Life Sciences' Most Pressing Data Challenges

How Does Your Organization Compare?

Highlights From Frost & Sullivan's Survey of Commercial, HEOR,
and Clinical Development Experts

komodo

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Executive Summary

Komodo Health commissioned Frost & Sullivan to conduct a survey of experts working in the Clinical Development, Commercial, and HEOR business units in the fall of 2023. The purpose was twofold: first, to gain a deep understanding of what each business unit views as its most significant data challenges; and second, to use the findings to assist teams in understanding what's driving those challenges and how to solve them.

5 Key Takeaways:

✓ The complexity of "data management" — specifically, the process of integrating data sources into a usable dataset — continues to increase in tandem with the exponential growth of data and data vendors. For any one project, teams contract with an average of 4 data sources and 4 consultants, and the average time required to integrate data into a usable dataset is 7 months. Jump ahead **to see how you can shave 4-9 months off your data management timeline via a single contract.**

✓ Only 14% of Life Sciences companies report they are "extremely confident" in their data insights. While the largest organizations ($1B+) report having greater confidence than emerging ($50M-$499M) or mid-size ($500M-$999M) companies, they report experiencing the same data challenges. Jump ahead **to learn what's behind concerns about data quality and what you can do to gain confidence.**

✓ There are 9 insights that 50% or more of survey participants say are "significant" to "very significant" challenges to access. Jump ahead **to see what they are and what you can do to obtain them.**

✓ The waiting game: There are numerous hurdles to obtaining insights that delay decision-making. Jump ahead **to see why it takes so long to get the insights you need and what you can do differently to accelerate speed to insights.**

✓ About half of all survey participants report that accessing data insights specific to their business unit is often a "significant" to "very significant" challenge. There were no statistical differences based on company size. Jump ahead **to solve your greatest data challenges.**
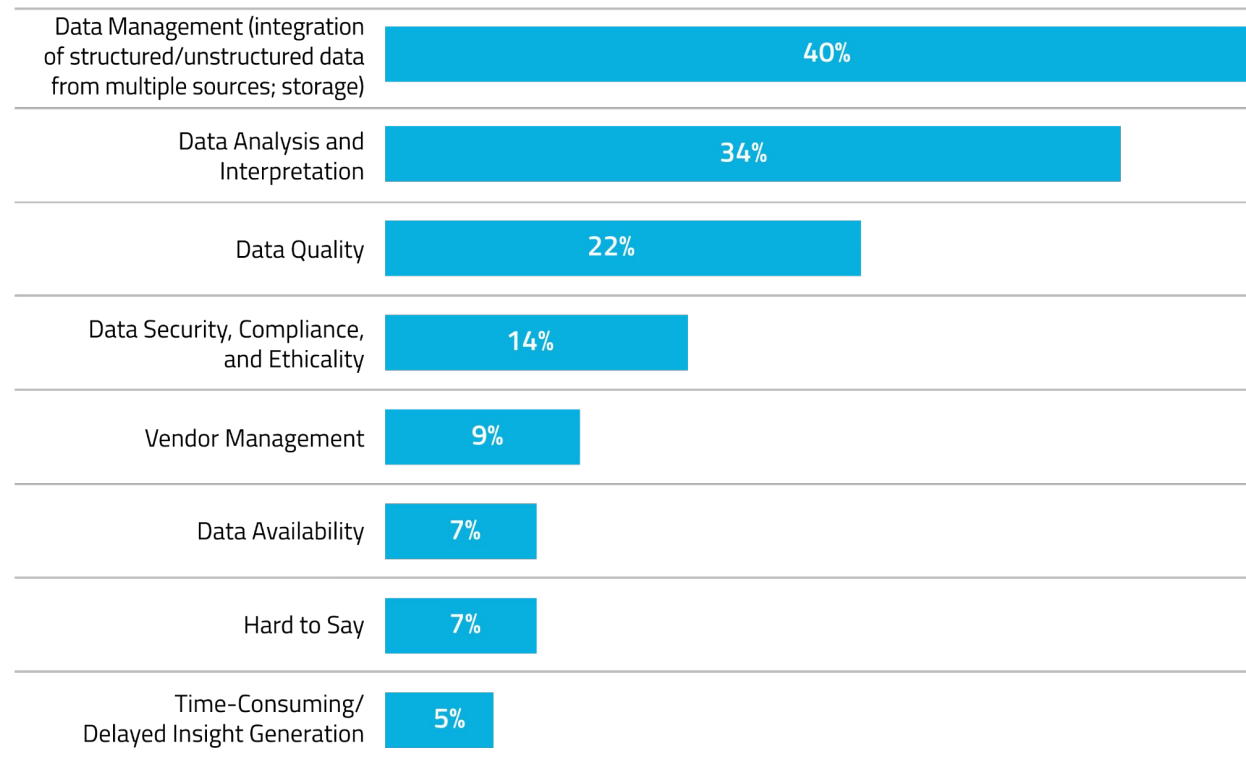
Where the Problems Start: Data Management

"Data management" was cited most often as the greatest challenge to obtaining data insights, followed by data analysis/interpretation, then concerns regarding quality and security/compliance.

Biggest Challenges to Gaining Data Insights
(Based on Spontaneous Answers)

| Challenge	Percentage
Data Management (integration of structured/unstructured data from multiple sources; storage)	40%
Data Analysis and Interpretation	34%
Data Quality	22%
Data Security, Compliance, and Ethicality	14%
Vendor Management	9%
Data Availability	7%
Hard to Say	7%
Time-Consuming/ Delayed Insight Generation	5%

Average Number of Data Vendors Needed

Life Sciences teams contract with an average of four different data vendors for any one project. **Nearly a quarter — 24% — report they typically work with six or more.** *The larger the company, the greater the number of vendors (6+) engaged.*

Clinical Development

- 3%
- 34%
- 38%
- 25%
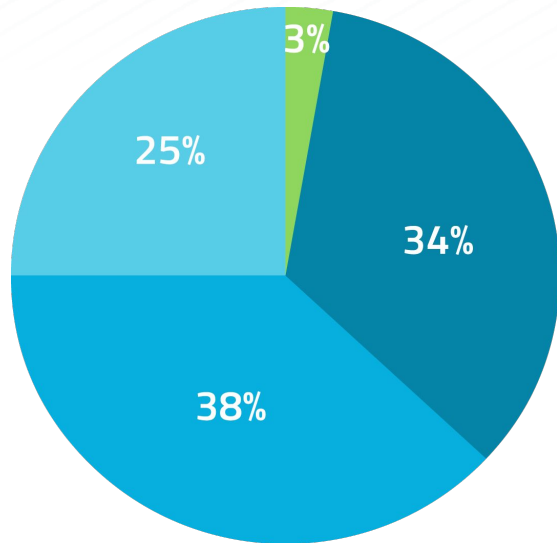
Average: 4 vendors
Contracted to obtain insights into disease incidence and prepare for a clinical trial

Commercial

- 2%
- 30%
- 44%
- 24%
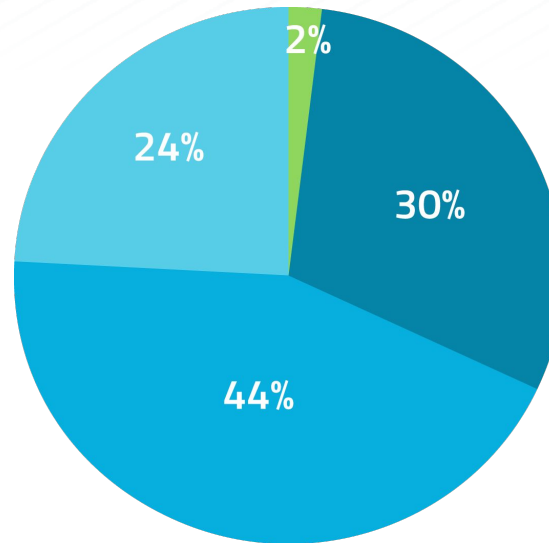
Average: 4 vendors
Contracted for commercial launch strategy and therapy adoption measurement

