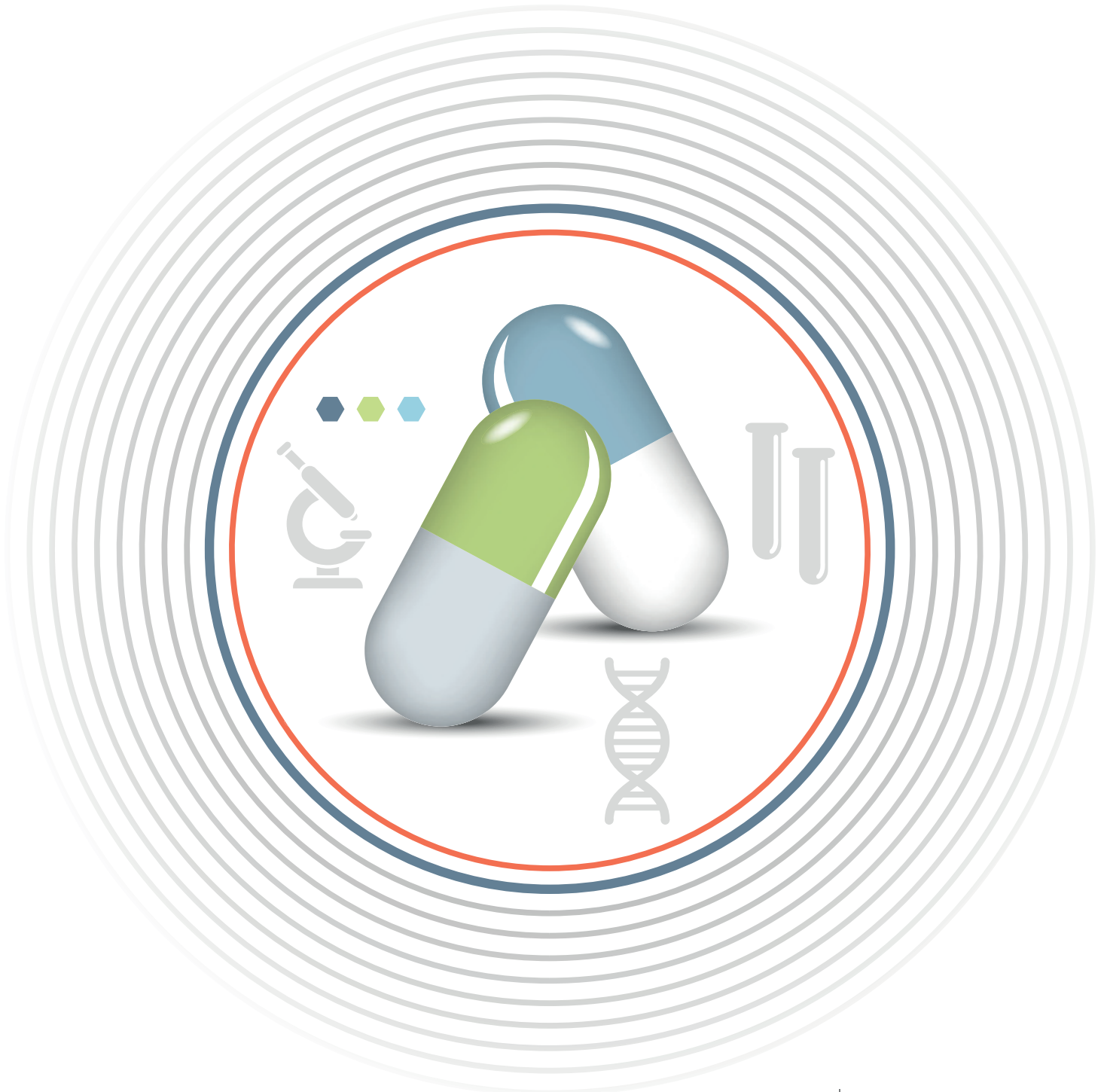


# HOW THE PHARMA INDUSTRY IS TACKLING MEDICATION ADHERENCE



# Contents

About this Survey .....	2
About S3 Connected Health .....	3
Participants' Profile at a Glance .....	4
Motivations .....	5
Perspectives & Attitudes .....	6
Organizational Responsibility .....	7
Organizational Barriers .....	8
Online Initiatives .....	9
Effectiveness of Existing Tactics .....	10
Satisfaction with Current Efforts .....	11
Factors Impacting Adherence .....	11
Room for Improvement .....	12
Current Budgets & Future Investment .....	12
Conclusions & Recommendations .....	13

## About this survey

Non-adherence to medication has huge implications for patients, healthcare providers, payers, and the pharmaceutical industry. On average, 50% of prescription medications aren't taken as directed; this is estimated to cause 125,000 deaths in the US and contributes to US pharma losing an estimated \$188 billion per annum.

