



# A Weight Lifted – Paths forward for MedTech in the GLP-1 era

*GLP-1 impact on Medical Devices*

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IQVIA MedTech – March 2024



# Speakers



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# After the big GLP-1 bang



# The origins of the GLP-1 explosion

*Discovered over 30 years ago with first launch coming from Astra Zeneca in April 2005 with Byetta*

**Exenatide Byetta®**

Twice Daily

*AstraZeneca*

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**Lixisenatide Lyxumia®**

Once Daily

*Sanofi*

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**Liraglutide Victoza®**

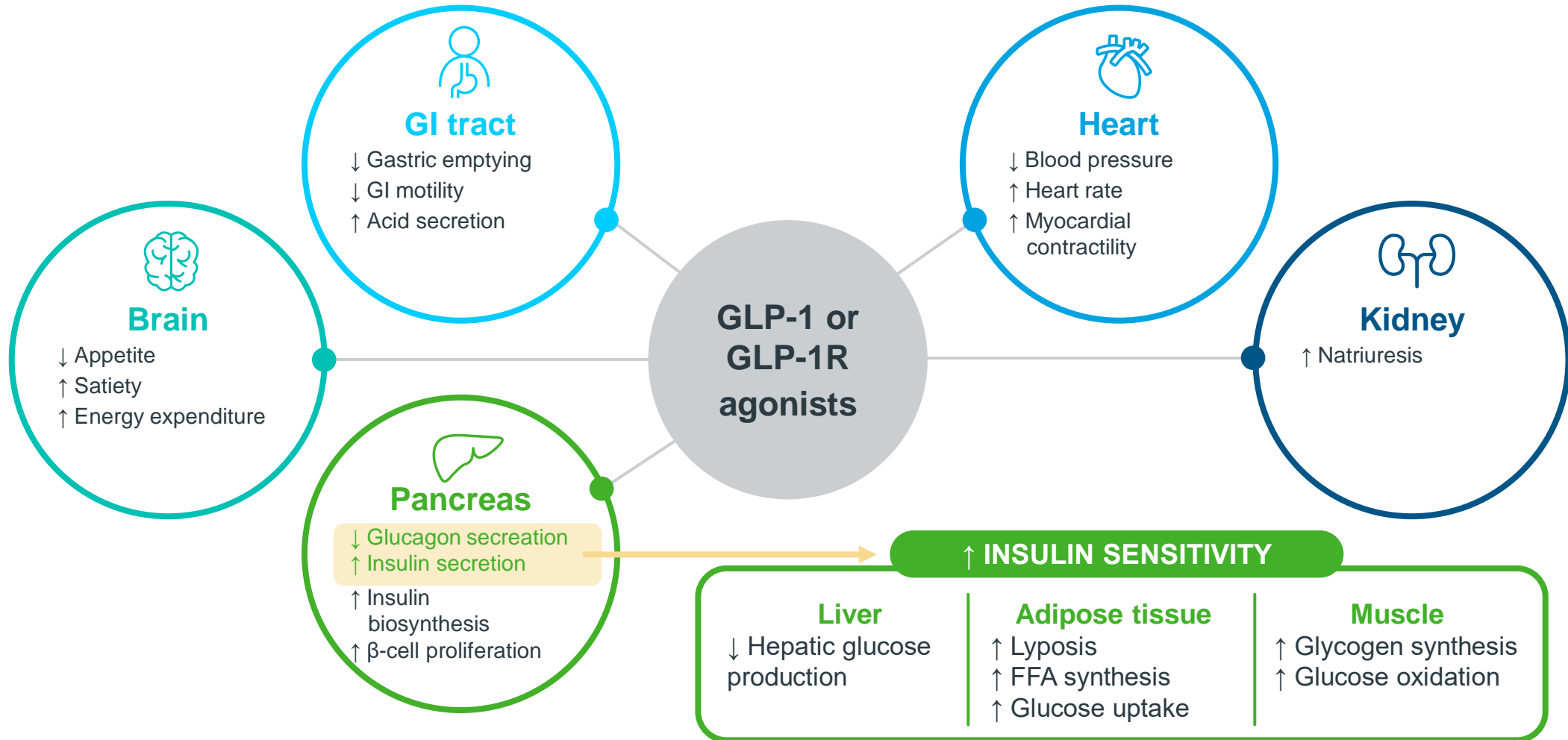
Once Daily

*Novo Nordisk*



# Uncovering the hidden positive GLP-1 physiological effects

Originally designed to manage blood glucose, other positive effects came to light



# Second generation of GLP-1s explode into the mainstream

*Wave of GLP-1s capture public imagination especially due to the weight loss impact*

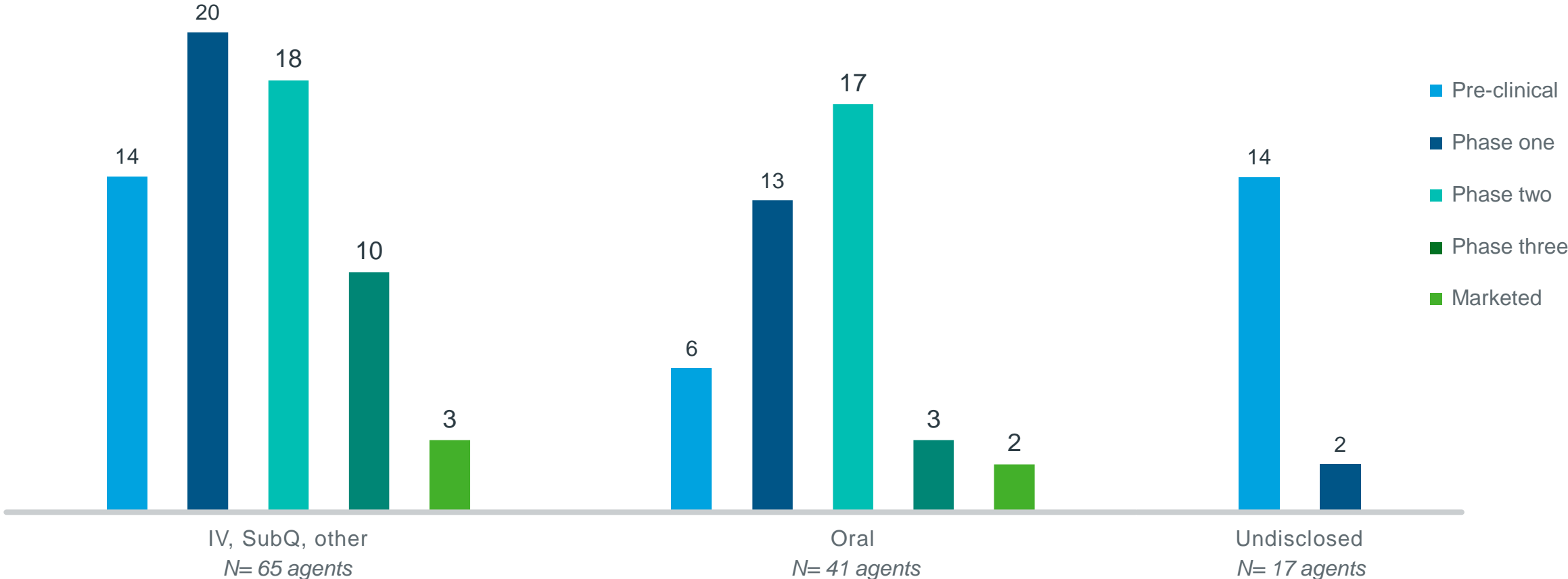
<b>Exenatide</b> <b>Bydureon®</b> Once Weekly <i>AstraZeneca</i>	<b>Once-weekly</b> <b>Bydureon BCise®</b> Once Weekly <i>AstraZeneca</i>	<b>Semaglutide</b> <b>Ozempic®/Wegovy®</b> Once Weekly <i>Novo Nordisk</i>	<b>Tirzepatide</b> <b>Mounjaro®/Zepbound®</b> Once Weekly <i>Lilly</i>
<b>Dulaglutide</b> <b>Trulicity®</b> Once Weekly <i>Lilly</i>	<b>Albiglutide</b> <b>Eperzan®/Tanzeum®</b> Once Weekly <i>GSK</i>	<b>Semaglutide</b> <b>Rybelsus®</b> Oral: Once Daily <i>Novo Nordisk</i>	