HEOR

- 5%
- 34%
- 39%
- 22%
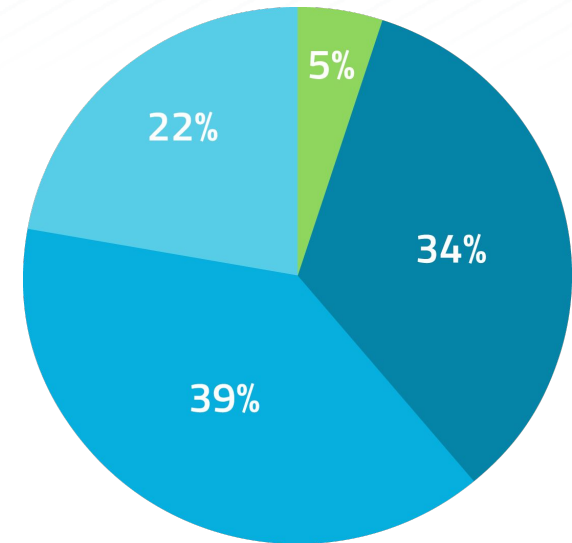
Average: 4 vendors
Contracted to assess the impact of a therapy on a patient population

Legend:
- 1 data vendor
- 2-3 data vendors
- 4-5 data vendors
- 6+ data vendors

Time Frame for Integrating/Preparing the Dataset

Across all organization sizes and business units, it takes an average of seven months to transform data into a usable state.
Nearly a third of all organizations (32%) say it takes even longer — eight to 12 months — to get their RWE research-ready.
Size of organization doesn't have a significant impact on average time.

Clinical Development

40%
31%
27%
0% 2% 0%

| Up to 3 mos | 4-5 mos | 6-7 mos | 8-9 mos | 10-11 mos | 13+ mos |
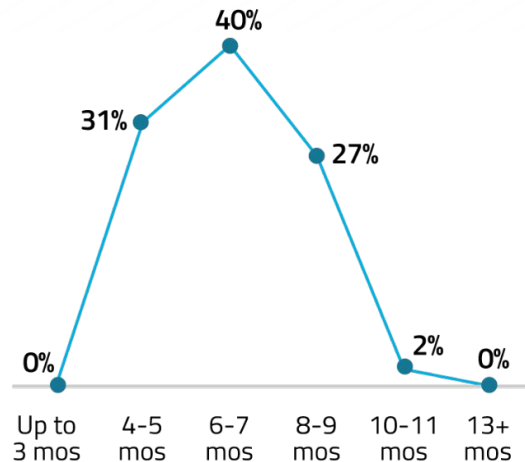
Average: 7 months

Commercial

34% 33%
22%
11%
0% 0%

| Up to 3 mos | 4-5 mos | 6-7 mos | 8-9 mos | 10-11 mos | 13+ mos |

Average: 7 months

HEOR

41%
26% 24%
9%
0% 0%

| Up to 3 mos | 4-5 mos | 6-7 mos | 8-9 mos | 10-11 mos | 13+ mos |
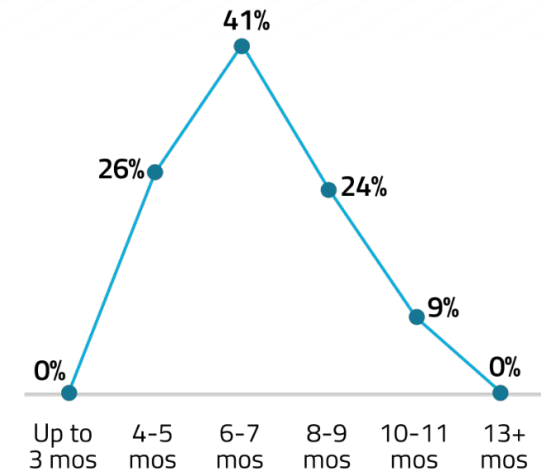
Average: 7 months

When seeking to gain data insights, how long does it typically take your organization to obtain and transform the data into a usable state?
The time frame should include identifying data sources, contracting/procuring, ingesting and cleansing (de-duplicating/standardizing/normalizing), and finally linking, de-identifying, and certifying the data.

Use of Consultants

Pharmaceutical companies contract with an average of four consultants for any one project.
- *Within Clinical Development and HEOR, larger companies are more likely to engage consultants*
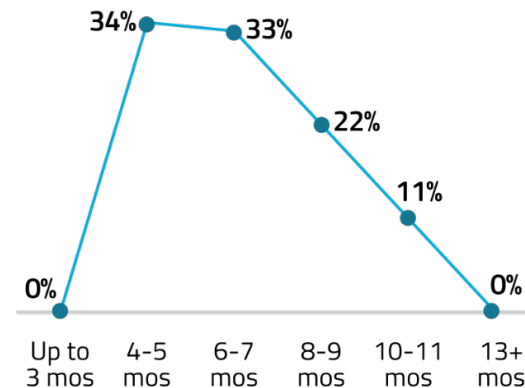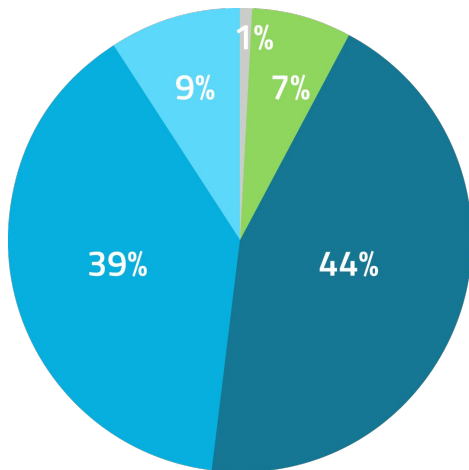- *In the Commercial space, smaller/emerging companies report being more likely to engage consultants*

Clinical Development

1%
7%
9%
39%
44%

Average: 3 consultants
Contracted to obtain insights into disease incidence and prepare for a clinical trial

Commercial

34%
30%
36%
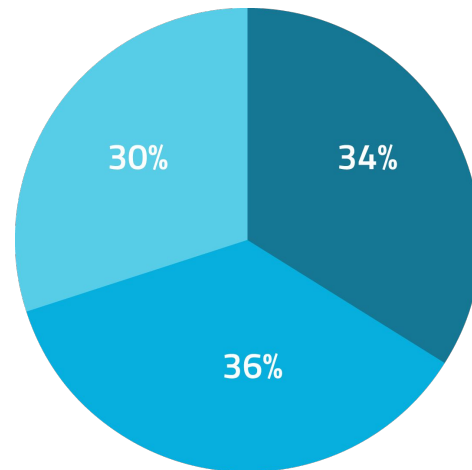
Average: 4 consultants
Contracted to obtain insights to develop a commercial launch strategy and continuously measure therapy adoption

