Medicaid Policy Matters Webinar Series

GLP-1s: Uptake, Adherence, and Safety From Real World Evidence

February 26, 2026

centerforevidencebasedpolicy.org

Webinar Aims

Today's webinar will focus on adherence to and safety of GLP-1s within the Medicaid context. We will use real-world data, to help inform coverage policies

Executive Summary

- The use of GLP-1s is rapidly increasing for a range of indications
  - Appearance of effectiveness for various indications based on randomized controlled trials
  - Concern around use in the real world, including adherence and safety
- Studies of GLP-1 adherence and safety, using real-world data, do not often include people covered by Medicaid
  - Important differences in adherence and safety may exist in Medicaid populations, and have therefore not been studied or understood
- Medicaid claims data can be used to document GLP-1 utilization trends in Medicaid, including adherence and safety trends
- Findings from Medicaid claims data indicate:
  - Rapid growth in GLP-1 use among Medicaid members in recent years
  - Low adherence and high discontinuation rates across these medications
  - No differences in overall rates of adverse events between these medications

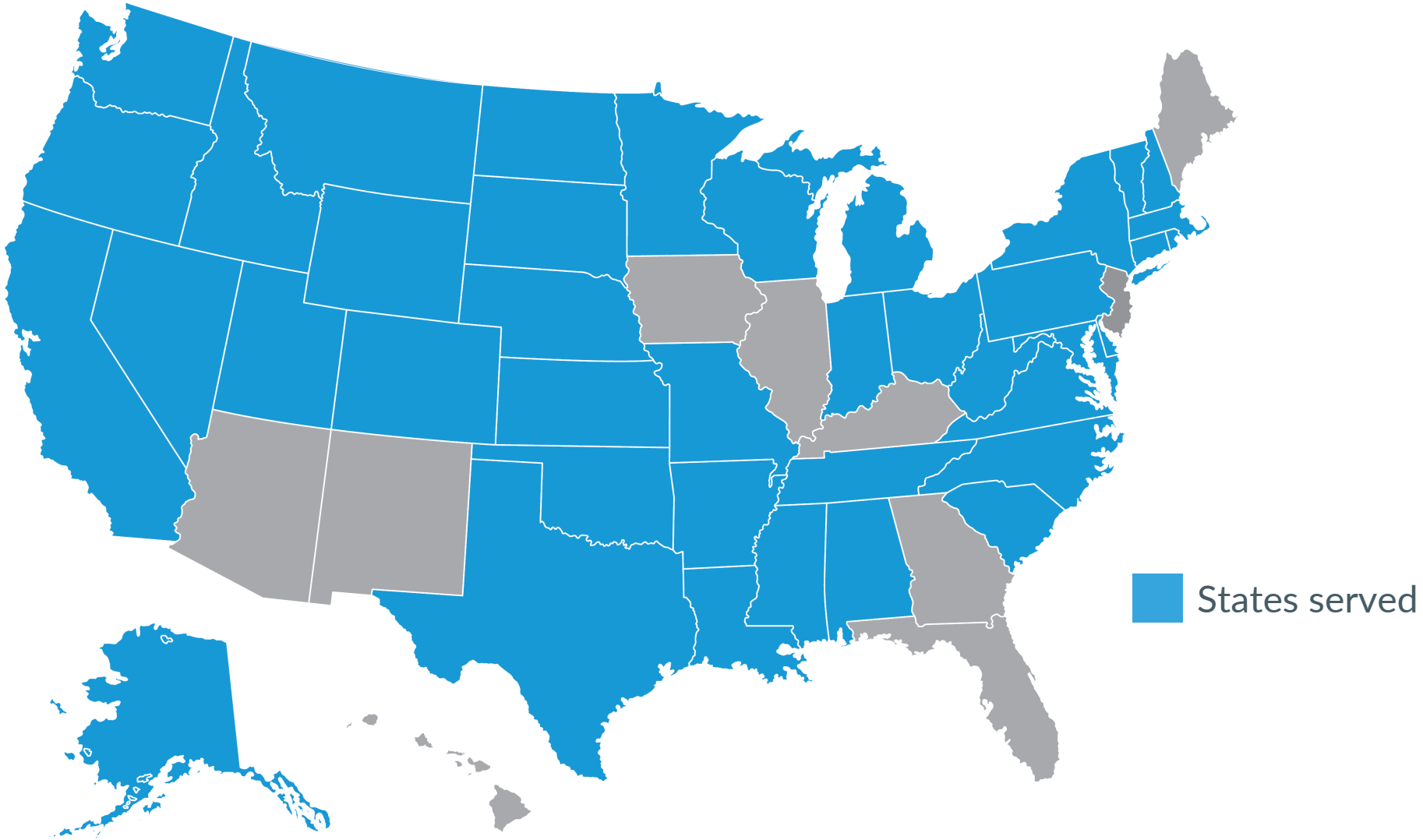
About the Center for Evidence-based Policy

About Our Work

Rigorous and **neutral** research and technical assistance services to support state policymakers:

- Evidence review and synthesis
- Data analytics including administrative data integration, management, and analysis
- Policy analysis
- Technical assistance (operational and process-related)
- Trainings and workshops on evidence-based decision making

40 States Served Since 2003



About Our Organization

- Established in 2003 at Oregon Health & Science University
- Our work is driven by states, 90% related to Medicaid
- We are not funded by industry or associations
- We are nonpartisan and we do not lobby
- Our work is typically proprietary

Who Are We?

OUR STAFF

- Systematic reviewers
- Policy analysts
- Physicians
- Pharmacists
- Nurses
- Genetics professionals
- Epidemiologists
- Librarians
- Data scientists
- Technical editors
- Researchers

OUR WORK IN 2025

- Produced 50 evidence reports
- 23 policy briefs
- Researched 40 topics
- Screened over 30,000 titles and abstracts
- 11 surveillance reports
- Graded 600 articles for quality
- 180 unique projects

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Agenda Overview

1. Background and Overview
2. Methods
3. Findings
   - Uptake of GLP-1s in Medicaid
   - Adherence and Discontinuation
   - Safety and Adverse Events
4. Discussion and State Considerations

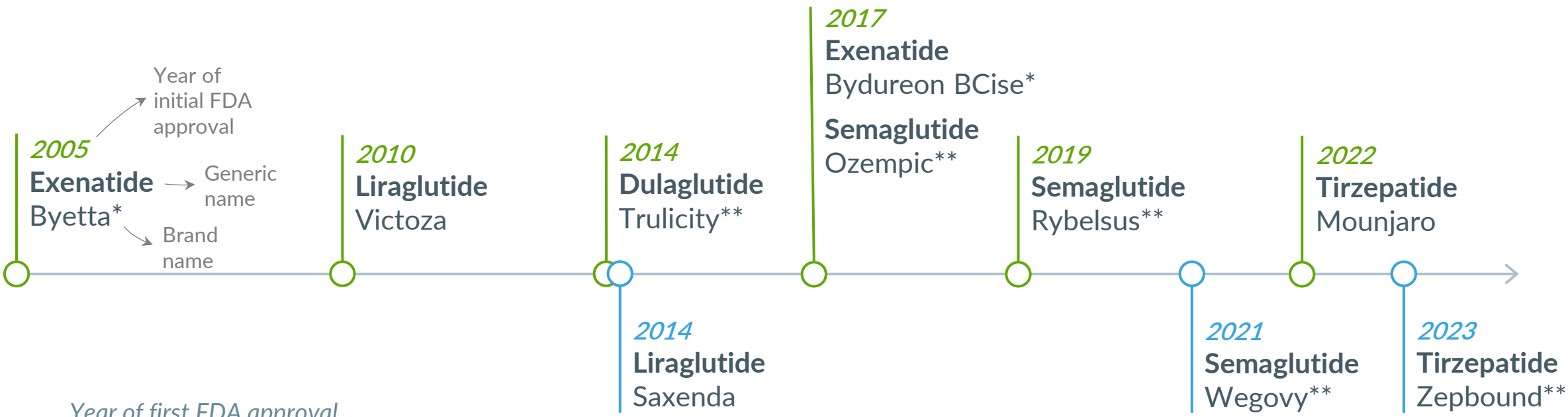
Background and Overview

What Are GLP-1s?