[\\*https://fortune.com/europe/2024/02/05/novo-nordisk-ceo-lars-fruergaard-jorgensen-surprised-weight-loss-wegovy-ozempic-europe-out-of-pocket/](https://fortune.com/europe/2024/02/05/novo-nordisk-ceo-lars-fruergaard-jorgensen-surprised-weight-loss-wegovy-ozempic-europe-out-of-pocket/)

# Pipelines are full of weight loss agents extending the trend

120+ weight loss agents are being developed by 60+ companies



Note: Pfizer includes Biohaven, Roche includes Carmot Therapeutics and AstraZeneca includes Eccogene; excludes partner logos e.g. Gubra/BI, Hanmi/MSD and Zealand Pharma/BI  
Sources: IQVIA Analytics Link, Refinitiv Workspace, TD Cowen, Clinicaltrials.gov  
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# GLP-1s for cardiovascular disease – the next big thing?

*Serendipitous finding...far-reaching implications*

In 2008 the FDA mandated Cardiovascular Outcome Trials (CVOT) for blood glucose therapies

- Prior blood glucose therapies showed increased CV risk by up to 2-3x
- This requirement was removed in 2018

Early GLP-1 drugs have CVOT data. Demonstrated GLP-1s to have a statistically significant reduced incidence of MACE (~9-16% reduction)

Several CVOT now on-going for T2D and obese populations to study potential reductions in MACE



# Recent Impact of GLP-1 on the MedTech industry

*Sharp reactions driven by 'what ifs' and hype rather than facts*

## What's Happening?

- Oct-2023 saw a **sharp reaction** from **MedTech sector** due to GLP-1 trial results
- **Novo Nordisk**: Ozempic® (T2D). FLOW trial. 11 Oct 2023, stopped trial 1-year early due to **positive results reducing progression to kidney failure**. Could reduce need for dialysis.

## SELECT trial:

- **Novo Nordisk**: Wegovy® (Obesity). SELECT trial. 17,500 pts
- The trial studied if Wegovy® could decrease time to first occurrence of MACE: heart attacks, strokes, cardiovascular death in obese population.
- First trial in non-diabetic patients for cardiovascular outcomes.
- 8 August 2023: Novo Nordisk reported out SELECT trial. Found **20% reduction vs placebo**.
- 10 Nov 2023: Full results presented at the American Heart Association and published in [the New England Journal of Medicine](#).

## Impact: MedTech Market Reaction

Novo Nordisk stops Ozempic kidney trial after early signs of success

By Patrick Wingrove  
October 10, 2023 11:42 PM GMT+1 - Updated 15 days ago



**Ozempic Shows Promise Treating Kidney Failure in Blow to Dialysis Firms**

Ozempic Is Moving a Bunch of Stocks Wednesday Morning

By Dan Caplinger - Oct 11, 2023 at 9:37AM

### KEY POINTS

- Markets were poised to move higher again on Wednesday morning.
- Shares of Novo Nordisk climbed on good news from a study of its drug Ozempic on kidney patients.
- Eli Lilly shares followed suit, but dialysis provider stocks fell sharply.
- 10 stocks we like better than Novo Nordisk

## Wegovy study details revive debate over GLP-1 impact on devices

The data confirmed a cardiovascular benefit for heart patients and showed the drug could help pre-diabetic patients control their blood sugar.

Published Nov. 13, 2023

T2D: Type 2 Diabetes

MACE: major adverse cardiovascular events

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# What is coming down the pipeline that could impact MedTech

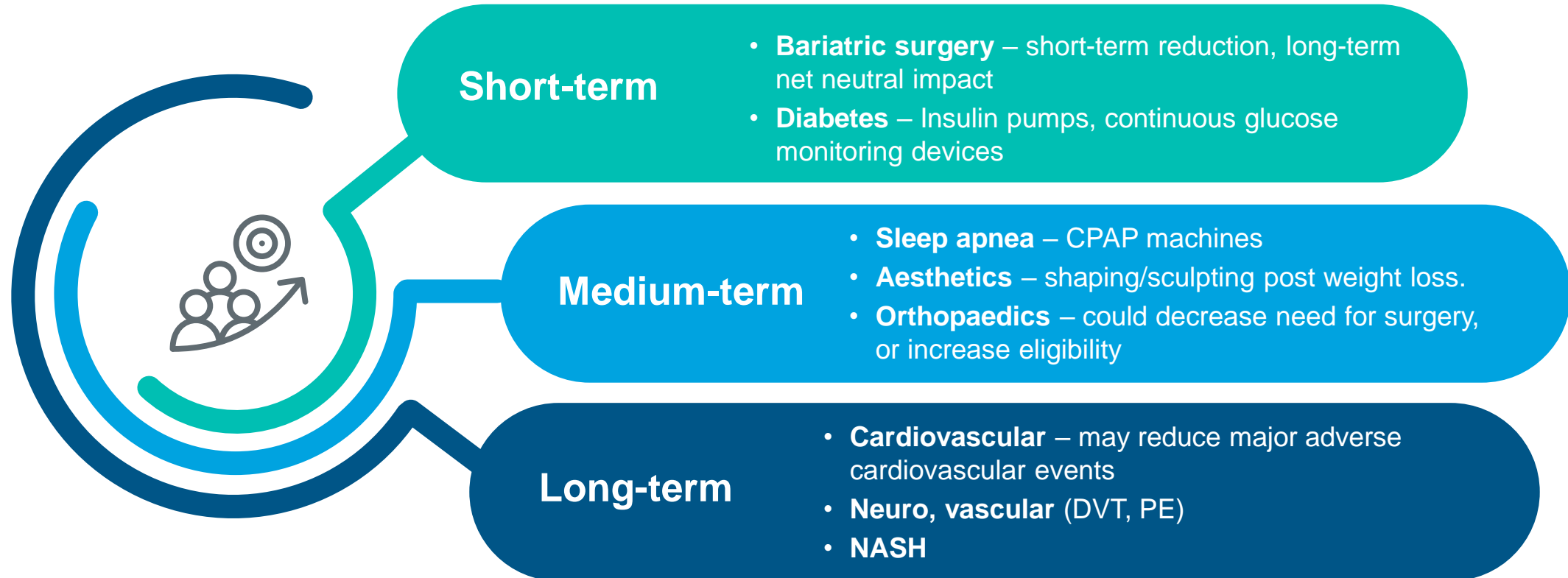
PRODUCT	SPONSOR	OUTCOMES	TRIAL NAME	END DATE	MEDTECH AFFECTED
Zepbound <sup>®</sup>	Lilly	OSA, Apnea-Hypopnea Index (AHI)	<a href="#">SURMOUNT-OSA</a>	Q1-2024	CPAP
Rybelsus <sup>®</sup>	Novo Nordisk	T2D w/CVD, MACE	<a href="#">SOUL</a>	Q2-2024	CVD
Wegovy <sup>®</sup>	Novo Nordisk	OA, WOMAC pain score	<a href="#">STEP-9 trial</a>	Q3-2024	Orthopaedics, Pain Mgmt.
Ozempic <sup>®</sup>	Novo Nordisk	T2D w/PAD, walking distance	<a href="#">STRIDE</a>	Q3-2024	Vascular surgery
Mounjaro <sup>®</sup>	Lilly	T2D, Reduction of first MACE	<a href="#">SURPASS-CVOT</a>	Q4-2024	CVD
Zepbound <sup>®</sup>	Lilly	Obesity, Reduction of first MACE	<a href="#">SURMOUNT-MMO</a>	Q4-2027	CVD