HEOR

7%
15%
39%
39%
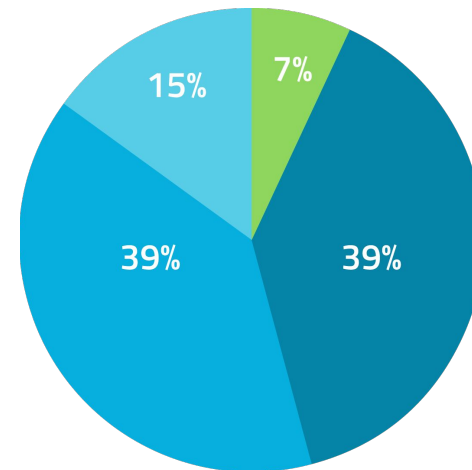
Average: 4 consultants
Contracted to obtain insights needed to assess the impact of a therapy on a patient population

Use of Consultants by Business Unit	Clinical Development	Commercial	HEOR
"Usually" use consultants for data analysis/interpretation	43%	16%	35%
When using consultants, average number engaged is 4+	48%	66%	54%

- 1 data consultant
- 2-3 data consultants
- 4-5 data consultants
- 6+ data consultants
- Hard to say

7
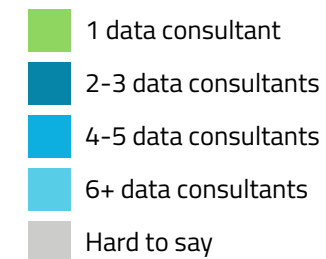
Primary Data Source: Open, Closed, or a Combination of Claims?

There is not a consensus, either within each business unit or across units, *regarding the best data source for insights. Of note:*
- *34% of HEOR experts report using open claims as the primary source, a surprising and significant deviation from historical practice (i.e., closed claims or a combination of open and closed)*
- *57% of Commercial experts report prioritizing closed vs. open claims, also a deviation from historical practice*

Clinical Development
(to assess disease incidence)

27% Closed claims

42% Both equally important

31% Open claims
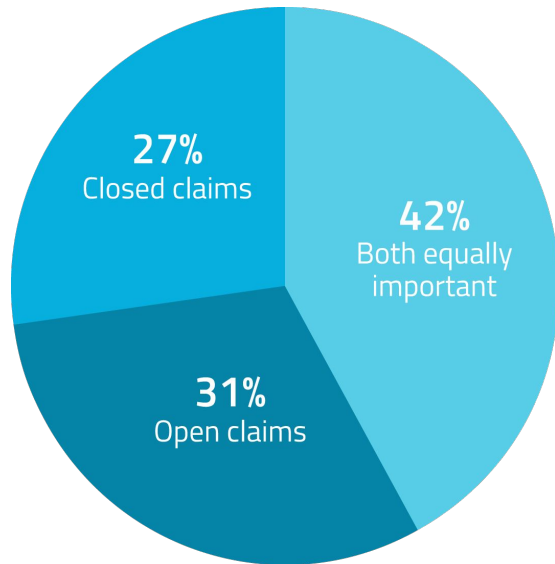
HEOR
(to measure clinical and health economics outcomes)

31% Both equally important

34% Open claims

35% Closed claims
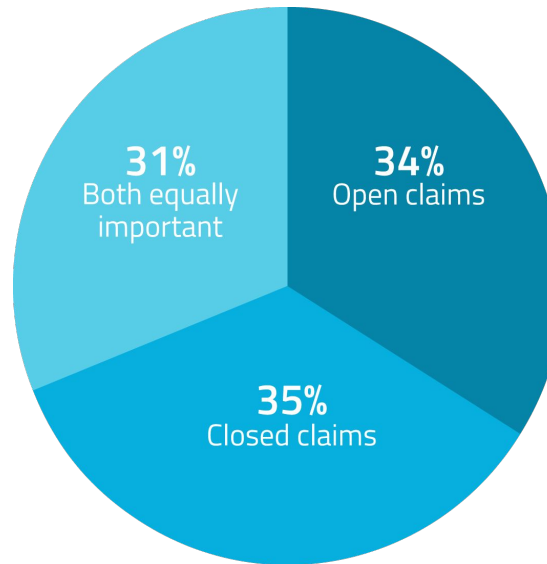
Commercial
(to measure therapy adoption within a population)

3% Pharmaceutical sales

40% Open claims

57% Closed claims
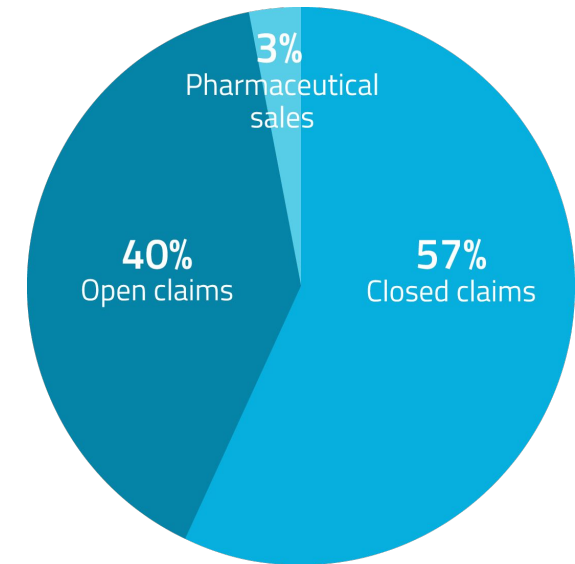
Who Is the Payer?

Which payer populations are most difficult to see? There is not a clear consensus among business units, except all three report the dual-eligible population to be the most challenging.

Clinical Development

Population	No challenge	Minor challenge	Significant challenge	Very significant challenge
Patients who are **dual-eligible for Medicare and Medicaid**	4%	32%	44%	20%
Patients with **traditional Medicare/Medicaid** coverage through the state/federal government	20%	37%	30%	13%
Patients with **Medicare Advantage** coverage through a commercial carrier/insurer	20%	43%	26%	11%
Patients with **Managed Medicaid** coverage through a commercial carrier/insurer	15%	44%	33%	8%
Patients with **commercial** insurance coverage	37%	41%	16%	6%