Glucagon-like peptide-1 (GLP-1) and glucose-dependent insulinotropic polypeptide (GIP)/GLP-1 receptor agonists (collectively, GLP-1s)

- Help regulate blood sugar
- Primarily available as subcutaneous injections
- Approved for a growing number of indications:
  - Type 2 diabetes (T2D)
  - Chronic weight management
  - Major adverse cardiac events
  - Obstructive sleep apnea
  - Metabolic-associated steatohepatitis

GLP-1s on the Market



Year of first FDA approval
Generic name
Brand name

○ Approval for type 2 diabetes
○ Approval for weight management

* Discontinued in October 2024
** Approved for other conditions after initial approval

Aim of Research

Investigate differences in adherence and safety of GLP-1s in real-world settings, to inform Medicaid coverage policies

Focus of today's presentation

SYSTEMATIC REVIEW

Assess the comparative adherence and safety of approved GLP-1s as reported in published real-world evidence (RWE) studies

+

MEDICAID DATA SUPPLEMENT

Analyze Medicaid-specific real-world data on adherence and safety of approved GLP-1s using the same methods used in other RWE studies

Acknowledge other authors, including Shauna Durbin, Andrea Vintro, Hilary Jasmin, Shannon Robalino, and Beth Shaw

What Is Real-World Evidence (RWE)?

"**RWE refers to insights gained from data collected outside of traditional clinical trials,** such as electronic health records, registries, wearables, and medical devices. Unlike clinical trial data, RWE data is initially gathered for other uses and then repurposed for research."

-European Patients' Academy on Therapeutic Innovation (EUPATI)

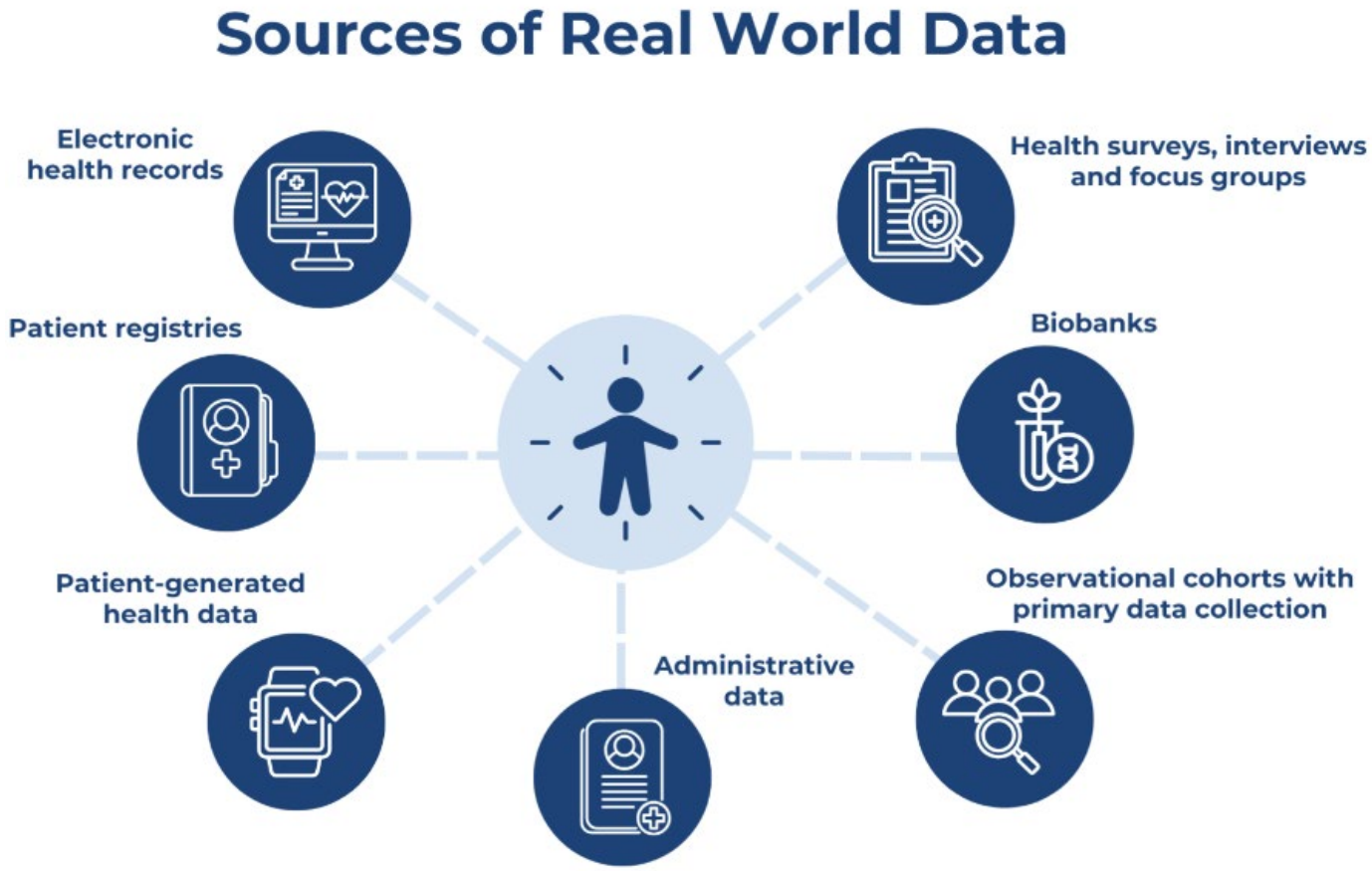


Image source. EUPATI.edu

Why Is RWE Important?

- Clinical trials are limited in what they can tell us about adherence and safety
  - Trial participants are often more adherent to treatments than patients would be in a real-world setting
  - Clinical trials may lack:
    - Duration (trial length) needed to assess long-term patient behavior
    - Sample sizes (number of participants) needed to detect rare but serious outcomes
  - Few clinical trials have directly compared GLP-1 therapies
- Limited generalizability of existing evidence to populations of Medicaid members

What Does RWE Tell Us About Safety and Adherence?