OSA: Obstructive Sleep Apnea  
MACE: Major Adverse Cardiac Event

WOMAC: Western Ontario and  
McMaster Arthritis Index

# Some reduction, some growth – GLP-1 impact on medical devices

*Need to keep an eye on short, medium and long-term potential impacts and plan accordingly*





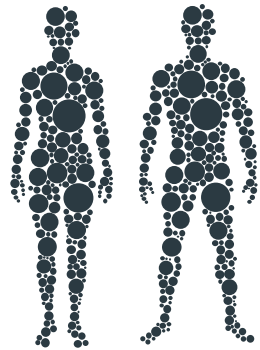
# Assessing the real impact of GLP-1s on MedTech



# Real World Evidence (RWE) contextualizes and extends RCTs

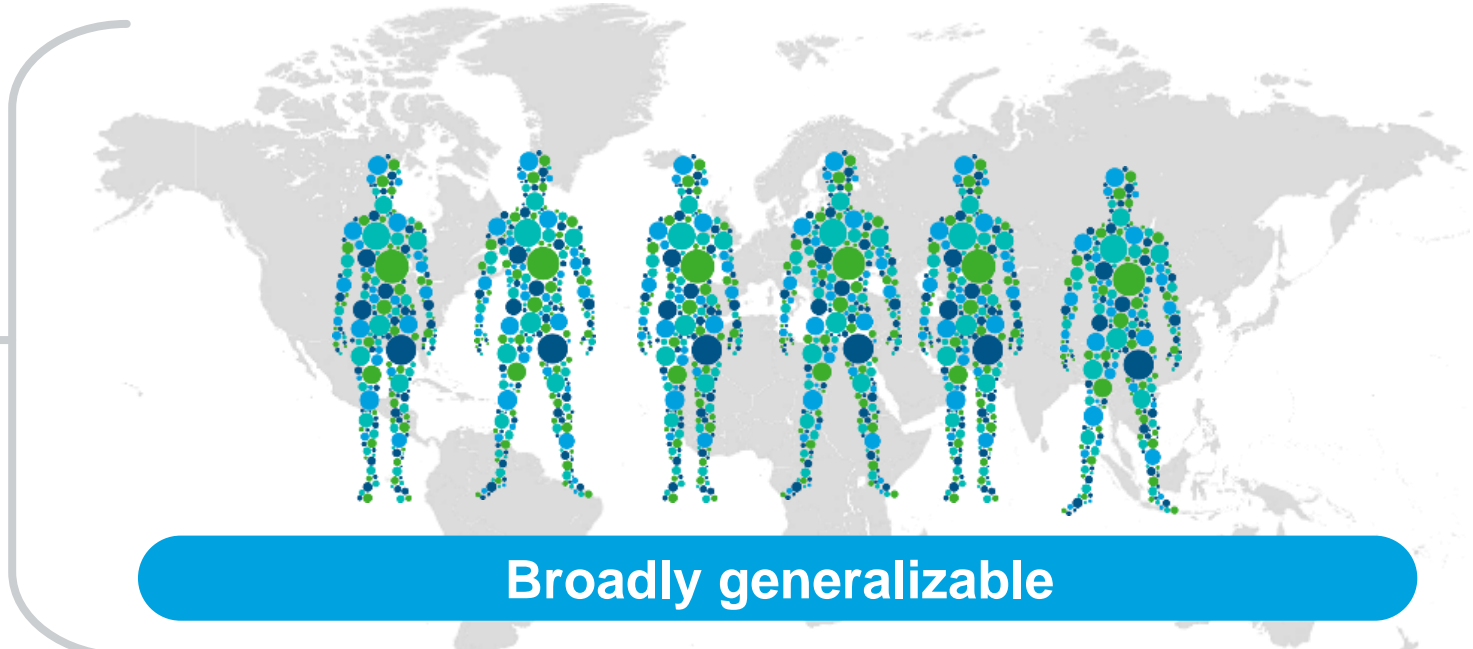
**RWE:** diverse patient populations, settings, and insights drawn from RWD

**RCT:** specific and controlled patient population and settings



## Internal validity

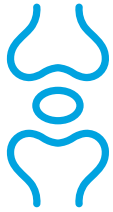
- Small population size
- Lack of diversity
- Controlled, clinical settings focused on patients most likely to benefit



## Broadly generalizable

- Observational
- Everyday settings, including at home use
- Diverse populations
- Diverse types of clinical care providers
- Larger scale data
- Longer term follow-up

# Two examples where RWE can help assess GLP-1 impact



## Orthopedics

- Knee deterioration can be accelerated with increased BMI
- Extreme BMI is a contraindication for knee replacement surgery

*Will increased use of obesity agents cause the markets for knee replacement devices to shrink or expand?*



## Diabetes

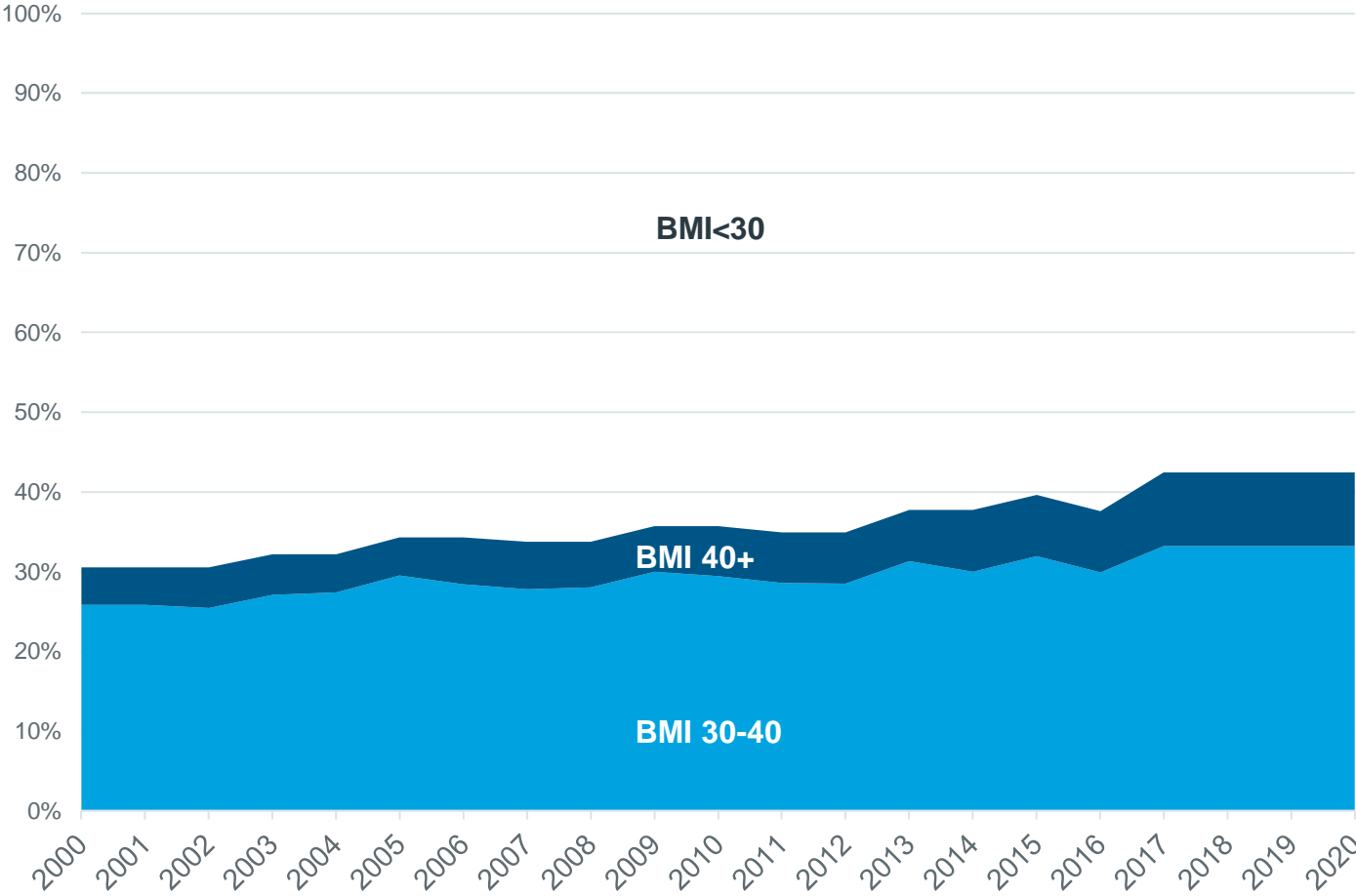
- High correlation between increased BMI and diabetes
- GLP-1 has direct impact on diabetes
- Many patients with high BMI and diabetes also have other comorbidities