Commercial

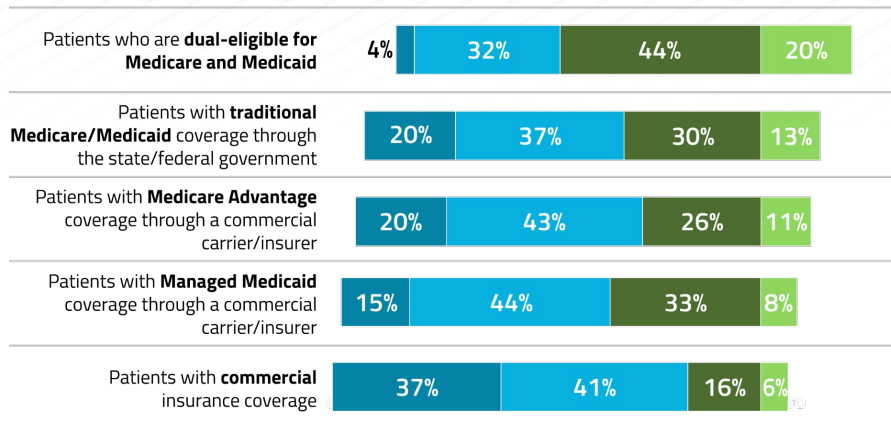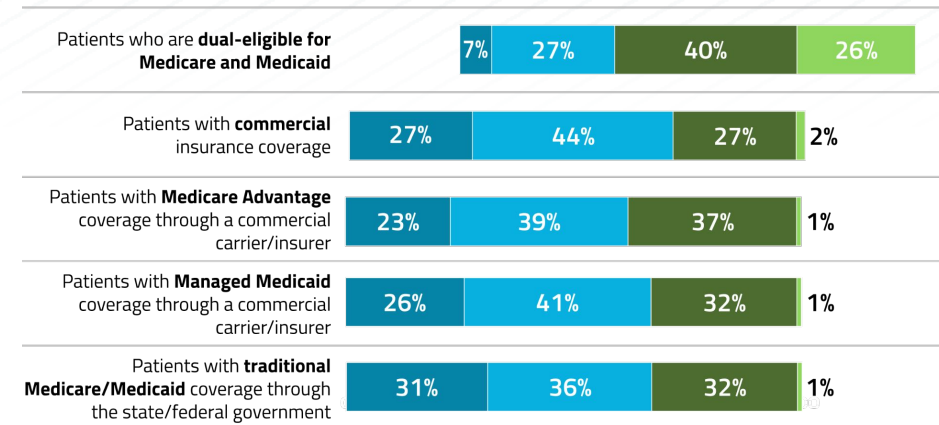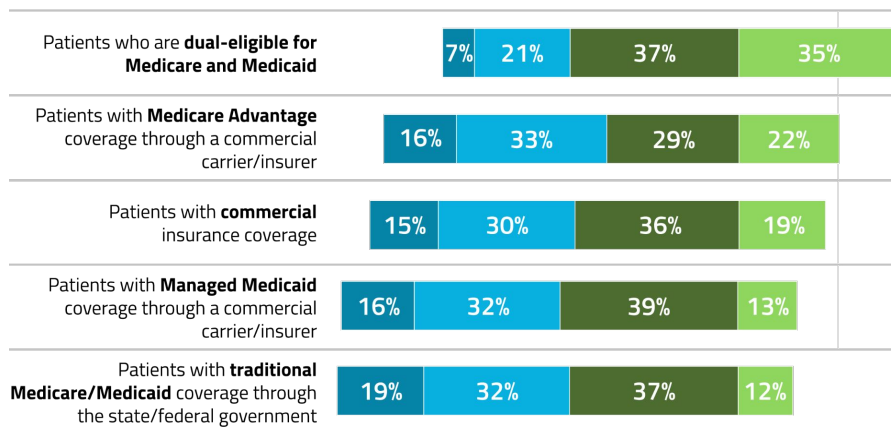| Population	No challenge	Minor challenge	Significant challenge	Very significant challenge
Patients who are **dual-eligible for Medicare and Medicaid**	7%	27%	40%	26%
Patients with **commercial** insurance coverage	27%	44%	27%	2%
Patients with **Medicare Advantage** coverage through a commercial carrier/insurer	23%	39%	37%	1%
Patients with **Managed Medicaid** coverage through a commercial carrier/insurer	26%	41%	32%	1%
Patients with **traditional Medicare/Medicaid** coverage through the state/federal government	31%	36%	32%	1%

HEOR

Population	No challenge	Minor challenge	Significant challenge	Very significant challenge
Patients who are **dual-eligible for Medicare and Medicaid**	7%	21%	37%	35%
Patients with **Medicare Advantage** coverage through a commercial carrier/insurer	16%	33%	29%	22%
Patients with **commercial** insurance coverage	15%	30%	36%	19%
Patients with **Managed Medicaid** coverage through a commercial carrier/insurer	16%	32%	39%	13%
Patients with **traditional Medicare/Medicaid** coverage through the state/federal government	19%	32%	37%	12%

No challenge — Easily accomplished

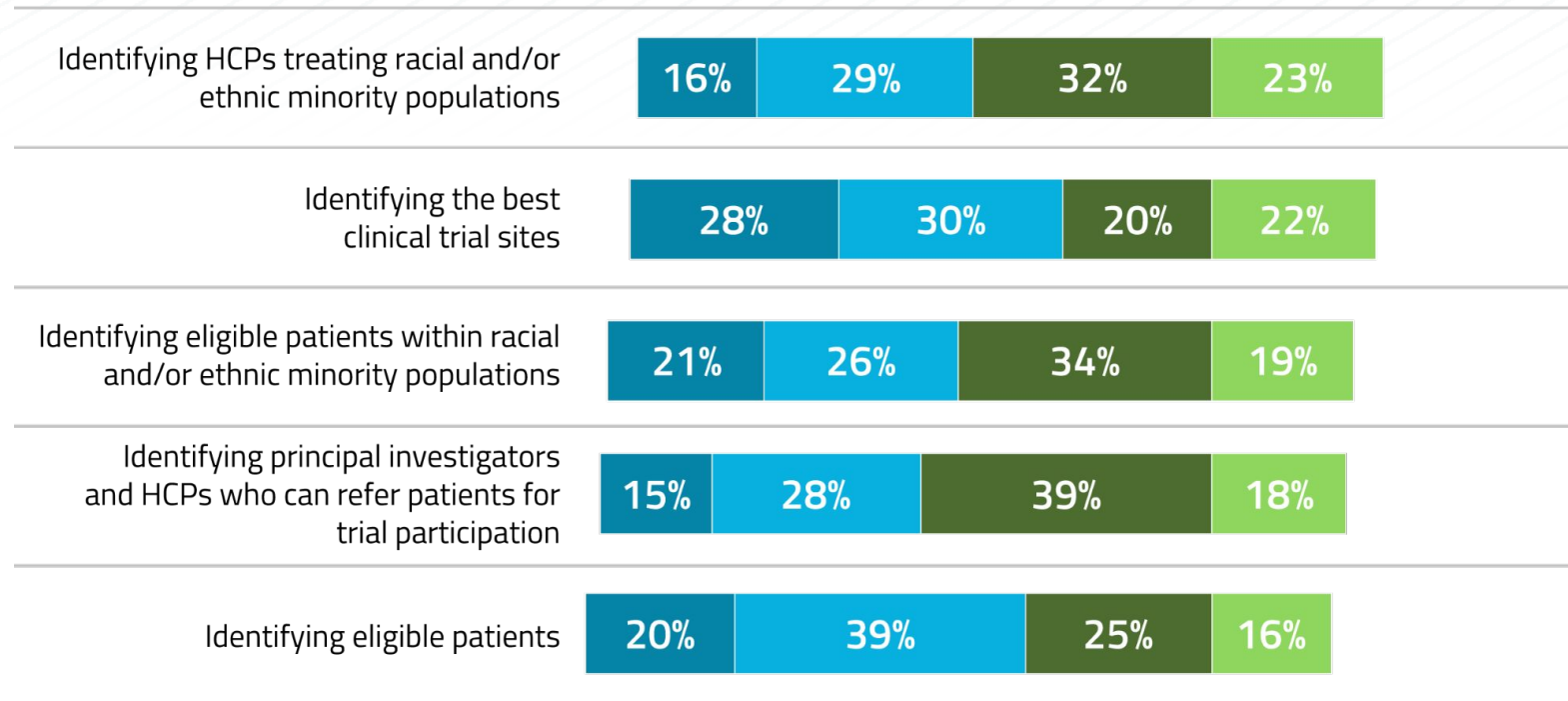**Minor challenge** — Requires some effort, but not a hurdle

Significant challenge — Requires additional time and/or cost

Very significant challenge — Adds significant time and/or cost, not always successful

Challenges Specific to Clinical Development

Identifying the HCPs and patients that are essential to increasing trial diversity and PIs/HCPs who can refer patients for trial participation are "significant" to "very significant" challenges for more than half of Clinical Development experts (53%-57%).

