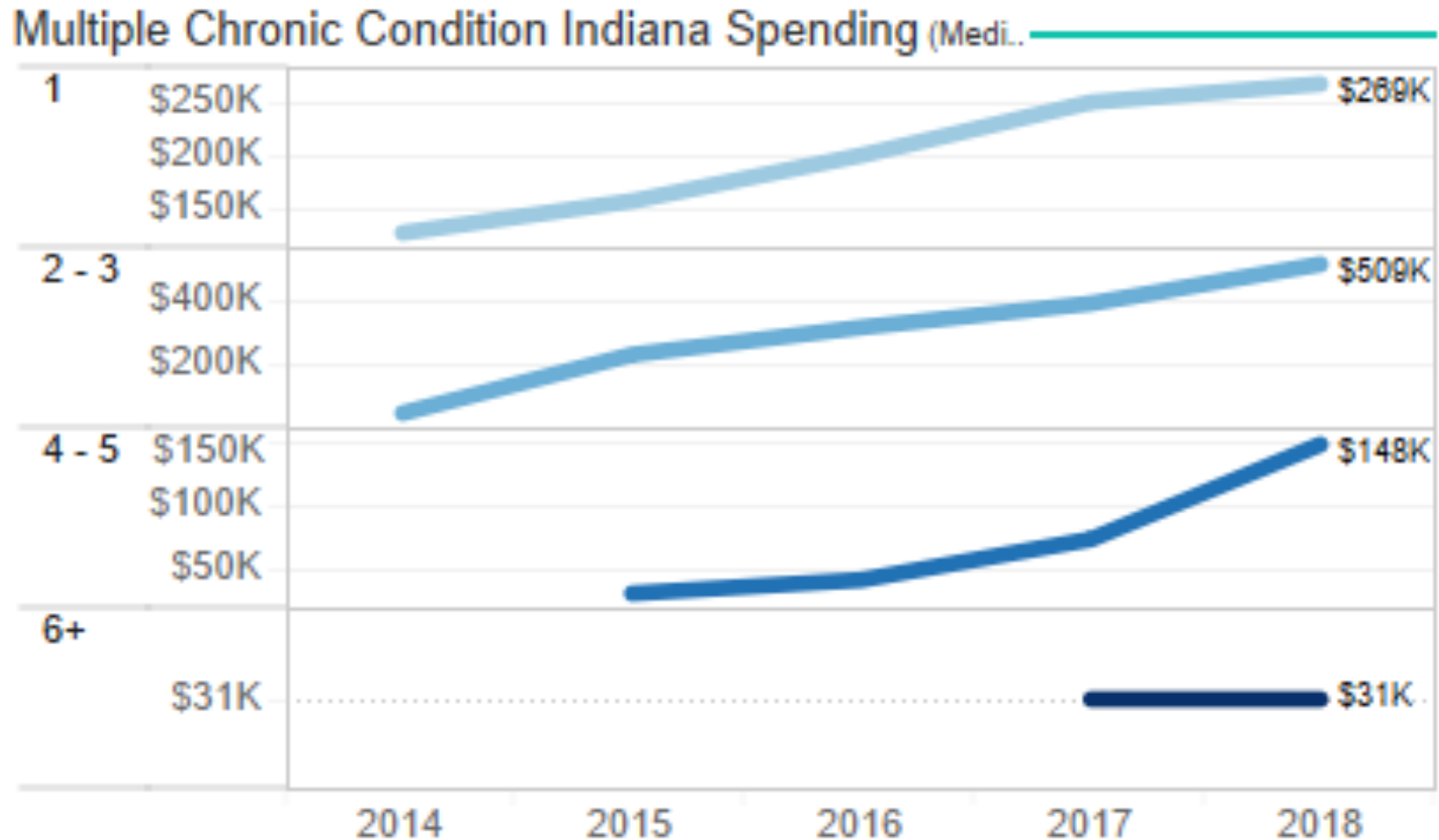
Member Id	Member Condition Count by Yr	Age Group	Gender Code	Depression	Diabetes	Hypertension	Obese	Chronic Conditions
1678492	3	0 - 18	Female					3
1678494	3	25 - 34	Female		1		1	1
1678506	3	55 - 64	Male		1	1	1	
1678588	3	35 - 44	Female	1		1	1	
1678612	3	25 - 34	Male			1	1	1
1678663	3	55 - 64	Male			1	1	1
1678678	3	25 - 34	Male		1			2
1678707	3	35 - 44	Male		1	1	1	
1678832	3	45 - 54	Male					