- RWE studies revealed key adherence and safety patterns
  - May be evidence that some GLP-1s are associated with higher rates of adherence than others
  - Limited evidence that safety does not differ significantly among GLP-1s
- Despite large sample sizes, still some uncertainty
  - Concerns around confounding (correlation but perhaps not causation)
  - Limited generalizability (patterns may or may not apply broadly)
  - Challenges with data used for analysis
- Continues to be an area of ongoing research

Methods

Data Source

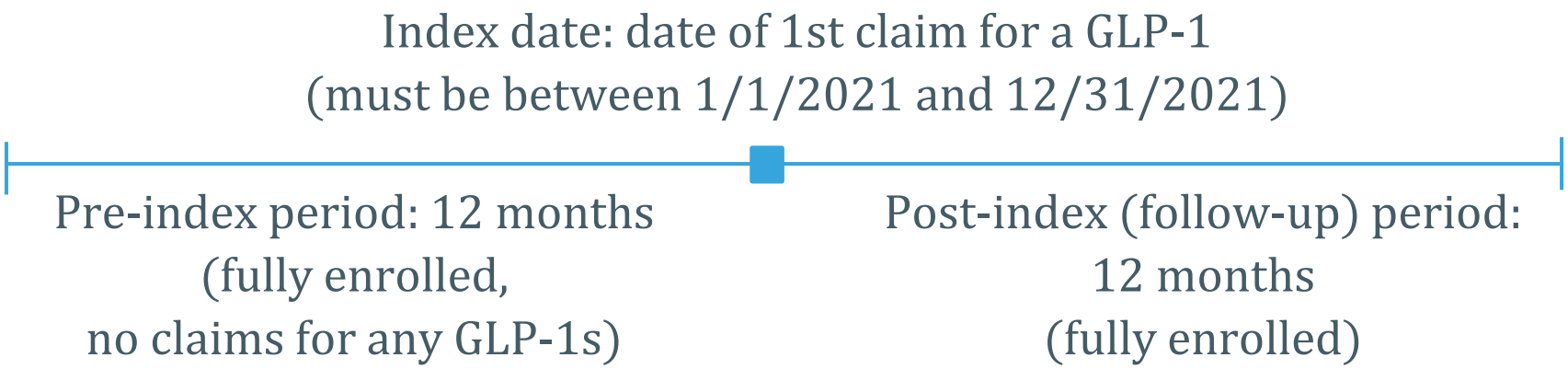
- Medicaid claims data: Transformed Medicaid Statistical Information System (T-MSIS) analytic files from Centers for Medicare & Medicaid Services (CMS)
- All non–dually eligible members in years 2019 to 2022 (latest available)
  - Demographic and enrollment information
  - Medical and pharmacy claims

GLP-1 Uptake

- Identified Medicaid members aged 18 to 64 years with at least 1 claim for any of the GLP-1 treatments on the market
- Summarized:
  - Number of GLP-1 claims and number of members with GLP-1 claims by drug, state, and year
  - Characteristics of members with GLP-1 claims (sex, age, race or ethnicity, type 2 diabetes status)

GLP-1 Adherence and Safety

- For analyses on adherence and safety, we constructed a study cohort of members who:
  - Initiated a GLP-1 treatment between Jan 1, 2021, and Dec 31, 2021 (date of the 1st GLP-1 claim = Index Date)
  - Were GLP-1 naïve (no GLP-1 claims in the previous 12 months)
  - Had 12-month follow-up data



Findings

Uptake of GLP-1s in Medicaid

GLP-1 Claims in Medicaid Overall, 2022

Number of GLP-1 claims and members with claims for GLP-1 treatments by brand, 2022

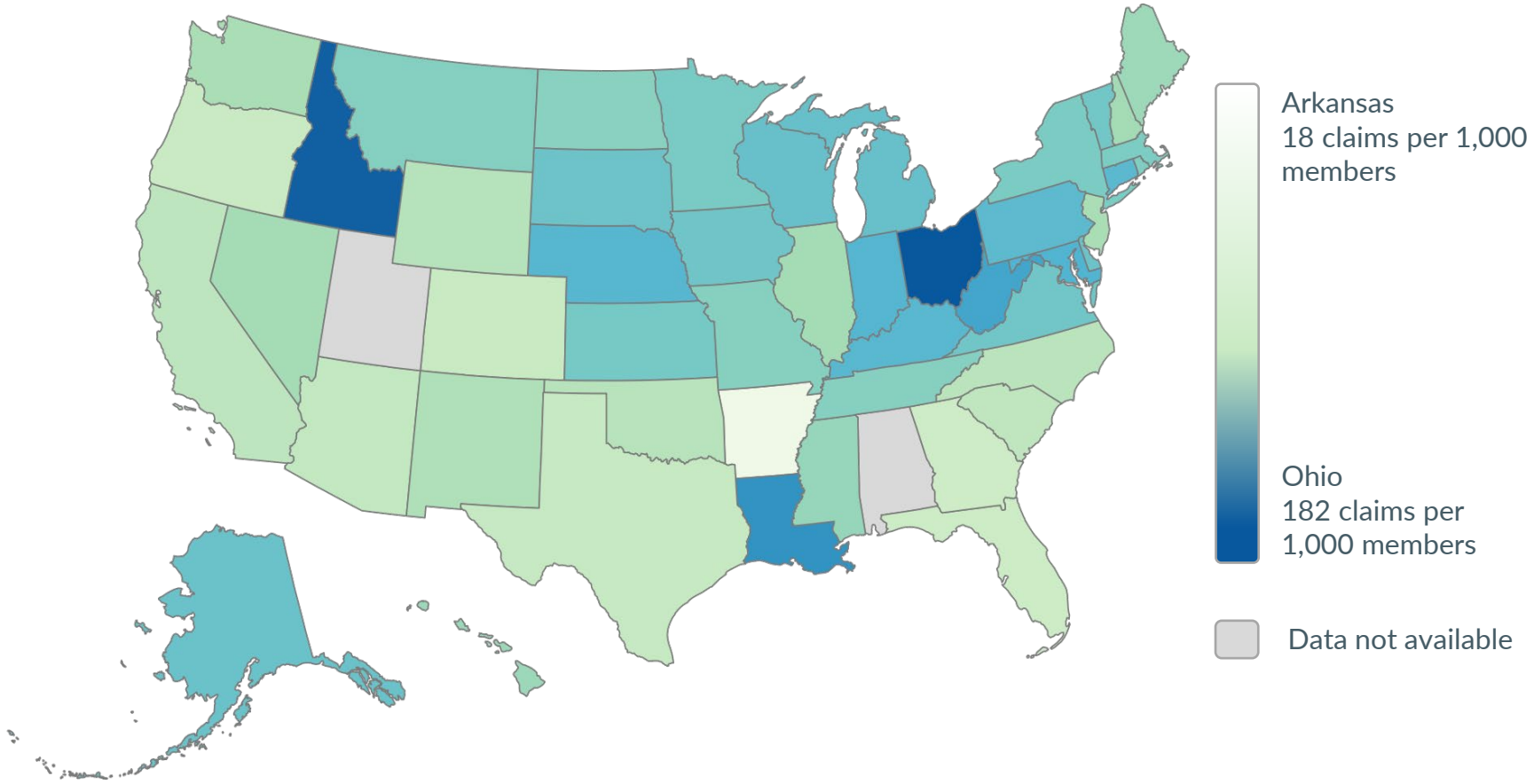
		Claims		Members	
Generic name	**Brand name**	**N[a]**	**%**	**N[a]**	**%**
Dulaglutide	Trulicity	2,081,159	51.0	348,655	48.6
Exenatide	Bydureon BCise	98,359	2.4	17,319	2.4
Exenatide	Byetta	12,078	< 1	3,158	< 1
Liraglutide	Saxenda	63,241	1.6	21,999	3.1
Liraglutide	Victoza	618,218	15.2	120,769	16.8
Semaglutide	Ozempic	985,917	24.2	212,121	29.5
Semaglutide	Rybelsus	152,318	3.7	39,606	5.5
Semaglutide	Wegovy	29,054	< 1	7,863	1.1
Tirzepatide	Mounjaro	38,016	< 1	15,691	2.2
Total		**4,078,360**		**717,899**	