*Will increased use of obesity agents directly impact multiple markets, and if so what does that mean for associated medical technologies?*

# Example 1 - Orthopedics

# Case Example: Impact of GLP-1s on an orthopedic technology

Obesity historical trend



Medical Device Example:

**255/100K**

Annual device use rate in total US population

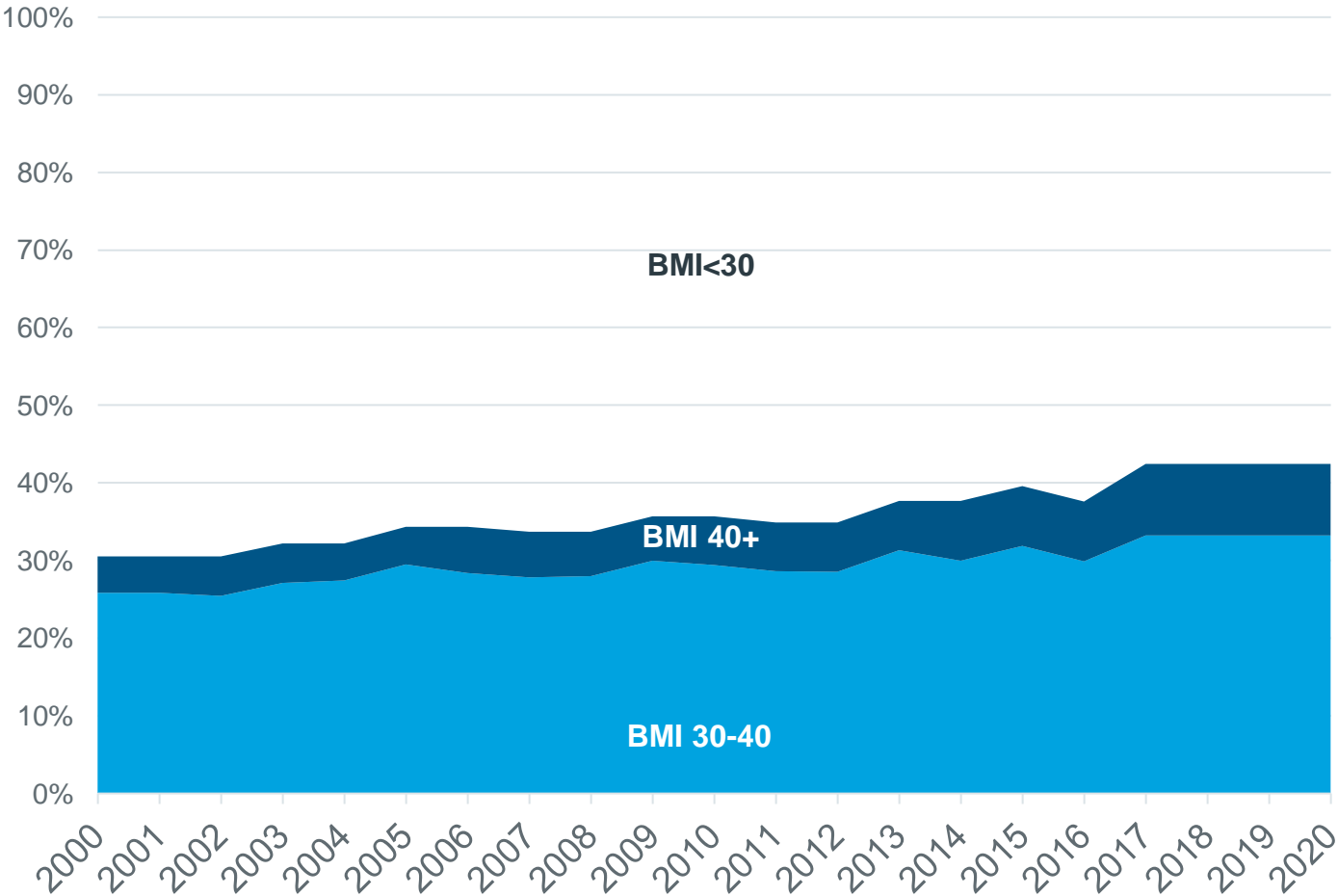
**649K**

Total devices used annually in 2020



# Case Example: Impact of GLP-1s on an orthopedic technology

Obesity historical trend



**255/100K**

Annual device use rate in total US population

**170/100K**

Use rate in non-obese population

**292K**

Approximate device uses in the US in 2020

Severely obese population

**420/100K**

Use rate in obese population

**357K**

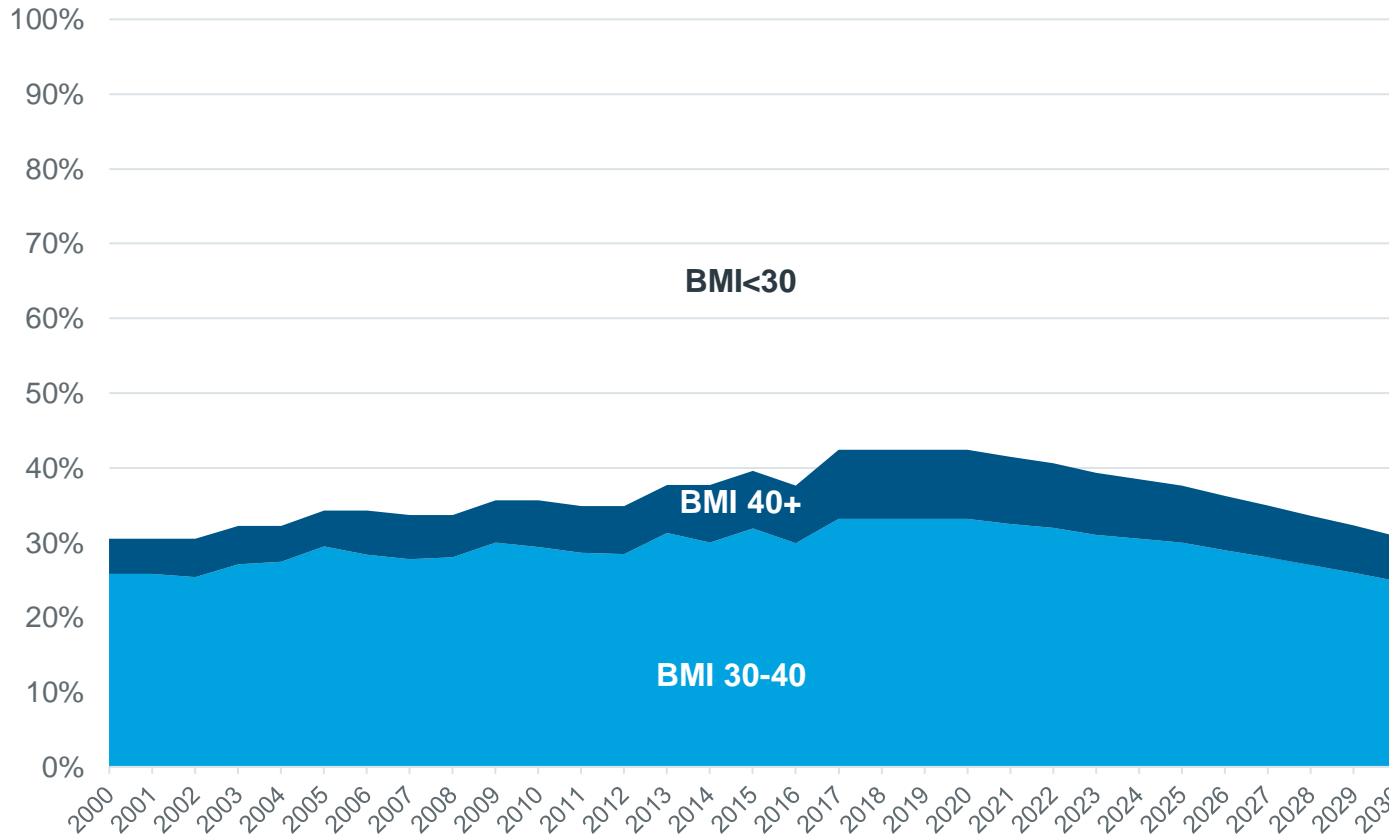
Approximate device uses in the US in 2020