	No challenge	Minor challenge	Significant challenge	Very significant challenge
Identifying HCPs treating racial and/or ethnic minority populations	16%	29%	32%	23%
Identifying the best clinical trial sites	28%	30%	20%	22%
Identifying eligible patients within racial and/or ethnic minority populations	21%	26%	34%	19%
Identifying principal investigators and HCPs who can refer patients for trial participation	15%	28%	39%	18%
Identifying eligible patients	20%	39%	25%	16%

No challenge
Easily accomplished

Minor challenge
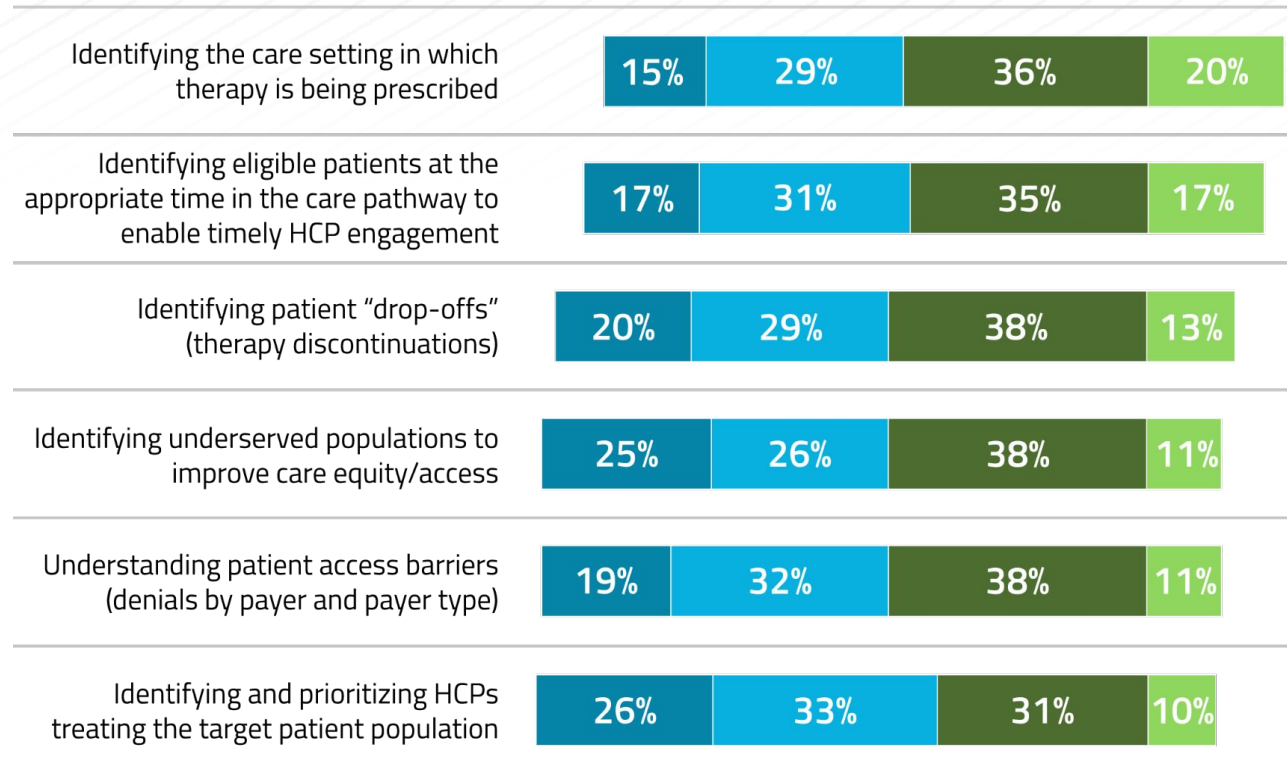Requires some effort, but not a hurdle

Significant challenge
Requires additional time and/or cost

Very significant challenge
Adds significant time and/or cost, not always successful

Challenges Specific to Commercial

Nearly half (49%-56%) of Commercial experts report it is a "significant" to "very significant" challenge to gain data insights essential for launch planning and driving therapy adoption.

Challenge	No challenge	Minor challenge	Significant challenge	Very significant challenge
Identifying the care setting in which therapy is being prescribed	15%	29%	36%	20%
Identifying eligible patients at the appropriate time in the care pathway to enable timely HCP engagement	17%	31%	35%	17%
Identifying patient "drop-offs" (therapy discontinuations)	20%	29%	38%	13%
Identifying underserved populations to improve care equity/access	25%	26%	38%	11%
Understanding patient access barriers (denials by payer and payer type)	19%	32%	38%	11%
Identifying and prioritizing HCPs treating the target patient population	26%	33%	31%	10%

No challenge
Easily accomplished

Minor challenge
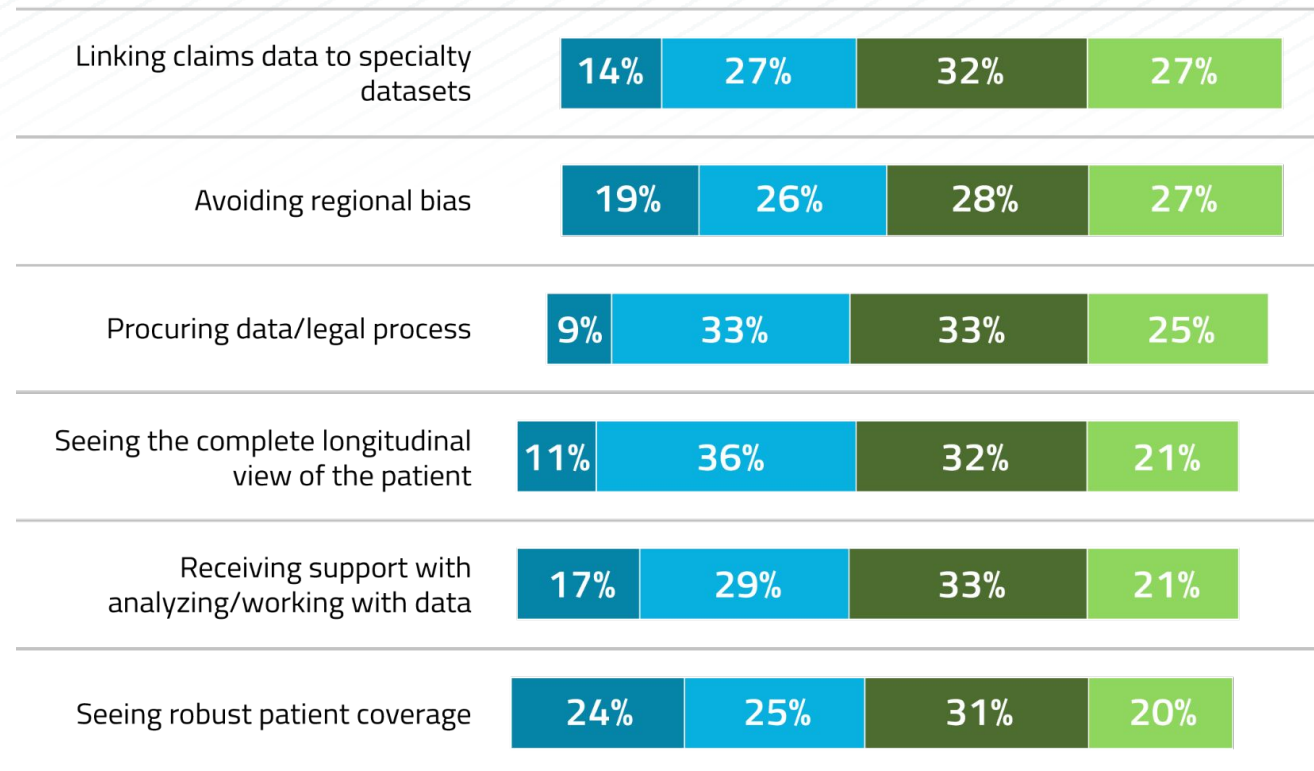Requires some effort, but not a hurdle

Significant challenge
Requires additional time and/or cost

Very significant challenge
Adds significant time and/or cost, not always successful

Challenges Specific to HEOR

More than half (53%-59%) of HEOR experts report there are multiple "significant" to "very significant" hurdles to obtaining data insights essential to evidence generation.