Note. [a] *Excluding dually eligible members and members in Alabama and Utah.*

GLP-1 Claims in Medicaid by State, 2022

GLP-1 use among Medicaid members varied 10-fold across states

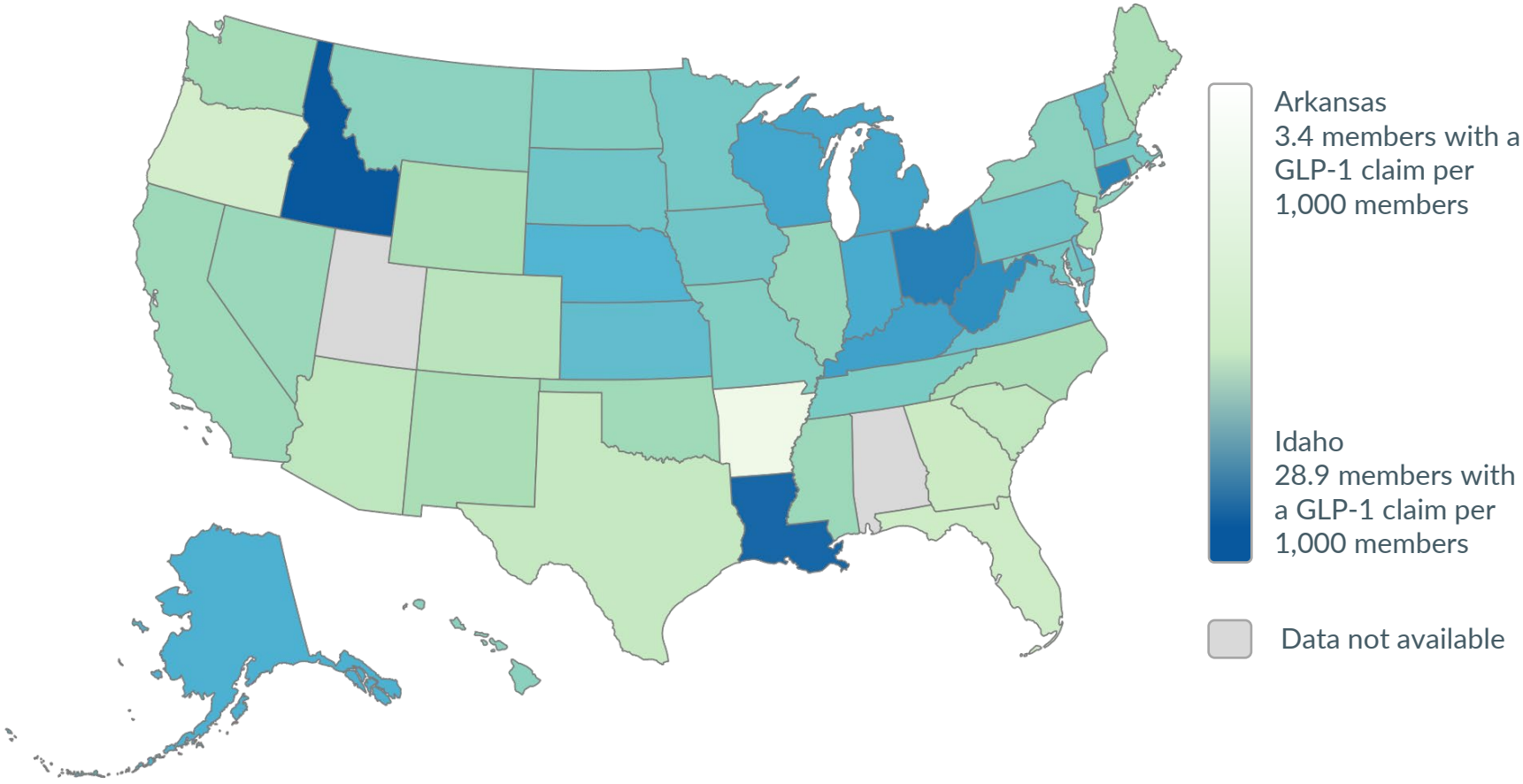
Number of GLP-1 claims per 1,000 members aged 18 to 64 years, by state, 2022



Members With GLP-1 Claims by State, 2022

Number of Medicaid members with GLP-1 claims varied 8-fold across states

Number of members with GLP-1 claims per 1,000 members aged 18 to 64 years, by state, 2022



Members With GLP-1 Claims, 2022: Demographics

Demographic group	With GLP-1 claims N[a]	With GLP-1 claims %	Without GLP-1 claims N[a]	Without GLP-1 claims %
Age				
18–34	98,225	13.7	24,883,654	52.1
35–44	157,860	22.0	10,366,735	21.7
45–54	224,315	31.2	6,801,446	14.2
55–64	237,499	33.1	5,752,853	12.0
Sex				
Female	484,701	67.5	27,700,308	57.9
Male	233,198	32.5	20,103,994	42.1
Race and Ethnicity				
Am. Indian/Alaska Nat., non-Hispanic	10,032	2.1	491,157	1.5
Asian, non-Hispanic	16,714	3.4	1,620,674	5.0
Black, non-Hispanic	95,362	19.5	6,624,558	20.3
Hispanic	124,889	25.6	9,278,115	28.5
Native Hawaiian or Pacific Islander, non-Hispanic	7,490	1.5	318,169	1.0
White, non-Hispanic	224,686	46.0	13,695,527	42.0
Multiracial, non-Hispanic	4,113	< 1	334,001	1.0
Other race/ethnicity	5,047	1.0	242,867	< 1
Total	**717,899**		**47,804,688**	

Note. [a] *Excluding dually eligible members and members in Alabama and Utah.*

Members With GLP-1 Claims, 2022: T2D Status

Presence of type 2 diabetes (T2D) diagnosis among members with GLP-1 claims, 2022