Care Management Program

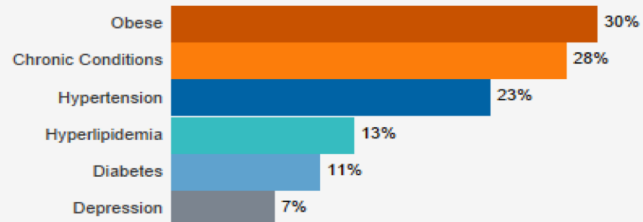


Care Management Program

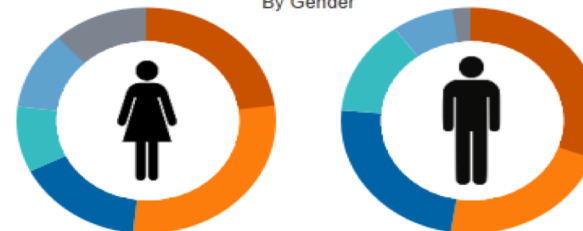


Demographic Dashboard

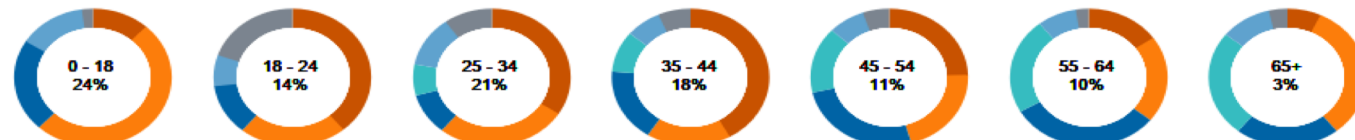
Overall Prevalence



By Gender



By Age



By Gender



Condition

Obese



Chronic Conditions



Hypertension



Hyperlipidemia



Diabetes

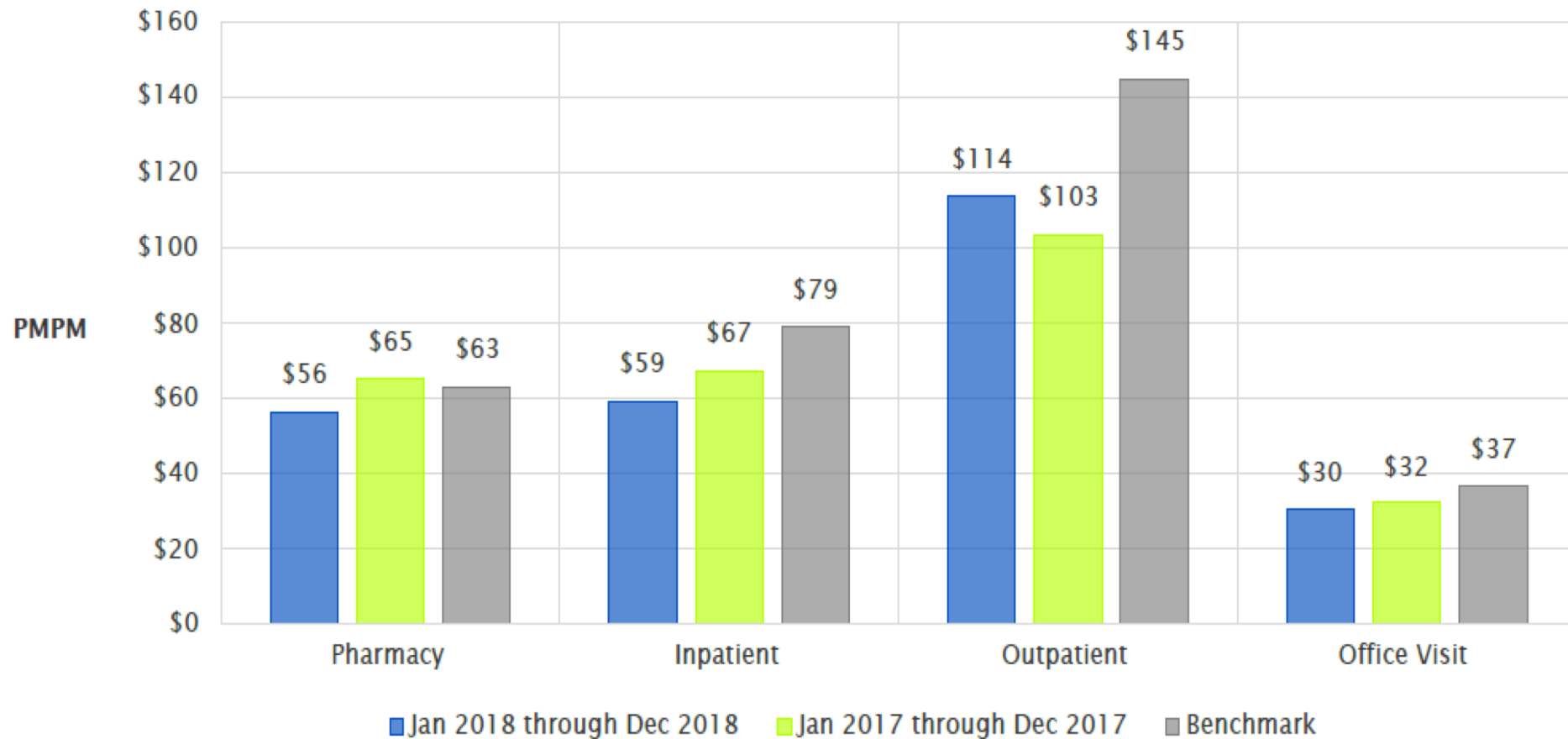


Depression



Utilization Programs

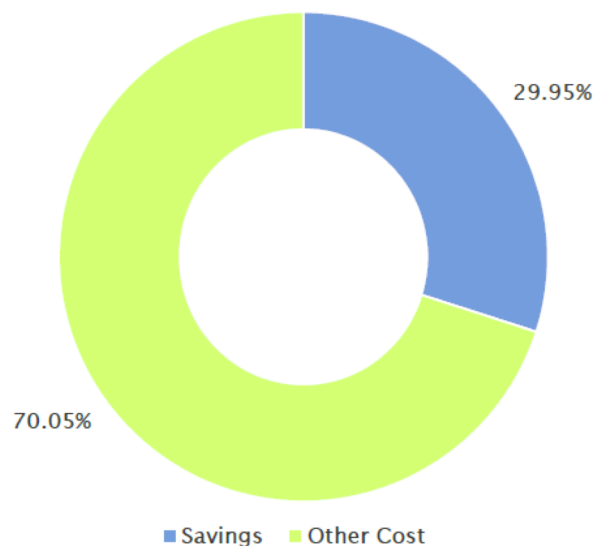
Plan Paid Amount by Service Category



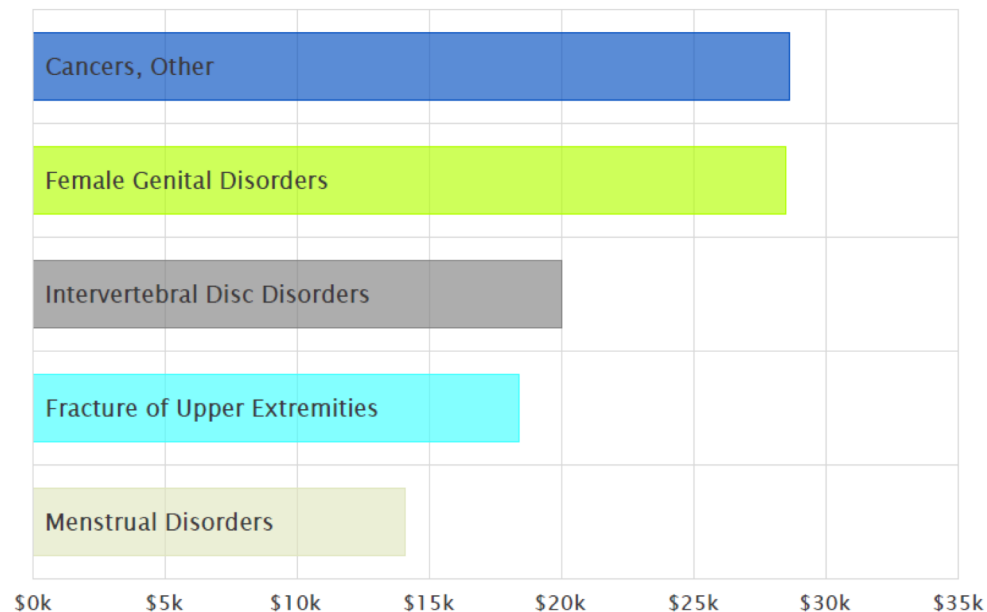


Utilization Programs

Potential Savings as a % of Total MRI & CT Cost



Top Surgery Diagnoses by Potential POS Switch Savings



Metric	MRI	CT
Hospital Average Allowed	\$3,013	\$1,311
Office Average Allowed	\$727	\$571
Potential Savings Per Service	\$2,286	\$740
Savings Eligible Services	15	20