**649K**

Total devices used annually in 2020

# Example scenario 1: GLP-1s reduce the obesity rate by 25%

25% Reduction in US Obesity



**170/100K**

Rate in non-obese population

**360K**

Approximate device uses in the US in 2030

Severely obese population

**420/100K**

Rate in Obese population

**294K**

Approximate device uses in the US in 2030

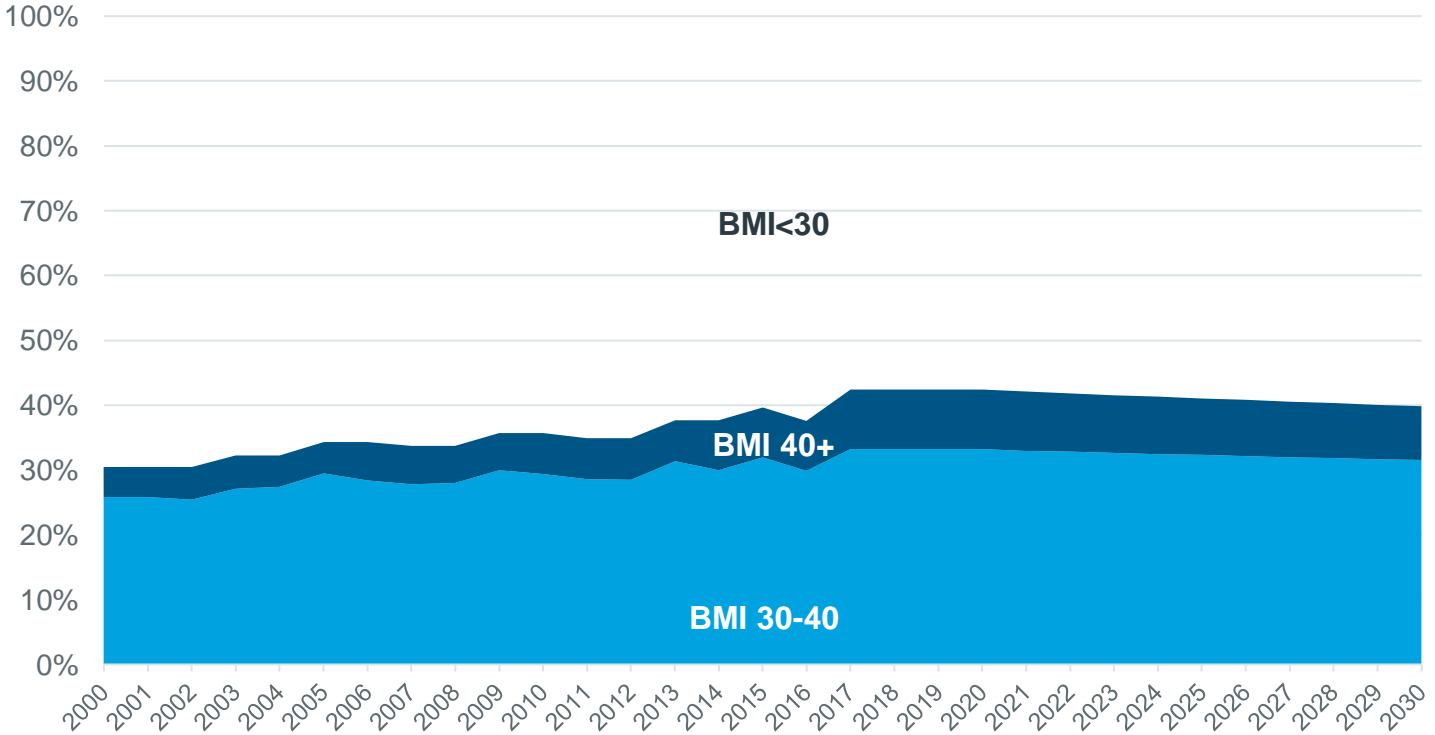
Flat from 2020

**654K**

Total devices expected annually in 2030

# Example scenario 2: GLP-1s reduce the obesity rate by 5%

5 % reduction in US Obesity



**170/100K**

Rate in non-obese population

**329K**

Approximate device uses in the US in 2030

Severely Obese Population

**420/100K**

Rate in Obese population:

**372K**

Approximate device uses in the US in 2030

1% CAGR

**701K**

Total devices expected annually in 2030

# RWD driving orthopedics analysis



## Claims data

Record of payments made for procedures and products



## Census data

US population records



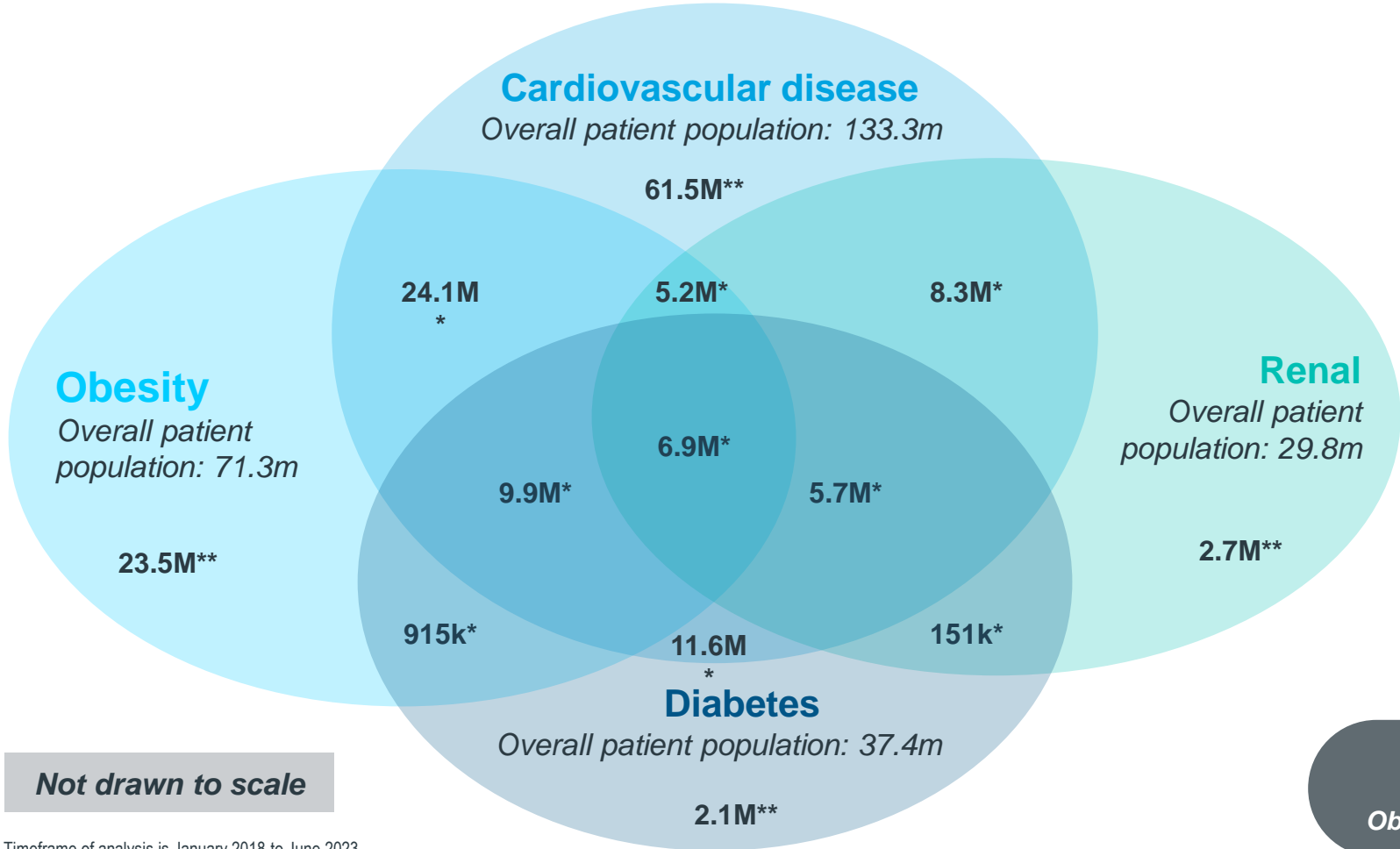
## Prescription data

Current rates of prescription, longitudinal rates and trends

## Example 2 - Diabetes

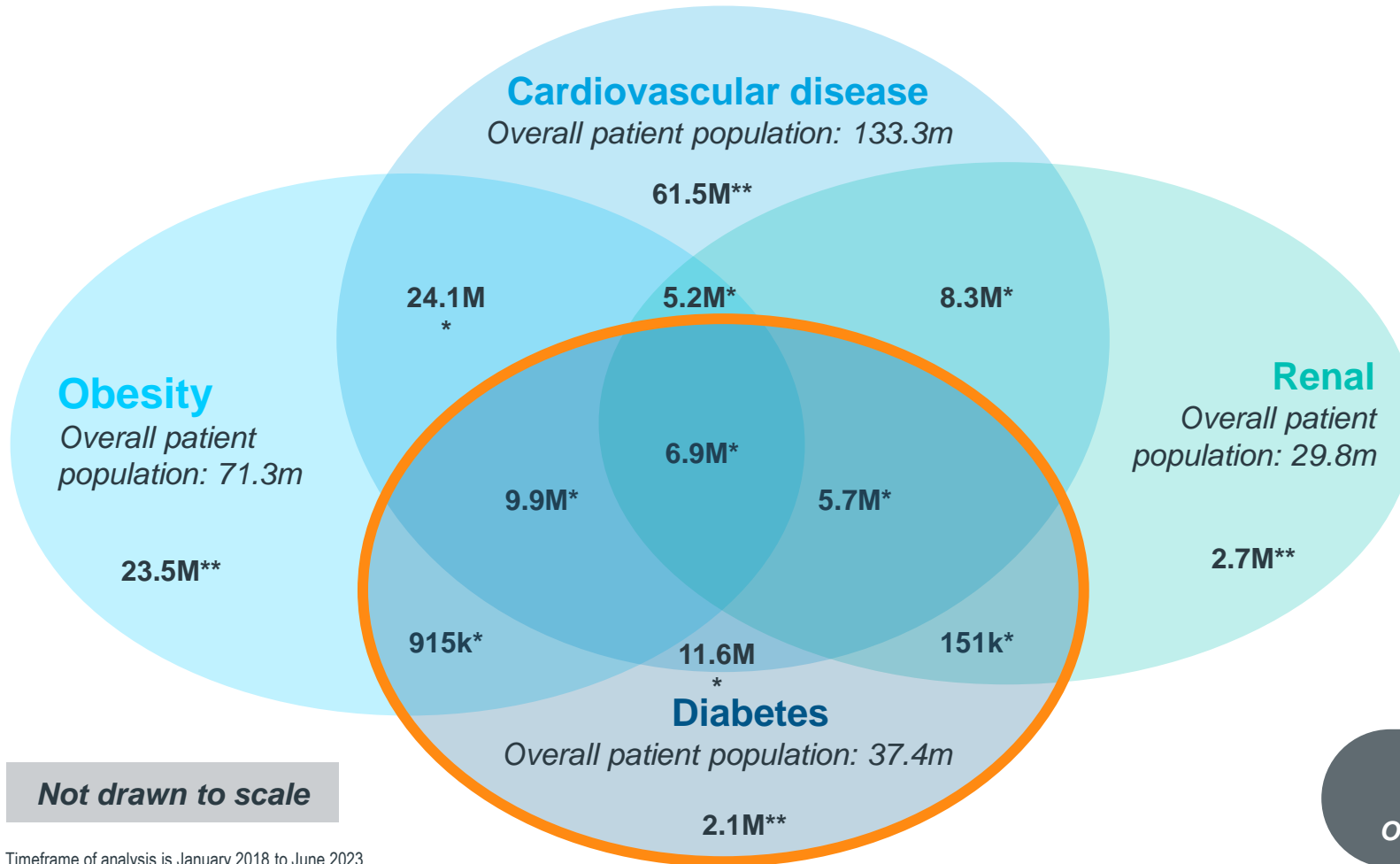
# The potential impact of GLP-1s in the cv-met space is complex

## US CV-met patient populations



Timeframe of analysis is January 2018 to June 2023  
 \*Represents number of patients in each Venn Diagram overlap  
 \*\*Represents number of patients in a single TA, i.e. have no comorbidity overlap  
 Patient population sizes include 2022+ data-active patients, or those with Rx or Dx claims in 2022 or 2023  
 Source: IQVIA LAAD; US Market Access Strategy Consulting analysis  
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# Example: Medical Devices for Diabetes



**Not drawn to scale**

## Considerations for MedTech in the diabetes space

- Will the obesity population decrease?
- Will the diabetes population also decrease?
- Will the entire CV-Met space decrease?
- Does the specific technology have applications in adjacent spaces?