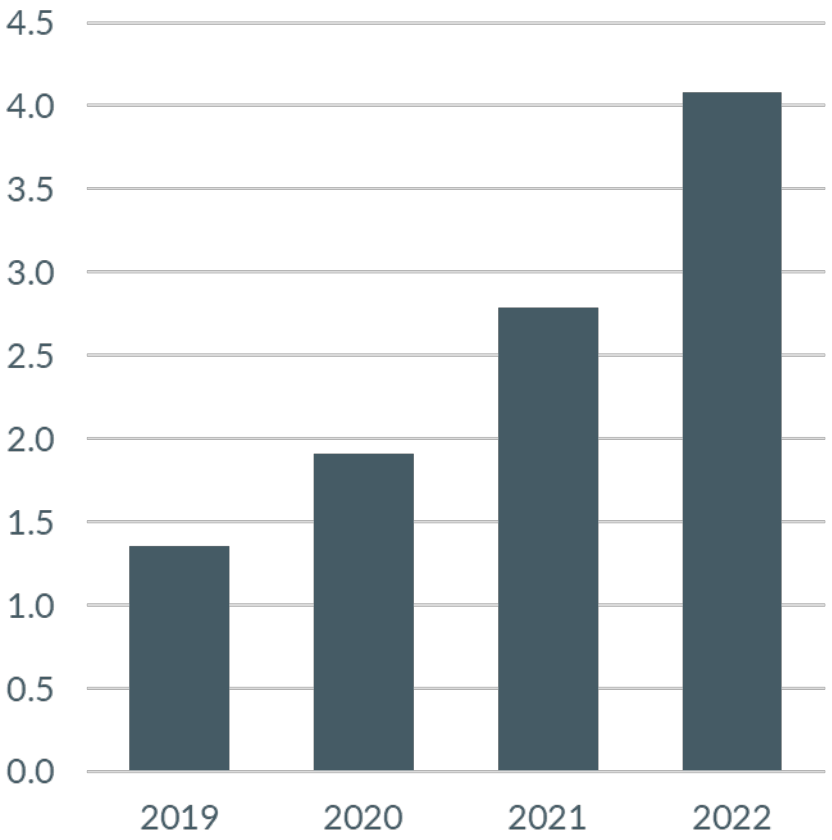
			Members with T2D	
Generic name	**Brand name**	All members[a]	N[a]	%
Dulaglutide	Trulicity	348,655	313,149	89.8
Exenatide	Bydureon BCise	17,319	16,348	94.4
Exenatide	Byetta	3,158	2,877	91.1
Liraglutide	Saxenda	21,999	3,118	14.2
Liraglutide	Victoza	120,769	102,131	84.6
Semaglutide	Ozempic	212,121	161,957	76.4
Semaglutide	Rybelsus	39,606	33,906	85.6
Semaglutide	Wegovy	7,863	1,779	22.6
Tirzepatide	Mounjaro	15,691	9879	63.0
Total		**717,899**	**585,260**	**81.5**

Note. [a] Excluding dually eligible members and members in Alabama and Utah.

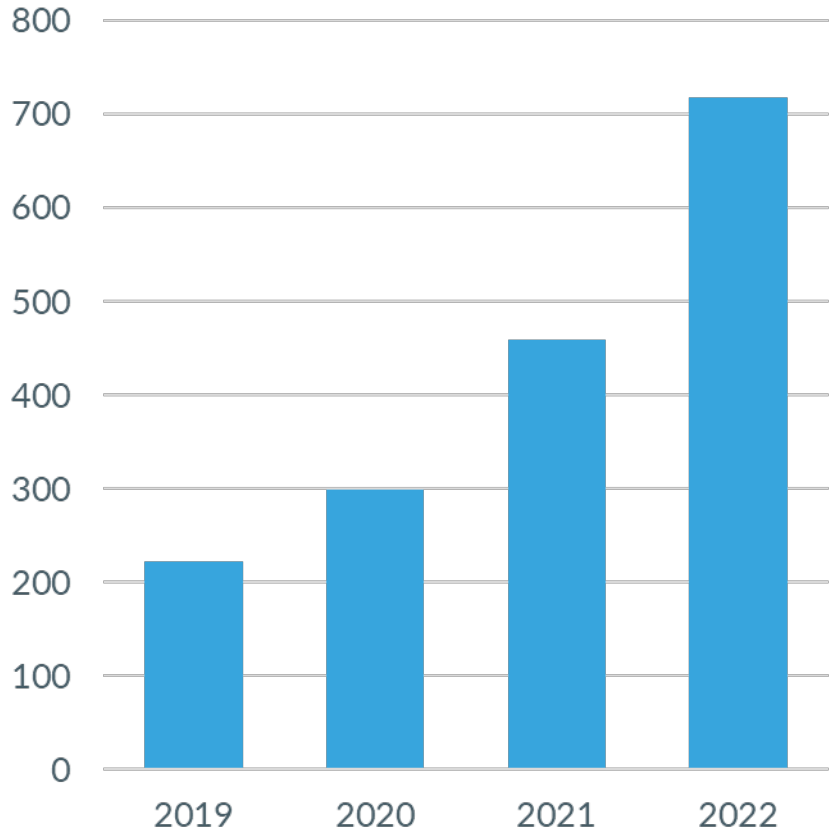
GLP-1 Utilization Over Time *(1 of 3)*

GLP-1 utilization increased 3-fold between 2019 and 2022

GLP-1 claims (in millions)[a]



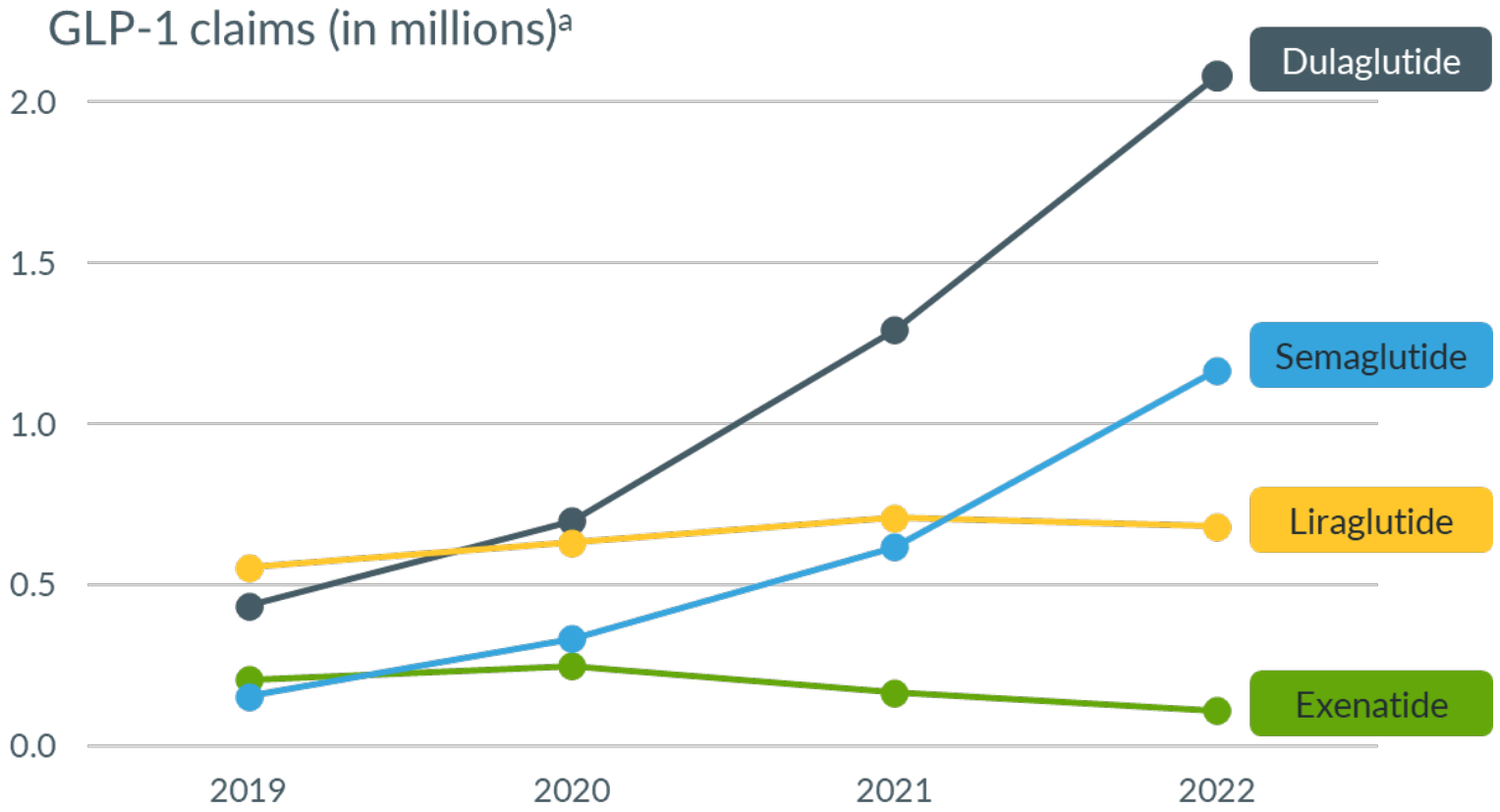
Medicaid members with GLP-1 claims (in thousands)[a]