Potential Savings	\$34,287	\$14,794
Total Potential Savings	\$49,081	

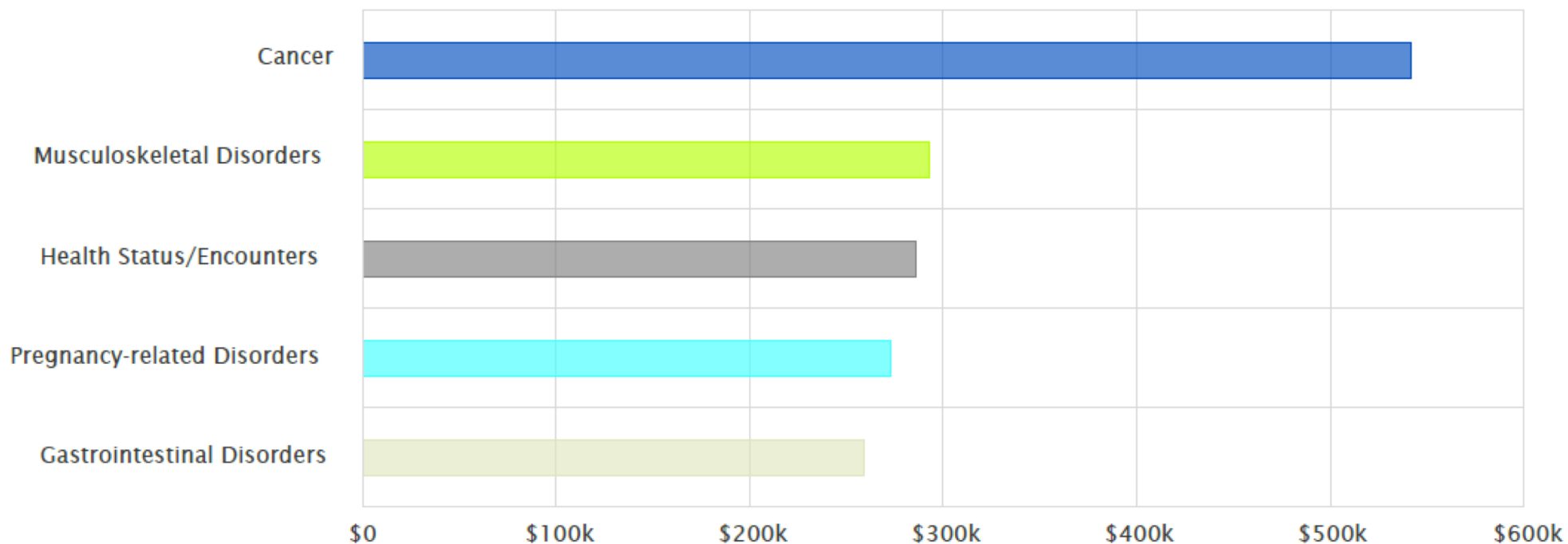
Diagnosis Grouper	Outpatient Hospital Cost / Surgery	ASC Cost / Surgery	Outpatient Hospital Surgeries	Potential Savings
Cancers, Other	\$36,655.63	\$8,037.36	1	\$28,618
Female Genital Disorders	\$15,140.92	\$8,017.75	4	\$28,493
Intervertebral Disc Disorders	\$25,111.38	\$5,121.80	1	\$19,990
Fracture of Upper Extremities	\$19,244.46	\$10,048.79	2	\$18,391
Menstrual Disorders	\$19,688.22	\$5,588.72	1	\$14,100
Hernias	\$22,041.06	\$8,120.78	1	\$13,920
Ear Nose and Throat Disorders	\$10,539.32	\$5,922.12	3	\$13,852
Congenital Anomalies - Nervous Sys	\$10,897.06	\$653.99	1	\$10,243
Benign Neoplasm	\$27,069.65	\$17,178.16	1	\$9,891
Endometriosis	\$28,046.99	\$19,054.37	1	\$8,993
All Other	--	--	10	\$34,613
Total	--	--	26	\$201,104