*Not listed due to diagram spacing:  
Obesity & Renal ONLY overlap (717k patients),  
Obesity, Diabetes, & Renal ONLY overlap (78k patients)*

Timeframe of analysis is January 2018 to June 2023  
 \*Represents number of patients in each Venn Diagram overlap  
 \*\*Represents number of patients in a single TA, i.e. have no comorbidity overlap  
 Patient population sizes include 2022+ data-active patients, or those with Rx or Dx claims in 2022 or 2023  
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# RWD driving diabetes analysis



## Claims data

Open and closed, commercial and Medicare



## Census data

US population records



## Prescription data

Current and longitudinal prescription rates, trends



## Patient reported outcomes

Survey results, adherence data



## EMR data

Structured and unstructured data from treatment records



## Lab data

Testing rates, lab results



## Device data

Data collected from the medical technology

**+Others**



# Future state: Important considerations for MedTech given the new reality of GLP-1s

1

## Patient Landscape

A clear picture of the evolving patient landscape is critical

2

## Market Access

Payers will be constantly assessing the tradeoff between new technologies and the cost of expensive GLP-1s

3

## Reporting

The ubiquity of GLP-1s in the patient population will drive reporting, to include patient cohorts on clinical trials and potential drug/device interactions



**Taking the right  
path forward**

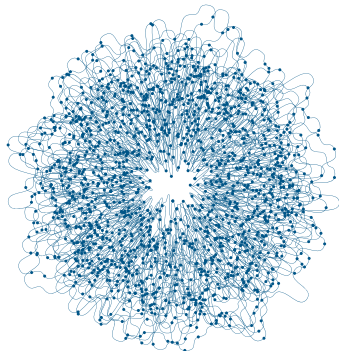


# Key building blocks to mastering the GLP-1 future

*GLP-1 impact collaborative approach: data, consulting, real-world evidence*

## 1 Data assets

- Prescription data, GLP-1 volume
- Procedure data, procedure volumes involving medical devices
- Claims analysis, co-morbidities



## 2 Analysis/ Consulting

- Longitudinal analysis of GLP1 patient vs procedure data or device delay
- Correlation between GLP1s and other disease areas
- Understand change in patient journey
- Conduct primary research to immediately gain market intelligence, physician viewpoints

## 3 Real-world evidence

- Analyze real-world data from various sources to generate evidence and insights to support:
- Investor/payer discussions
- Competitive positioning
- Longer-term business planning

**Prepare yourself to stay ahead of the changing market**

# Ensure you have the right data so nothing slips through the gaps

*Data to identify GLP-1 uptake, procedure volumes, and co-morbidities among GLP-1 patients*

## 1 Data assets

**Prescription data, GLP1 volume  
(IQVIA MIDAS and LRx data)**

- Obtain quantitative detail of GLP1 uptake among near-term target patient segment groups

**Procedure data, procedure volumes involving  
medical devices (IQVIA MIDAS data)**

- Review procedure volumes over time to confirm whether variance from historical trends

## 2 Analysis/ Consulting

## 3 Real-world evidence

**Claims analysis, co-morbidities  
(IQVIA US claims data)**

- Determine co-morbidities among GLP1 patients to identify uptake among longer-term patient segment groups

# Tap into market expertise to analyze and strategize

*Enhance understanding of data implications by utilizing analysis and consulting services*

## 1 Data assets

### Longitudinal analysis of GLP1 patient vs procedure data or device delay (IQVIA PharMetrics Plus for MedTech)

- Review of longitudinal data to determine whether GLP1 patients realize delay in progression to procedure/device
- Gain greater understanding of real change in Patient Journey among GLP-1 patients

### Conduct primary research to immediately gain market intelligence, physician viewpoints (IQVIA Primary Intelligence)

- Determine current and future GLP1 prescription habits among select HCPs for designated patient segments

## 2 Analysis/ Consulting

### Correlation between GLP1s and other disease areas (IQVIA LRx data)

- Identify likelihood of GLP1 patients needing treatment/management for multiple diseases

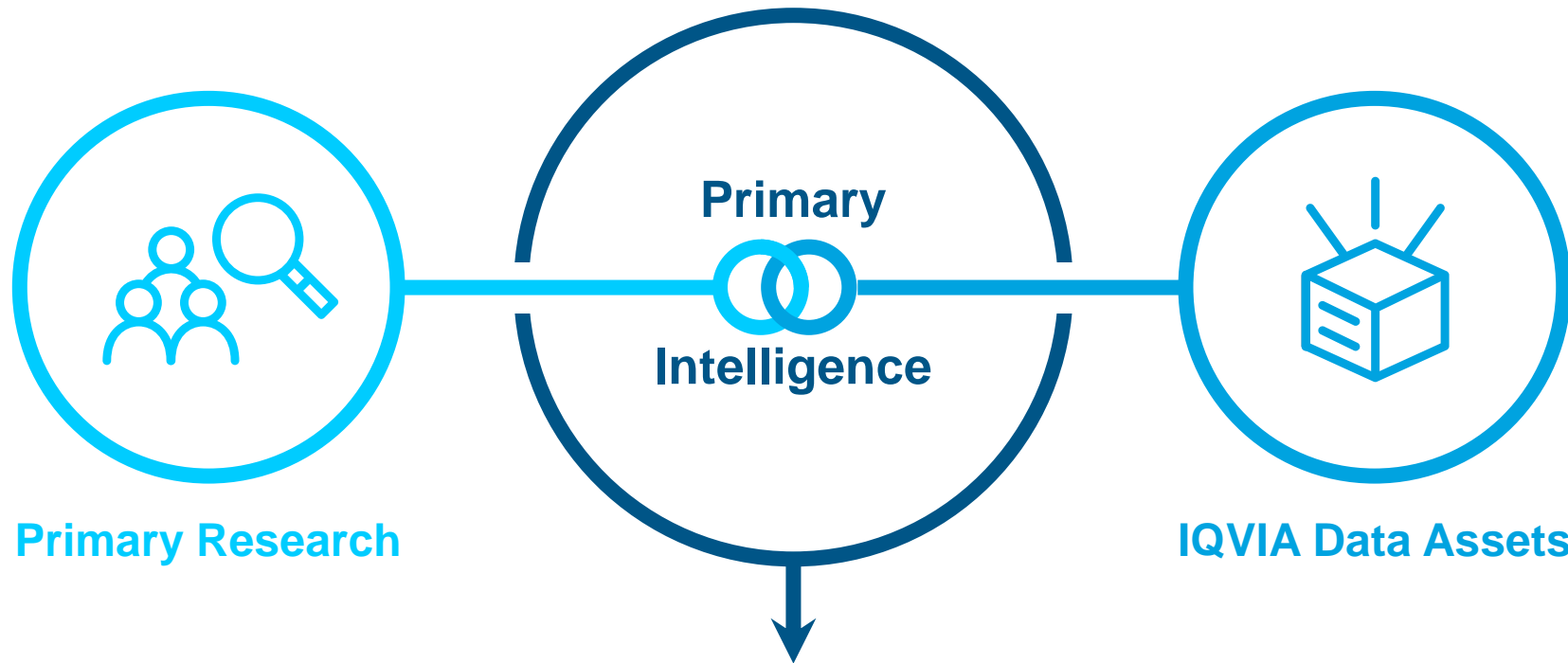
### Engage in social media listening to understand consumer views of GLP-1 (IQVIA Social Media Intelligence)

- Enhance understanding of patient incentives to initiate – and terminate – GLP1 therapy

## 3 Real-world evidence

# Combine sources to uncover deeper GLP-1 insights

*IQVIA's primary intelligence (PI) strategy is to combine industry leading research capabilities with IQVIA data assets to redefine how our clients address their research needs*



Primary Research

IQVIA Data Assets

Primary Intelligence

## Primary Research Redefined

Making current research approaches better through integration

### Our PI Mission:

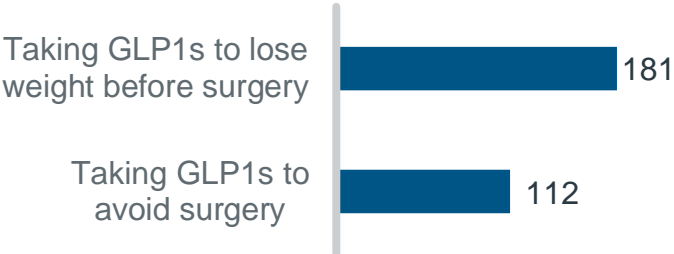
- Leverage all relevant IQVIA assets in our work
- Create integrated solutions that enhance industry research standards
- Help our clients find better answers to their most critical research questions