	No challenge	Minor challenge	Significant challenge	Very significant challenge
Linking claims data to specialty datasets	14%	27%	32%	27%
Avoiding regional bias	19%	26%	28%	27%
Procuring data/legal process	9%	33%	33%	25%
Seeing the complete longitudinal view of the patient	11%	36%	32%	21%
Receiving support with analyzing/working with data	17%	29%	33%	21%
Seeing robust patient coverage	24%	25%	31%	20%

No challenge
Easily accomplished

Minor challenge
Requires some effort, but not a hurdle

Significant challenge
Requires additional time and/or cost

Very significant challenge
Adds significant time and/or cost, not always successful

Confidence in the Reliability of Data Insights

Half of experts across teams (50%-56%) report being "extremely" to "very" confident in the reliability of their data insights in driving decision-making; 44%-50% report being less so ("confident/somewhat confident").
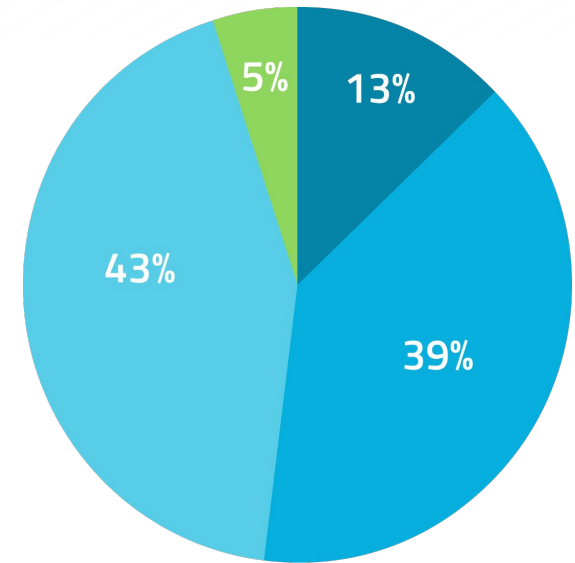
Clinical Development

15%
10%
40%
35%

Commercial

2%
13%
42%
43%

HEOR

5%
13%
43%
39%
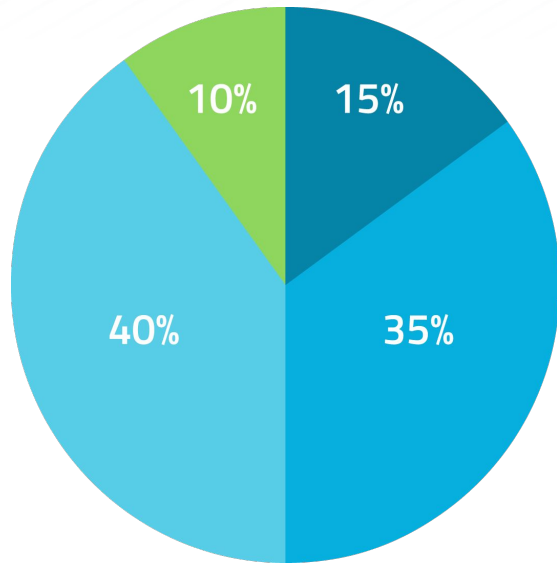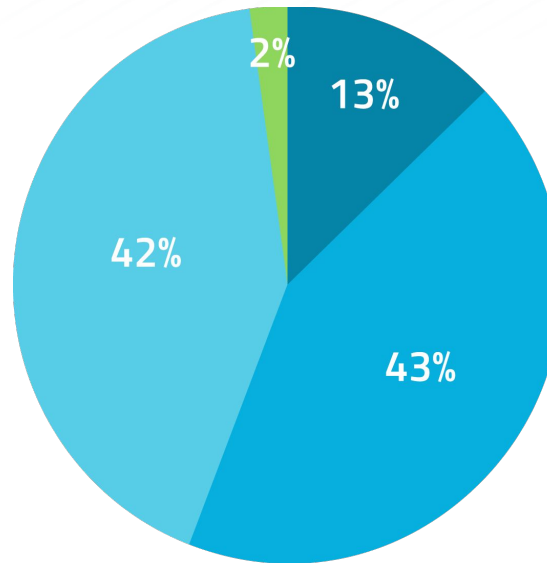
Extremely confident Very confident Confident Somewhat confident

Leveraging Artificial Intelligence (AI)

More than three-quarters (77%) of survey respondents working across Clinical Development, Commercial, and HEOR functions say they are currently using data solutions that are enhanced by AI. Usage rates are highest among Commercial teams, where 94% report using AI-infused analytics.
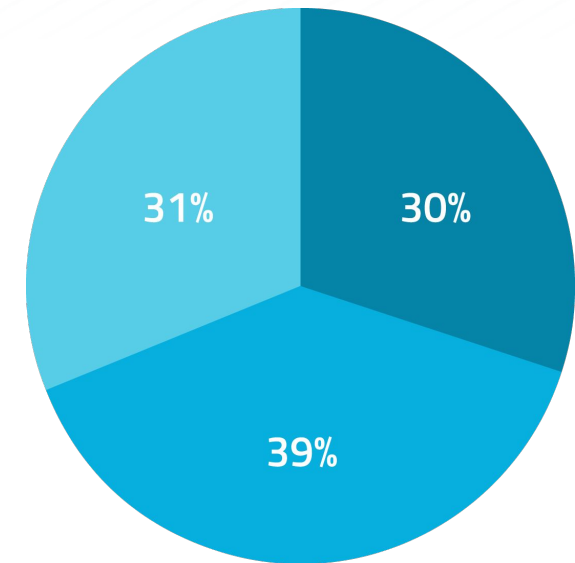

Clinical Development
- 26%
- 42%
- 32%
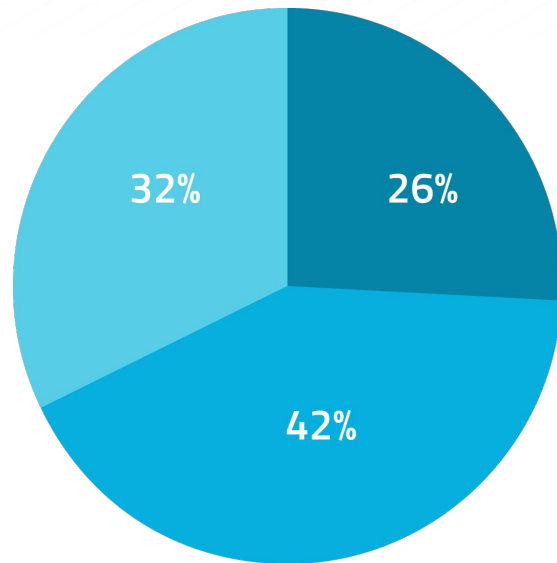
Commercial
- 49%
- 45%
- 4%
- 2%
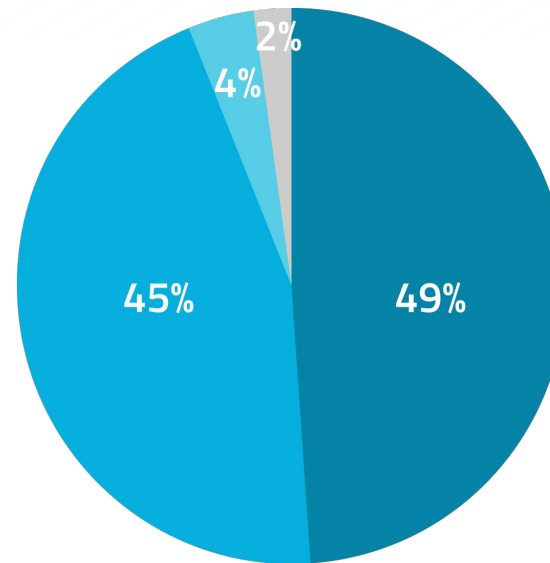
HEOR
- 30%
- 39%
- 31%

Yes, usually the data solutions we access/use are enhanced with AI

Yes, sometimes the data solutions we access/use are enhanced with AI

No, the data solutions we access/use are not enhanced with AI

Hard to say

10 Data Challenges You Can Solve With Komodo

What are your greatest challenges to obtaining reliable data insights?
Select below to see how Komodo can help you solve each one.