Utilization Programs

Top 20 Diagnosis Groups

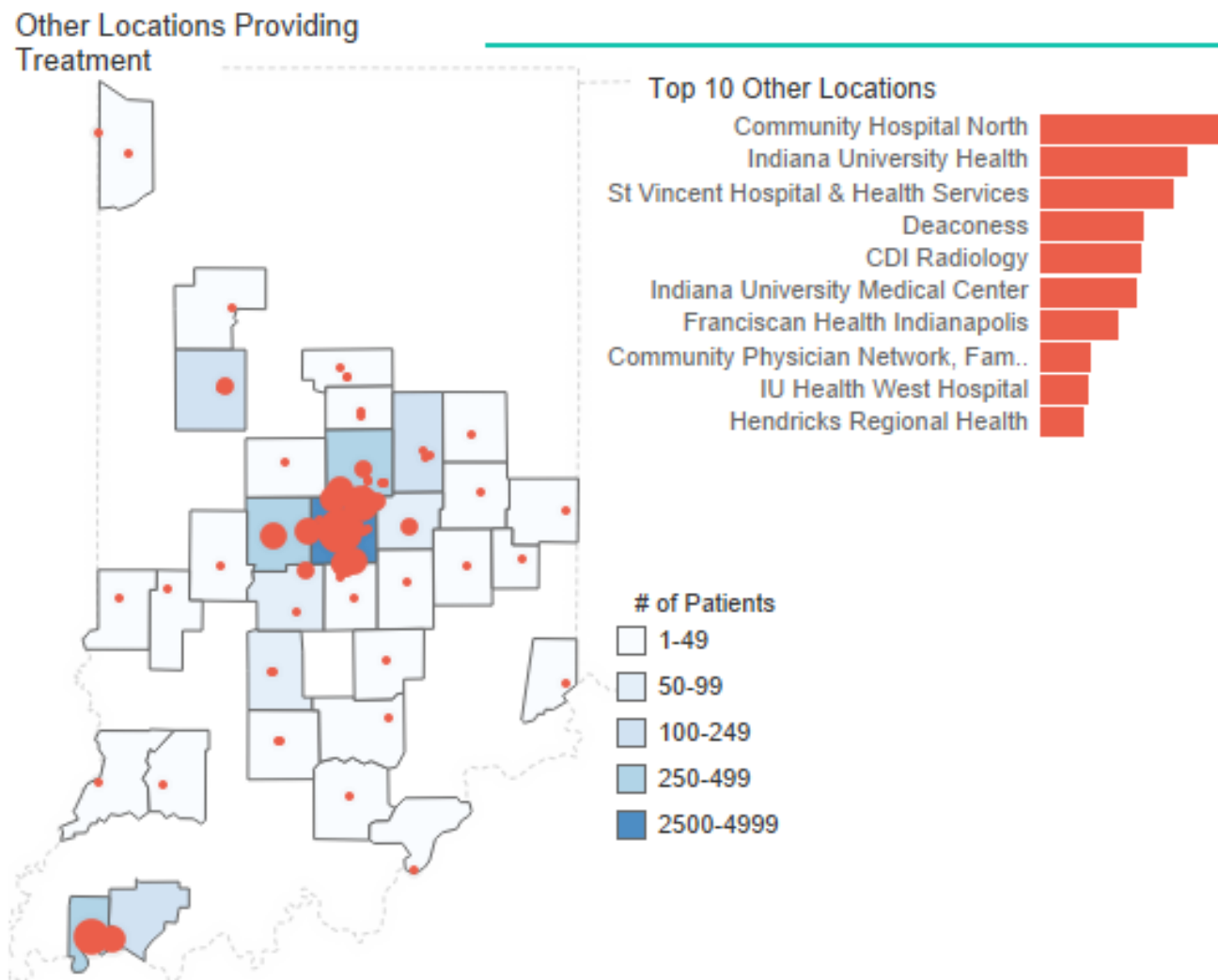
Population: Monarch Beverage



Utilization Programs

How people consume healthcare

- Utilize 2nd Opinion Services
- Direct care to COE's
- Direct to low cost imaging
- Avoid hospital readmissions





Thank you
Natalie Roberts
nroberts@monarch-beverage.com

Cummins Health Risk Matrix

**Using a Data-driven Approach
to Improving Health and
Wellness**

Nicole Williams

*Director, Global Clinical Strategy and US Health
and Wellness*



Why Are We Here Today?