Notes. [a] *Excluding dually eligible members and members in Alabama and Utah in all years; also excluding Mississippi from years 2019 to 2021.*

GLP-1 Utilization Over Time *(2 of 3)*

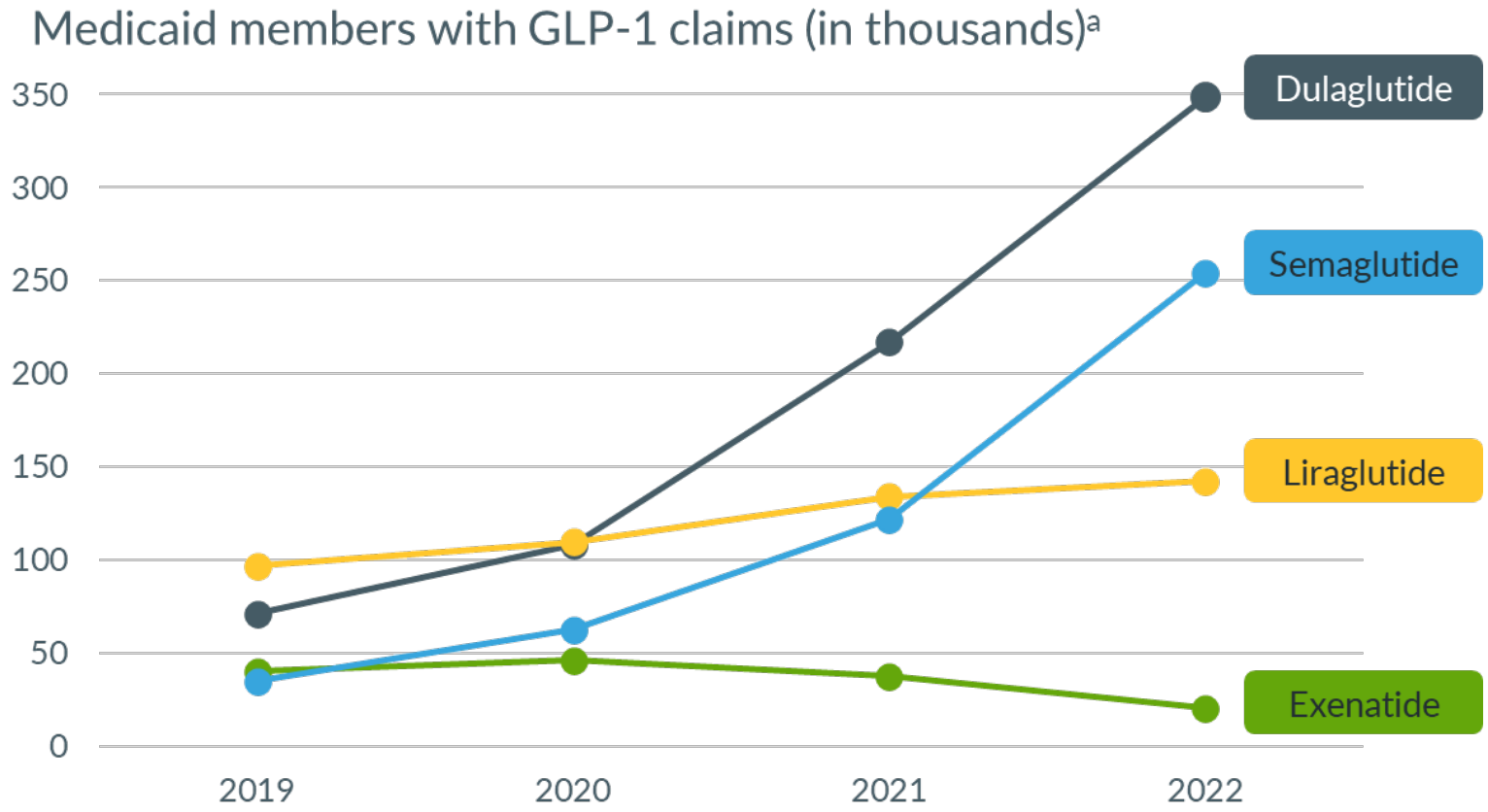
Semaglutide claims increased 7-fold and dulaglutide claims increased 4-fold, while exenatide claims decreased by half



Notes. [a] *Excluding dually eligible members and members in Alabama and Utah in all years; also excluding Mississippi from years 2019 to 2021.*

GLP-1 Utilization Over Time *(3 of 3)*

Dulaglutide and semaglutide also saw the largest increases in the number of Medicaid members with claims



Notes. [a] *Excluding dually eligible members and members in Alabama and Utah in all years; also excluding Mississippi from years 2019 to 2021.*

Findings

Adherence and Safety

Study Cohort for Adherence and Safety

Study cohort included 160,408 non–dually eligible adult members who initiated a GLP-1 treatment in 2021, with 12-month follow-up data into 2022

		N	%
Starting GLP-1 treatment			
Generic name	**Brand name**		
Dulaglutide	Trulicity	74,077	46.2
Exenatide	Bydureon BCise	5,983	3.7
Exenatide	Byetta	797	< 1
Liraglutide	Saxenda	2,434	1.5
Liraglutide	Victoza	35,073	21.9
Semaglutide	Ozempic	33,367	20.8
Semaglutide	Rybelsus	7,962	5.0
Semaglutide	Wegovy	715	< 1
Number of different brands used in post-index period			
1		141,053	87.9
2		18,186	11.3
3+		1,169	< 1
Members with type 2 diabetes			
		140,562	87.6
Total		**160,408**	