✓ [Data Management](#)

✓ [Data Quality](#)

✓ [Data Depth and Breadth](#)

✓ [Speed to Insights](#)

✓ [Clinical Trial Diversity](#)

✓ [Clinical Trial Recruitment](#)

✓ [Scaling Commercial Insights](#)

✓ [Driving Therapy Adoption](#)

✓ [HEOR Studies](#)

✓ [HCRU & Cost Analyses](#)

Research Methodology

Methodology

- Computer-assisted web interviews (CAWI)
- Invitation to survey via B2B panel
- Respondents had to pass screening criteria
- Respondents who passed screener self-administered a 20-minute interview hosted on Frost & Sullivan survey environment
- Strict quality control

Respondent Profiles

- Geographic scope: U.S.
- Three distinct pharma/Life Sciences industry audiences:
  - Clinical Development (e.g., Research And Development, Operations)
  - Commercial (e.g., Marketing, Business Development, Analytics)
  - HEOR

Samples

- Total sample: n=300
- Quota by audience:
  - Clinical Development: n=100
  - Commercial: n=100
  - HEOR: n=100
- Margin of error: +/- 5.7% at a 95% confidence level for 300 responses
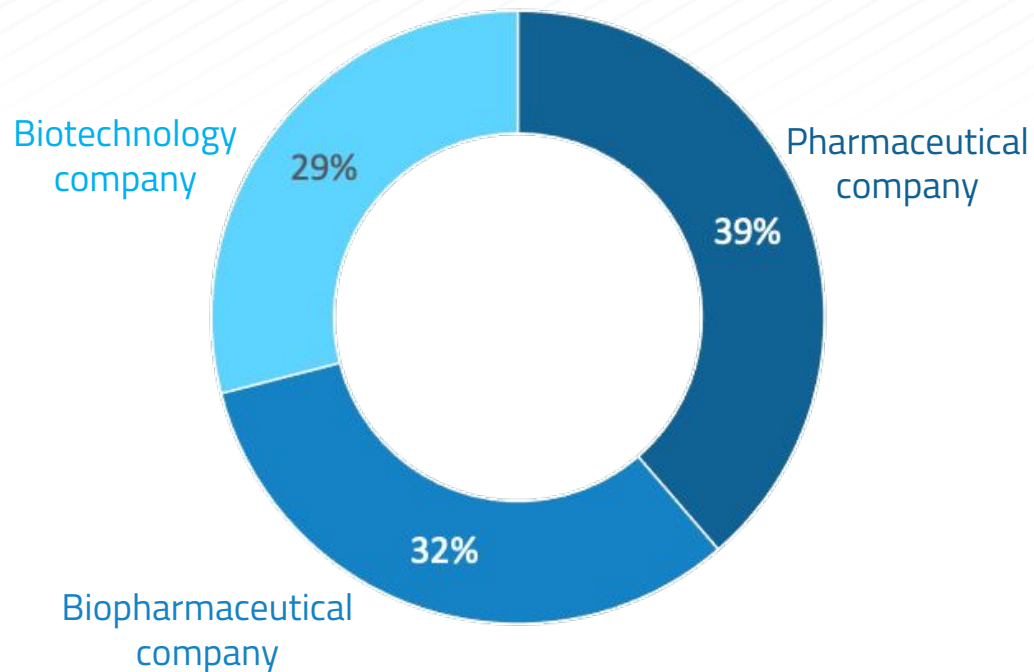
Field Work

- September-October 2023

Note: Percentages on charts and tables included in this report may not total 100% due to rounding.
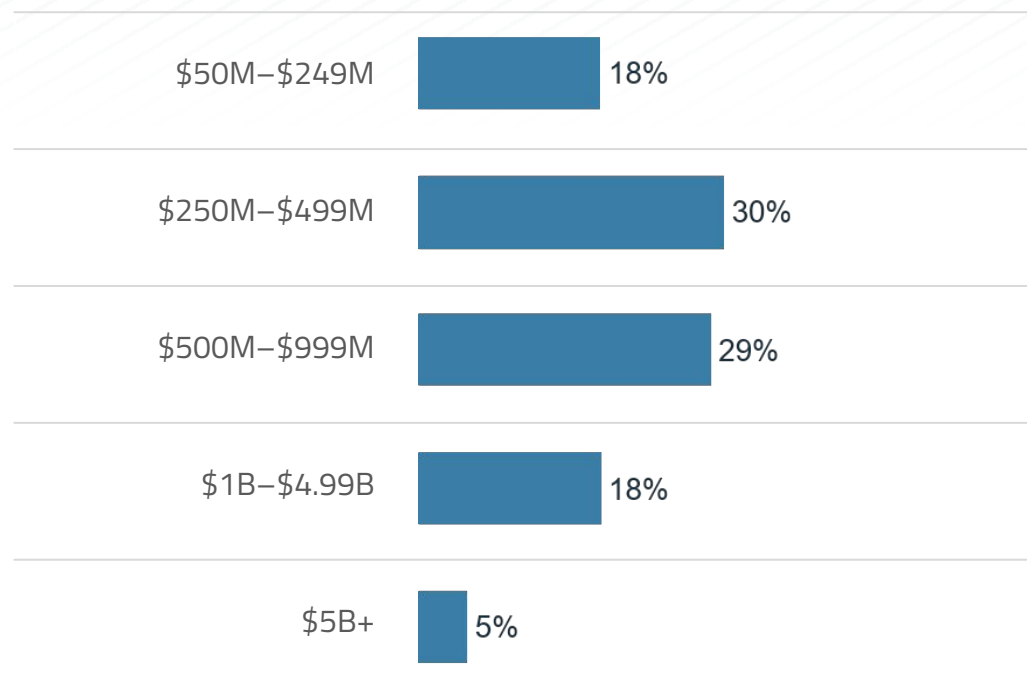
Company Profile