**BUSINESS
AS USUAL
IS NOT
AN
OPTION**

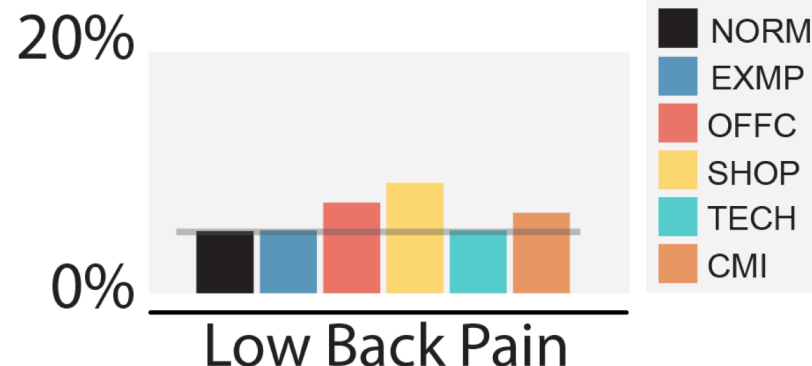
Cummins data shows we have health challenges in our US employee population



- Health status among ***our workforce is worse than national norms*** with ***significant variation*** among *job types* and *locations*
- Our programs are not reaching our highest-risk participants
- Participants don't understand or use all of the resources available
- Participants are experiencing provider access and quality issues – particularly in the behavioral health space

Example of workforce health risk

% of the population at high risk



An Example to share:

“Diagnosis of Low Back Pain”

- 1 of 5 Most Prevalent
- Costly
- BUT Impactful

Cummins' top five U.S. health challenges for employees and their families



Five conditions/diseases (*lagging indicators*) significantly affecting participants' health

Low back

Reduce: lost work days, spinal surgeries, CT/MRI scans

High blood pressure

Appropriate Rx use and reduce hospital stays; use behavioral health (BH) programs

Depression

Use stress reduction programs; reduce opioid use; refer to non-predatory facilities; increase PCP visits

Diabetes

Reduce cases and comorbid hospitalizations; use BH/stress reduction programs

Breast cancer

Reduce severity level at time of first diagnosis

We must *engage* and meet the unique needs and *preferences* of our workforce and families



Zoey Gen Z
Age 22

3% of population

Other Data points we pulled:

- **Job Type %**
- **Average Pay**
- **Health Risk:**
0.6 – Healthy
Physically active
Health enthusiast

VOC Concerns:

- New to the workplace
- Unsure of benefits
- Managing work/life balance

Video;
apps; txt



Sato Gen Y
Age 32

42% of population

Other Data points we pulled:

- **Job Type**
- **Average Pay**
- **Health Risk**
0.7 – Low Risk
 - Low incidence of chronic condition risks
 - Mental health and anxiety disorders

VOC Concerns:

- Starting a family and buying a home
- Being thoughtful about health care choices

mobile;
txt; web



Anthony Gen X
Age 47

34% of population

Other Data points we pulled:

- **Job Type**
- **Average Pay**
- **Health Risk:**
1.2 – Medium Risk
 - Depression
 - Substance Abuse
 - Diabetes
 - High blood pressure

VOC Concerns:

- Balancing financial needs of children and saving for retirement

Web;
email;
mobile



William Baby Boomer
Age 60

21% of population

Other Data points we pulled:

- **Job Type %**
- **Average Pay**
- **Health Risk:**
2.0 – High Risk
High Rx utilization
Hypertension
Cancer
Osteoarthritis

VOC Concerns:

- Readiness for retirement
- Maintaining and improving health

F2F;
mail;
web



Spouses & Partners

- Higher risk scores than employees
- Higher prevalence of maternity
- Similar generational split