# Joint patients mention using GLP-1s to lose weight to ensure they can have surgery to solve the issue

Several patients suffering from chronic pain also criticized GLP1s for not reducing their pain or reducing the effectiveness of their pain medication

## Top topics of patient discussions on orthopedic procedures and GLP1s

N=293\*



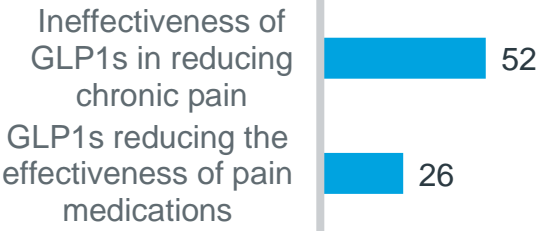
- Most patients who mentioned taking GLP1s while having joint pain as a comorbidity discussed wanting to lose weight to facilitate an impending surgery. In most such cases, the HCPs suggesting losing weight before the surgery
- Fewer patients mentioned wanting to lose weight using GLP1s to avoid undergoing joint-related procedures

“I found that I had drastically reduced knee pain. My doctor suggested joint replacement, but we agreed to try Ozempic first and within 2 weeks, I was sleeping through the night.”

“My husband needs Wegovy and can't wait any longer because he needs to lose weight in order to have hip surgery”

## Top topics of patient discussions on pain management devices and GLP1s

N=78\*



- Most patients who mentioned taking GLP1s while having chronic pain as a comorbidity did not experience any reduction in their pain-related symptoms
- Some patients also mentioned GLP1s reducing the effectiveness of their pain medication leading them to drop off GLP1s

“I was meaning the ozempic didn't take away all my IC symptoms. I have still a lot of pain and sometimes I can't even stand it”

“Do you think Ozempic reduces the effectiveness of your pain med? I have a pain pump and I feel I have no relief. I feel defeated”

\*293/391 patient conversations mentioned the impact of GLP-1s on orthopedic procedures. Only top topics are depicted.  
\*\*\*78/101 patient conversations mentioned the impact of GLP-1s on pain management devices. Only top topics are depicted.  
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# Utilize RWE to address external concerns about GLP-1 impact

*Address analyst and other concerns using evidence-based outcomes*

**1** Data assets

**2** Analysis/  
Consulting

**3** Real-world  
evidence

Analyze real-world data from various sources to generate evidence and insights to support

Counter hypothetical scenarios with real-world evidence demonstrating actual outcomes

- Investor/Payer discussions
- Competitive positioning
- Longer-term business planning



# Example: Orthopaedics

## Situation

- Manufacturer of orthopaedic implants for knee and hip joint replacements sought to use data to understand the BMI distribution of patients receiving total joint replacements (TJR) and how GLP1 antagonists would impact the market.
  - > Would the increase in GLP1 use cause more patients to be eligible for TJR?
  - > Would the increase in GLP1 use cause less individuals to need TJR?
  - > What does the TJR patient population look like from a longitudinal lens?

## Solution

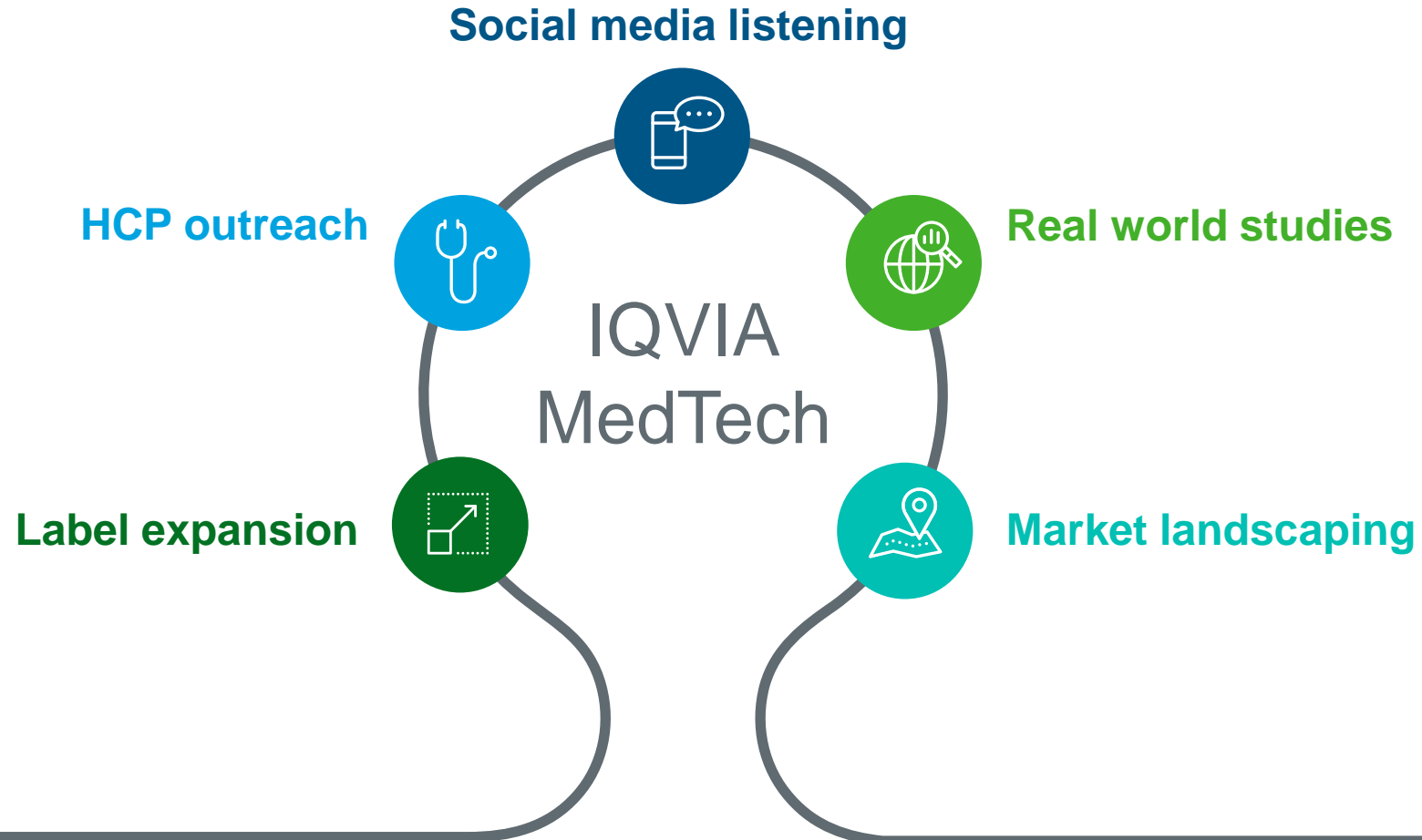
- Provided an analysis for patients, procedures, and drugs based on un-projected longitudinal prescription and medical claims data.
- Utilized BMI diagnosis codes and other weight indicators to show total joint replacement volume by BMI category or by other indicators to infer categories of health.
- Provided additional data views enabling client to assess the use of GLP1s, as well as the Hip and Knee Replacement market in relation to patient weight.

## Key Takeaways

- IQVIA RWD Analysis found no major impact on the TJR market from GLP-1 usage today
- Losing weight or initiating GLP-1 did not appear to impact procedure volume, even with the recent uptick in prescriptions; the percentage of these patients progressing to TJR has remained steady over recent years

# How IQVIA MedTech is supporting the industry

*Examples of current GLP-1 projects we are running*



## 3 key takeaways

1

GLP-1s are changing the entire healthcare landscape

2

Arm yourself with data-driven evidence to counter the noise

3

Don't despair! GLP-1s are creating MedTech opportunities as well as challenges

# Thank you

For more, visit [iqviamedtech.com](https://iqviamedtech.com)