Type of Organization

Biotechnology company 29%

Pharmaceutical company 39%

Biopharmaceutical company 32%

Annual Revenue 2022

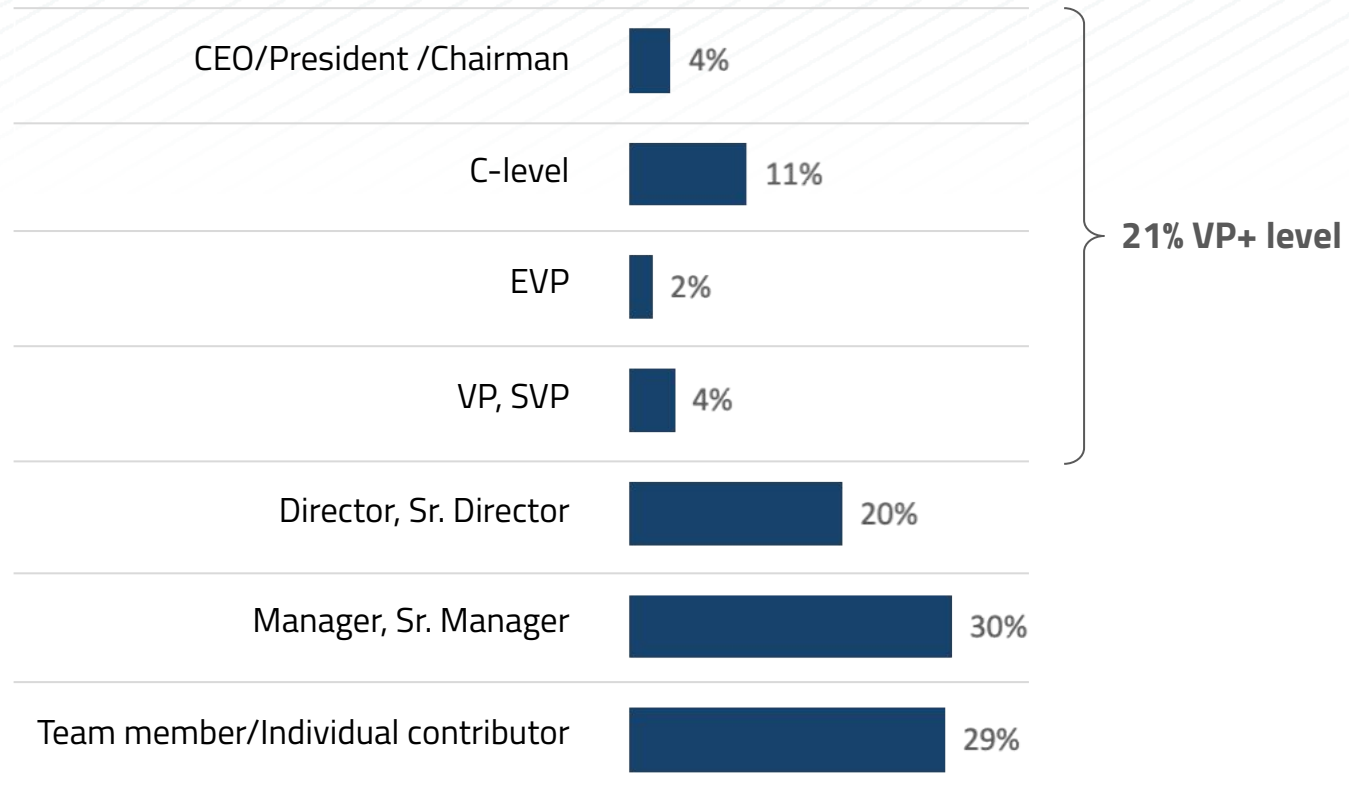|	
$50M–$249M	18%
$250M–$499M	30%
$500M–$999M	29%
$1B–$4.99B	18%
$5B+	5%

Base: All respondents (n=300)
What best describes your organization?
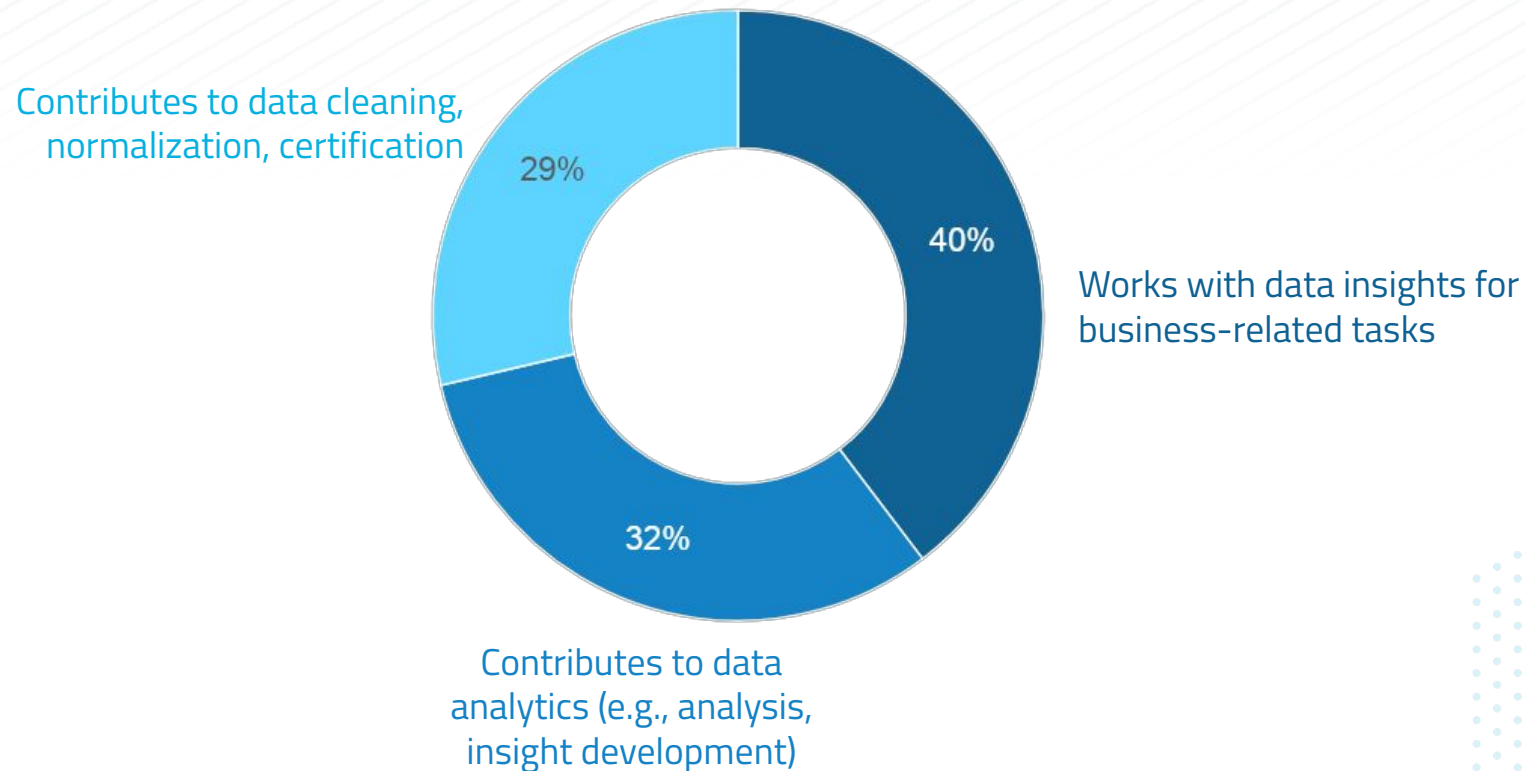Which of the following best describes your organization's 2022 annual revenue?

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Respondent Profile: Title

Title	Percentage
CEO/President /Chairman	4%
C-level	11%
EVP	2%
VP, SVP	4%
Director, Sr. Director	20%
Manager, Sr. Manager	30%
Team member/Individual contributor	29%

21% VP+ level

Base: All respondents (n=300)
Which of the following most closely represents your position within your organization?

Respondent Profile: Involvement With Data Insights

Contributes to data cleaning, normalization, certification — 29%

Works with data insights for business-related tasks — 40%

Contributes to data analytics (e.g., analysis, insight development) — 32%

Base: All respondents (n=300)
Which best describes your involvement in data insights at your organization?
Note: Percentages on charts and tables included in this report may not total 100% due to rounding.