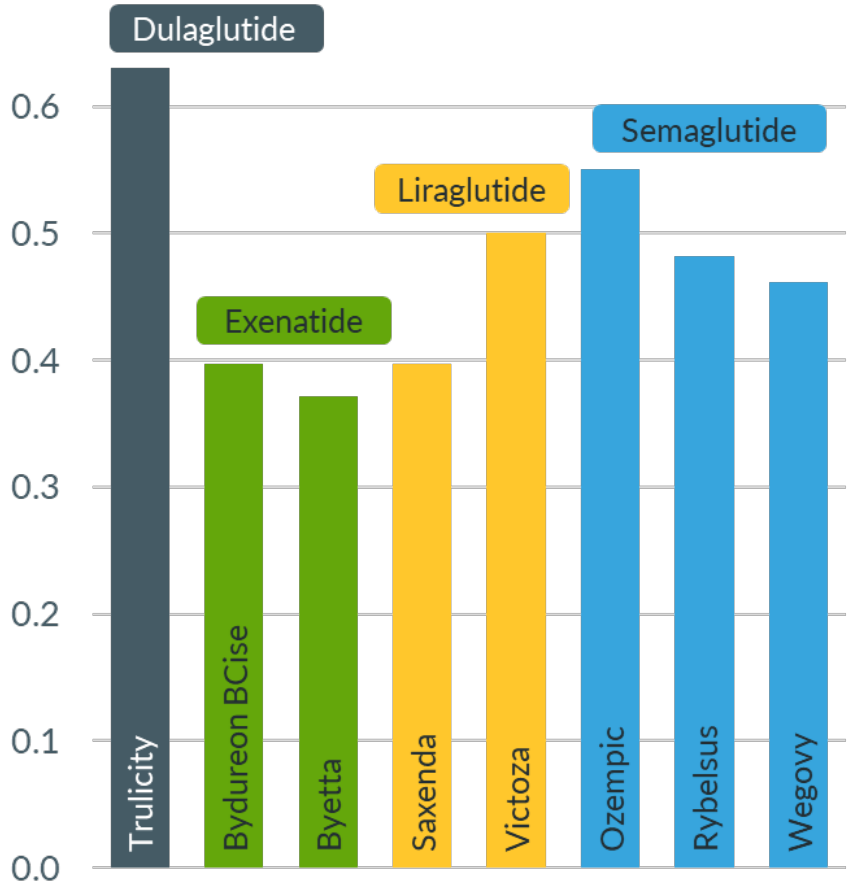
Adherence Measures

- **Adherence:** Proportion of days covered (PDC) in the 12-month follow-up period during which a patient had the medication on hand
  - Average PDC ranging from 0 to 1
  - Individuals who are considered "adherent" with PDC ≥ 0.80
- **Discontinuation:** Failure to refill the medication within 60 days
  - Individuals who discontinued
    - after 1 claim
    - within the first 12-month follow-up period after initiation
  - Average number of days' supply to discontinuation
  - Individuals who restarted using the same drug after discontinuation
  - Individuals who switched to another GLP-1 after discontinuation
  - Alternative GLP-1 drug that was switched to most

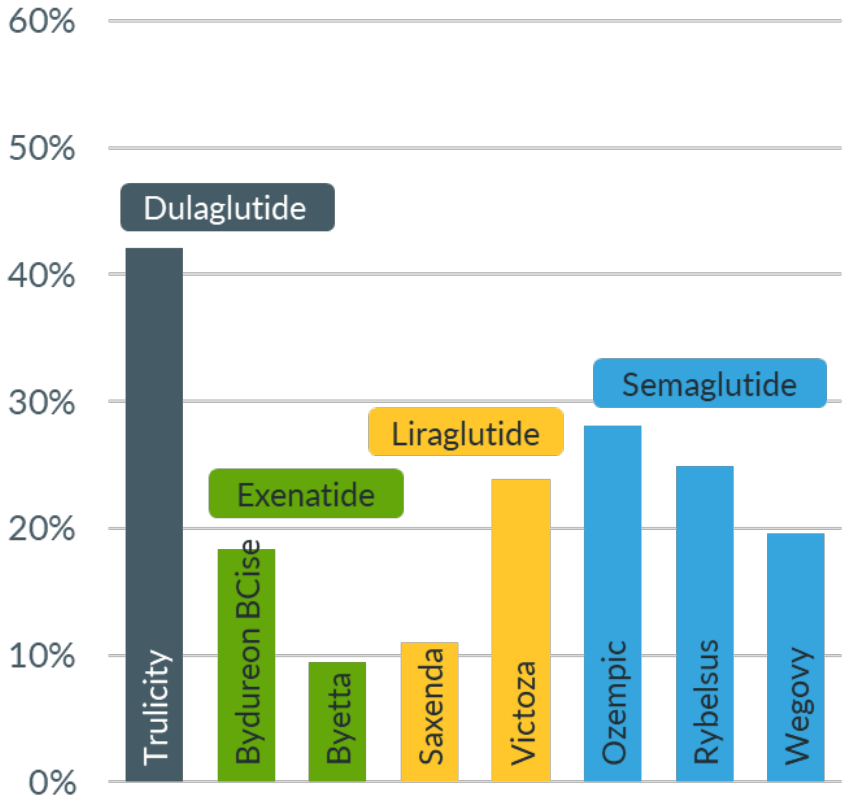
Proportion of Days Covered

Adherence was highest for dulaglutide, followed by semaglutide

Proportion of days covered (PDC)[a, b]