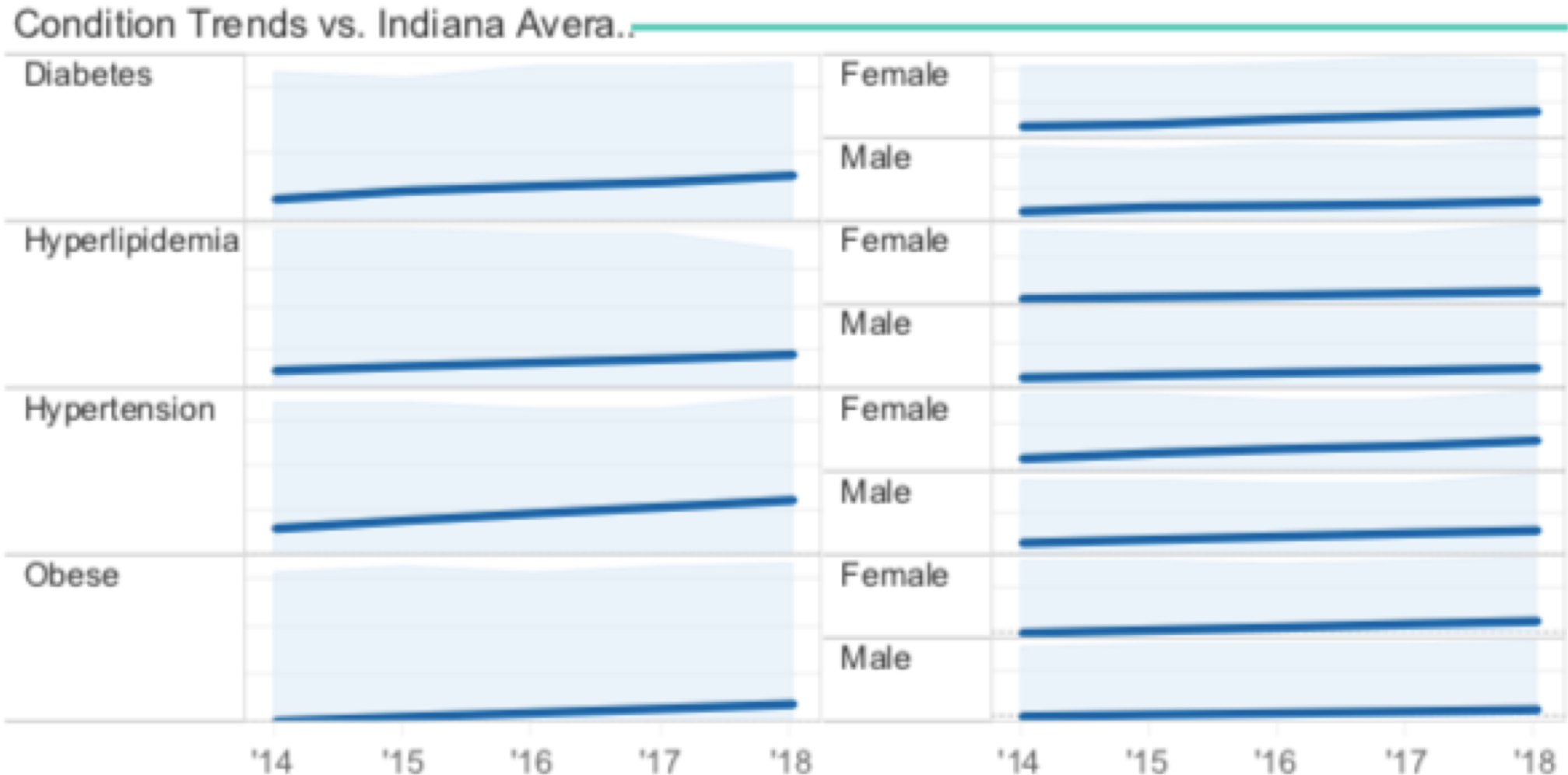


Dependents

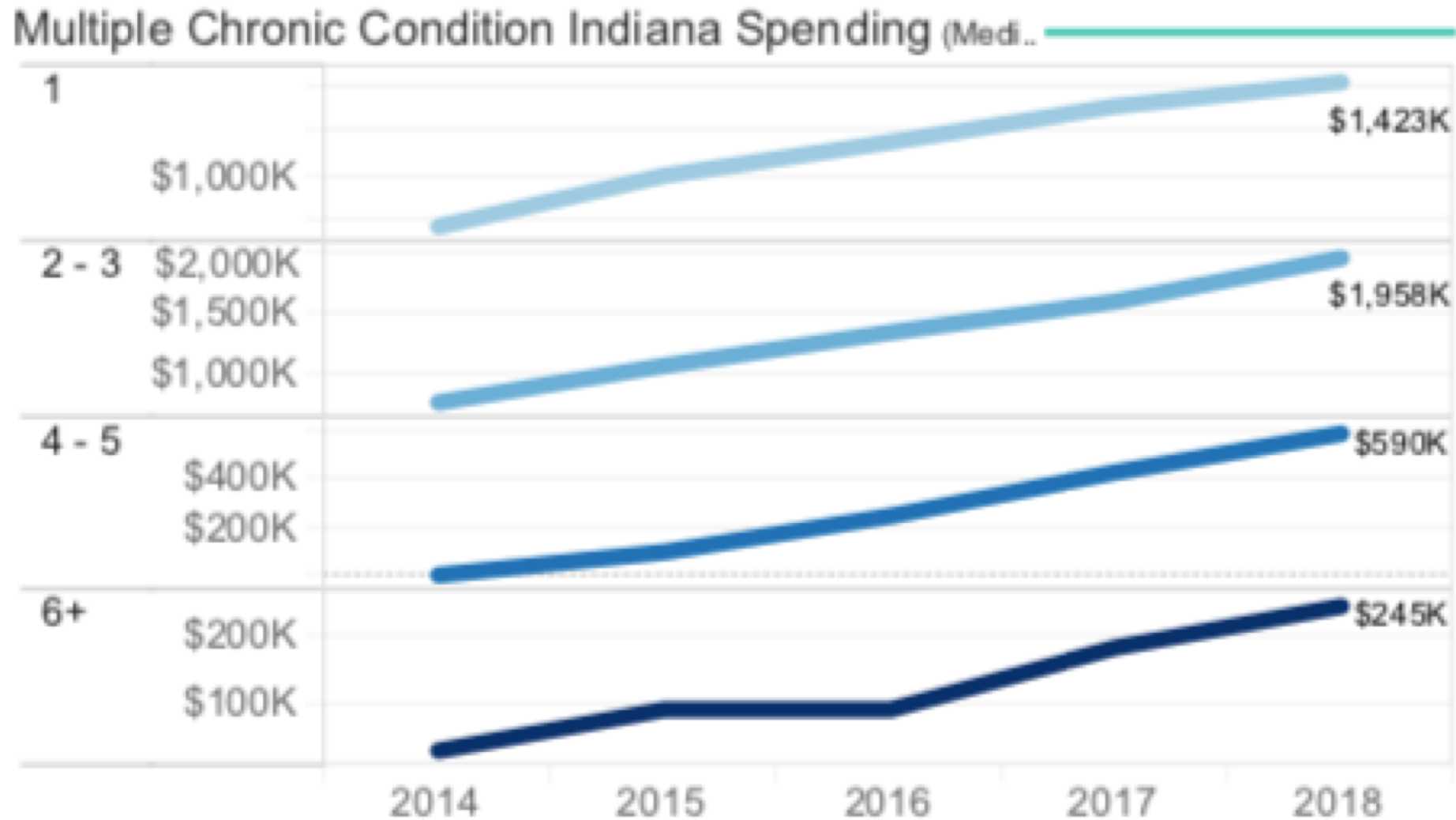
- Lower risk scores than employees
- Behavioral health and otolaryngology are key issues