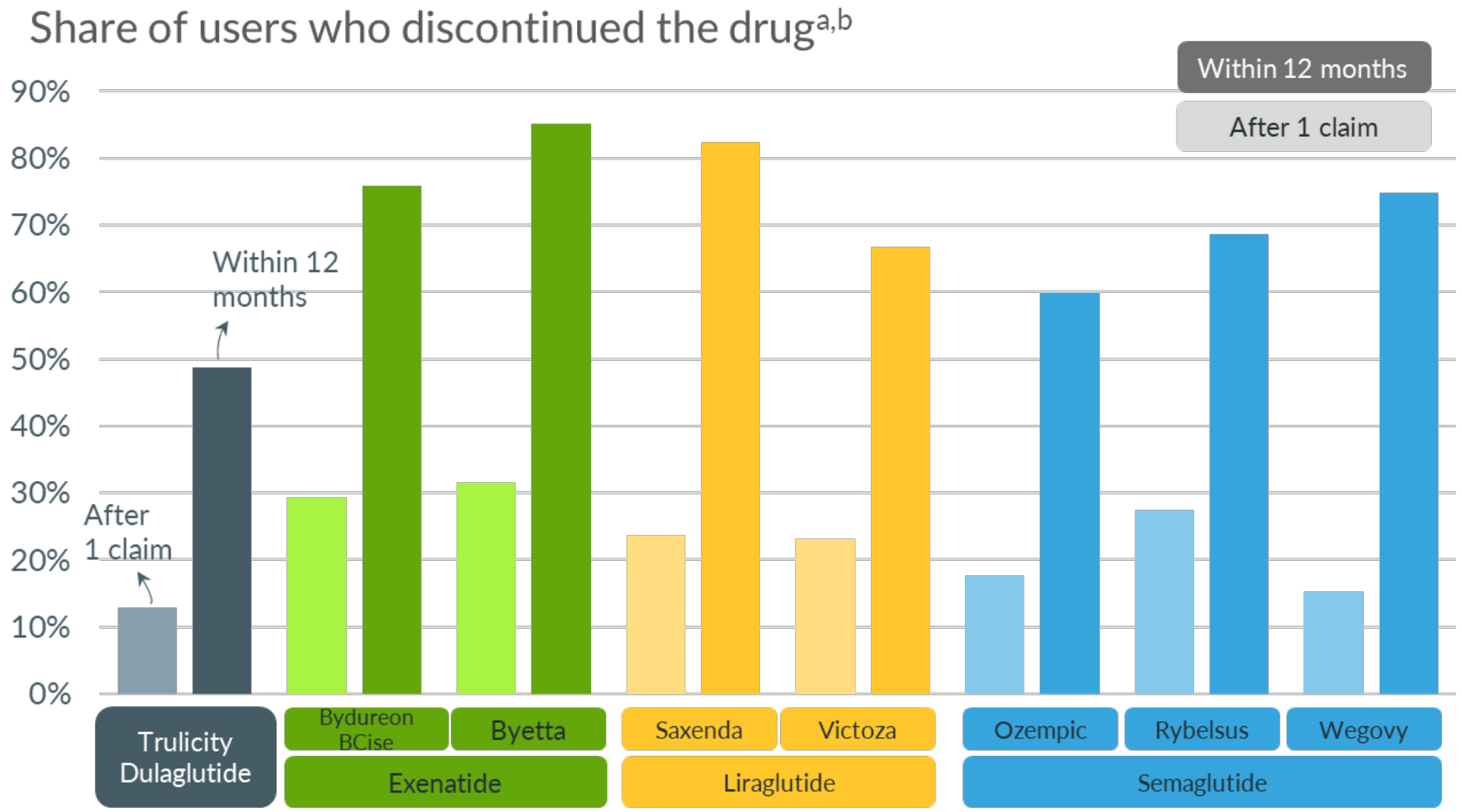
Proportion of GLP-1 users who were adherent (PDC ≥ 0.8)[a, c]



Notes. [a] *Adherence was evaluated in a cohort consisting of non-dually eligible adult members who initiated a GLP-1 treatment in 2021 and had 12-month follow-up data into 2022.*
[b] *Proportion of days covered (PDC) is the total number of days supplied divided by 365 days with overlapping days due to early refills counted only once.*
[c] *A person is considered adherent if their PDC ≥ 0.8.*

Discontinuation *(1 of 2)*

Discontinuation was lowest among members using dulaglutide



Notes. [a] *Discontinuation was evaluated in a study cohort consisting of non–dually eligible adult members who initiated a GLP-1 treatment in 2021 and had 12-month follow-up data into 2022.* [b] *Discontinuation is defined as having no new pharmacy claims within 60 days of the end of last claim.*

Discontinuation *(2 of 2)*

Discontinuing members had an average of 3 to 4 months' supply before quitting

Days' supply before discontinuation, restarting, and switching

Generic name	Brand name	N	Days' supply before discontinuation	% restarted	% switched	Drug most switched to (% of switchers)
Dulaglutide	Trulicity	36,043	117	34.7	14.8	Ozempic (66.5%)
Exenatide	Bydureon BCise	4,538	82	16.0	46.2	Trulicity (45.9%)
Exenatide	Byetta	678	97	21.1	43.8	Trulicity (44.8%)
Liraglutide	Saxenda	2,003	102	21.8	15.1	Wegovy (67.3%)
Liraglutide	Victoza	23,439	103	31.1	24.6	Trulicity (57.1%)
Semaglutide	Ozempic	19,991	110	36.5	18.5	Trulicity (72.5%)
Semaglutide	Rybelsus	5,467	96	29.6	17.2	Ozempic (46.6%)
Semaglutide	Wegovy	535	118	21.5	22.2	Saxenda (50.4%)

Measures of Safety

- **Emergency department (ED) visits**
  - Individuals with at least 1 claim for an ED visit for any reason during the 12-month follow-up period
- **Gastrointestinal adverse events (GI AEs)**
  - Individuals with at least 1 claim for specific GI AEs during the 12-month follow-up period:
    - Abdominal pain
    - Biliary diseases (cholecystitis or cholelithiasis)
    - Bowel obstruction
    - Gastroparesis

Safety and Adverse Events

Largely no difference in overall rates of adverse events across GLP-1s

Medicaid GLP-1 users with at least 1 claim for possible adverse events

Generic name	N	% with ≥ 1 ED visit[a]	% with at least 1 claim for: Abdominal pain	Biliary diseases[b]	Bowel obstruction	Gastroparesis
Dulaglutide	74,077	47.8	24.6	2.6	0.82	1.39
Exenatide	6,780	48.2	24.9	2.7	0.80	1.59
Liraglutide	37,507	48.6	25.6	2.8	0.77	1.18
Semaglutide	42,044	43.2	24.2	2.6	0.67	1.24

Notes. [a] Including ED visits for any reason; [b] Cholecystitis and cholelithiasis.
Abbreviations. ED: emergency department.

Discussion and State Considerations

Summary of Findings

- Rapid growth in GLP-1 use among Medicaid members in recent years
  - Claims for dulaglutide and semaglutide increased the most
  - Wide variation across states in use of GLP-1 treatments
- Adherence
  - Overall, low adherence and high discontinuation rates
  - Members receiving dulaglutide were more adherent and discontinued less frequently than those receiving other GLP-1 treatments
  - Some variation in adherence and discontinuation rates depending on the branded formulations, with higher adherence rates for brands approved for T2D
- Safety
  - Semaglutide may have slightly favorable safety outcomes; there were largely no differences in overall rates of adverse events

Key Takeaways

When developing coverage policies for GLP-1s, states may wish to:

1. Consider including dulaglutide or semaglutide as covered drug options because of favorable adherence with these agents
2. Consistently monitor the FDA for new approvals or indications to assess when policies may need adjustment and when additional comparative data are likely to become available
3. Implement regular searches for new eligible literature, as ongoing observational studies are not typically recorded in study registries
4. Regularly review guidance from professional organizations and regulatory agencies for updates on recommended place-in-therapy for these therapies based on indication

Additional Resources

- A recording of today's webinar will be available on the Center website
- DERP member states have access to the full systematic review report and the Medicaid Data Supplement with state-level findings
  - Contact Erin Sanborn at Sanborn@ohsu.edu if you need help accessing it
- Other Center reports on GLP-1s available to DERP or MED collaborative members include:
  - Pharmacologic agents for weight management: targeted update of clinical evidence and cost effectiveness (Mar 2025)
  - Pharmacologic agents for weight management: clinical evidence and management strategies (Oct 2023; May 2024)
  - Short-acting vs. long-acting GLP-1 receptor agonists for type 2 diabetes (Dec 2023)
  - Tirzepatide for type 2 diabetes mellitus (Oct 2023)

Questions and Discussion

Medicaid Policy Matters Webinar Series

Using Public Dashboards to Support Evidence-based Decisions

Tuesday, April 21, 2026 at 12:00pm (Pacific Time)

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