Direct
mail

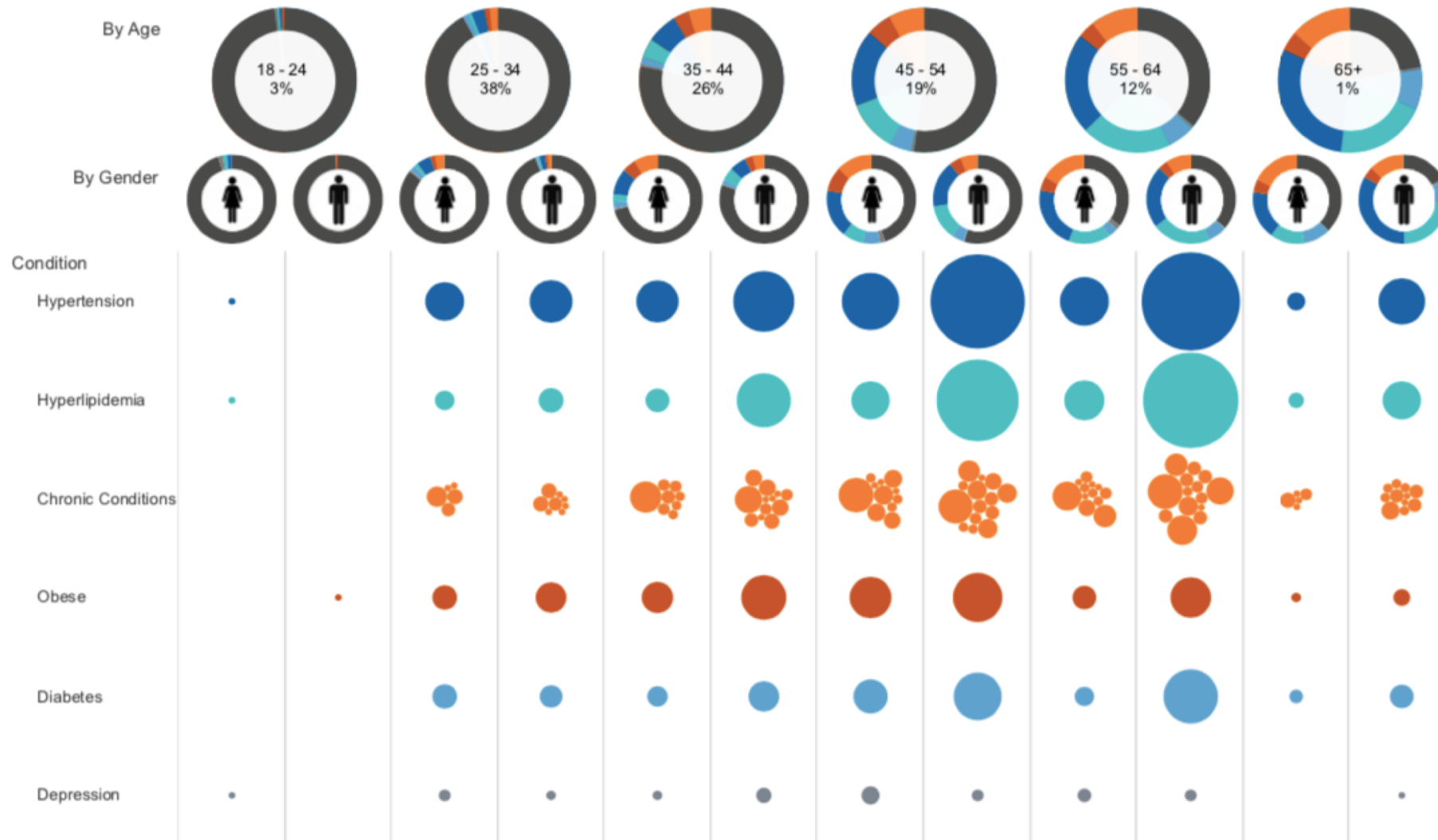
IHIE clinical data adds value to our health risk matrix



Looking at complex cases



Data to help us target personas and programs

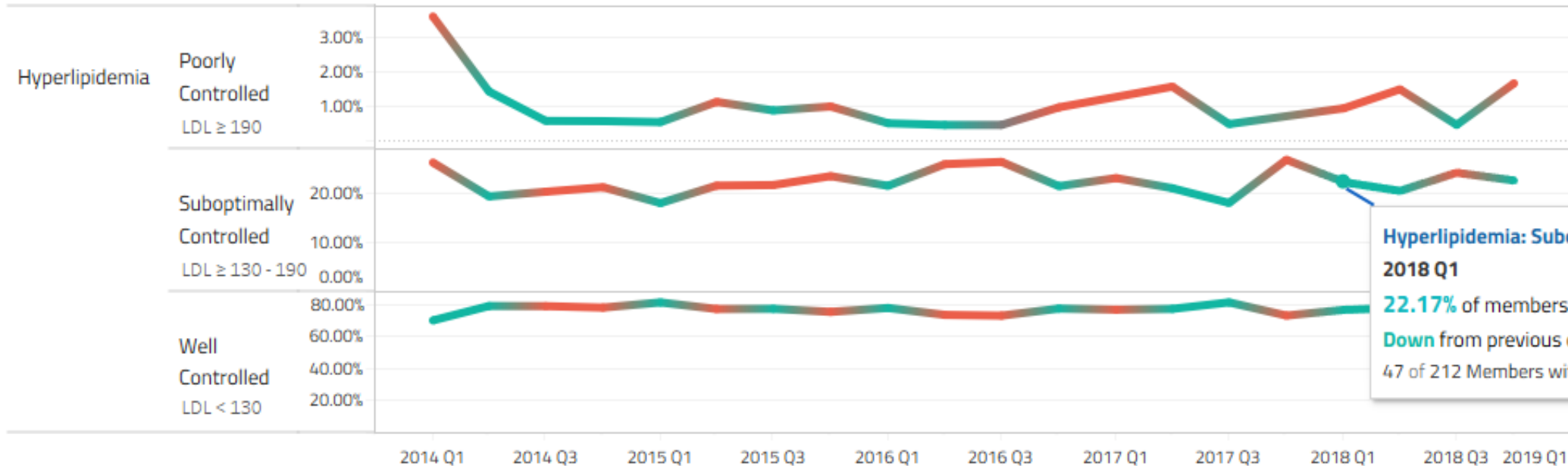




Data to help us ID trends

Condition Control Dashboard

Prepared for:



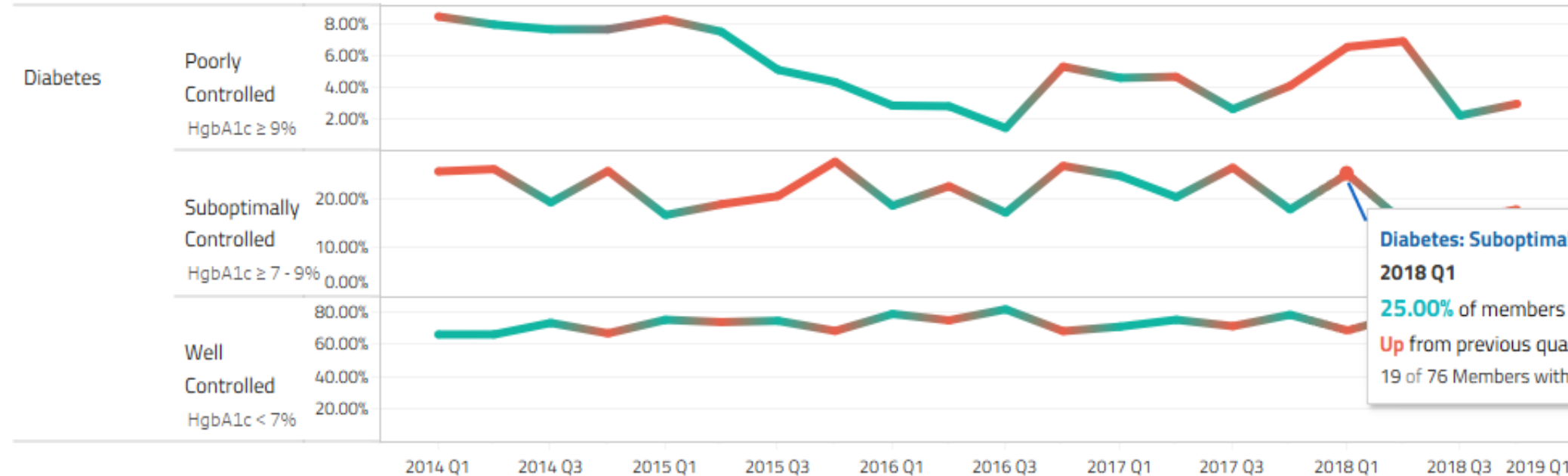
Hyperlipidemia: Suboptimally Controlled
2018 Q1
22.17% of members with **Hyperlipidemia** results/testing
Down from previous quarter
47 of 212 Members with Hyperlipidemia Results

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Data to help us ID trends

Condition Control Dashboard

Prepared for:



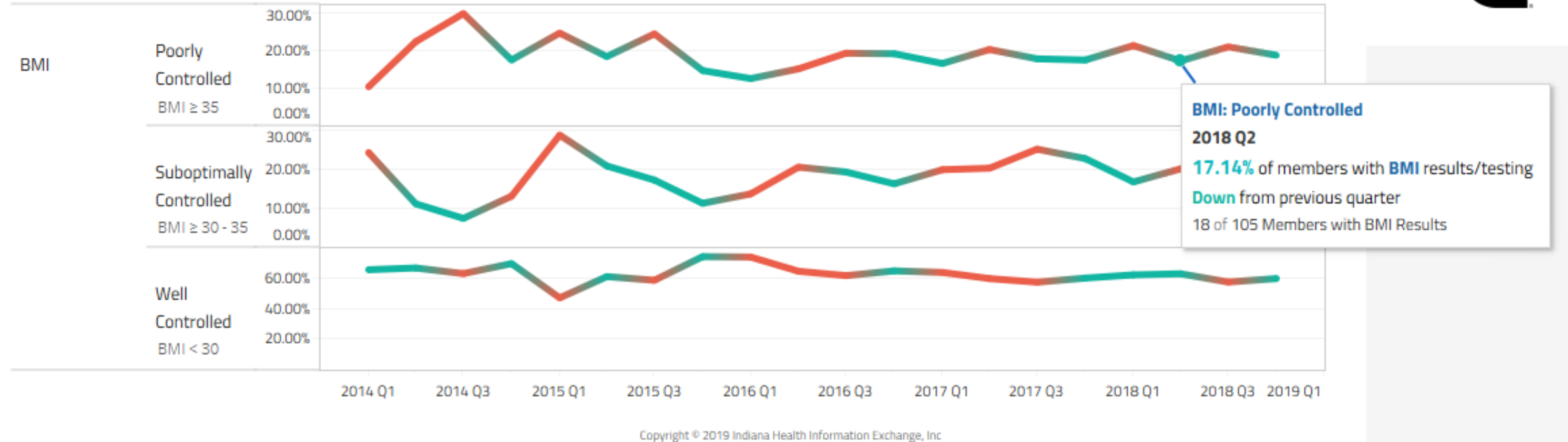
Diabetes: Suboptimally Controlled
2018 Q1
25.00% of members with **Diabetes** results/testing
Up from previous quarter
 19 of 76 Members with Diabetes Results

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Data to help us ID trends

Condition Control Dashboard

Prepared for:





Thank you