S3 Group and eyeforpharma developed a survey investigating how the pharma industry is tackling the problem of medication non-adherence. We found an industry which is motivated, frustrated, optimistic and confused about the problem and how they should address it.

The survey shows that pharma organizations are motivated both clinically and commercially to find a resolution and that there is a lot of ongoing program activity. We found that pharma is quite dissatisfied by their current rate of progress but that they are optimistic about the potential to turn things around. However, there was little agreement among the organizations polled as to how they should plan and resource their efforts to deliver improved adherence.

The survey suggests some gaps in pharma's approach to the issue of adherence. Medication adherence is transitioning from being a tactical and sometimes intractable issue to being

seen as a **considerable strategic opportunity for pharma**. While there is a wide variety of approaches being adopted by pharma, we investigate which ones are seen to be delivering success. We also make recommendations based on the data available.

This survey is brought to you in association with S3 Group, specialists in Connected Health technologies. S3 Group work with pharma organizations to improve adherence rates through the appliance of technology and patient-centric approaches.

This report outlines the key findings and conclusions of the survey.



# About S3 Connected Health

S3 Group are expert in the design and delivery of patient support, medication adherence and remote patient monitoring services. Since 2004 we have been working with pharma, healthcare providers and medical device vendors. We deliver innovative and effective services for the mutual benefit of patients, care providers, payers and pharma companies.

Our strength lies in our ability to reveal and understand the clinical and health economic needs of our clients and to convert these requirements into engaging, robust, integrated and regulated services at a global scale.

We can help you to:

- **Differentiate products & develop a stronger value proposition**
- **Deliver real-world data and evidence**
- **Improve therapy adherence**
- **Improve patient outcomes**
- **Achieve greater levels of patient engagement**
- **Improve self-management and care collaboration**
- **Protect & create new revenue streams.**

Connected Health technologies are at the heart of everything we do but we understand that the delivery of successful services is not just about technology but about the rollout of comprehensive end-to-end services. We understand the complexity of the stakeholder relationships at the heart of any new healthcare service and we design our services to ensure that all parties get value from the solutions we provide.

As you take the journey from strategy through to delivery; from unmet needs to commercial benefits; and from companion apps to regulated services we have the expertise to guide you. Find out more at [www.s3group.com/connected-health](http://www.s3group.com/connected-health)

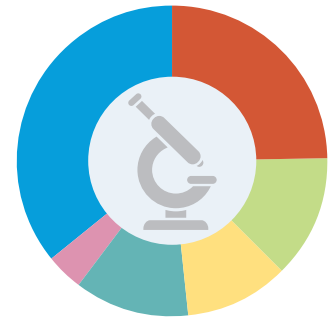


# Participants' Profile at a Glance



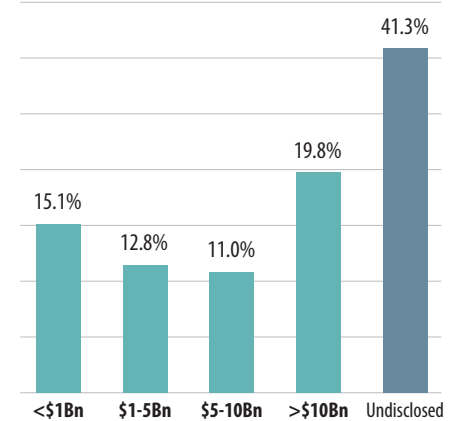
We conducted a survey on *How the Pharma Industry Is Tackling Medication Adherence* among 200 respondents, covering a wide range of geographies, organizational sizes, job functions and areas of focus. Below is the profile of our sample at a glance.

## Job function

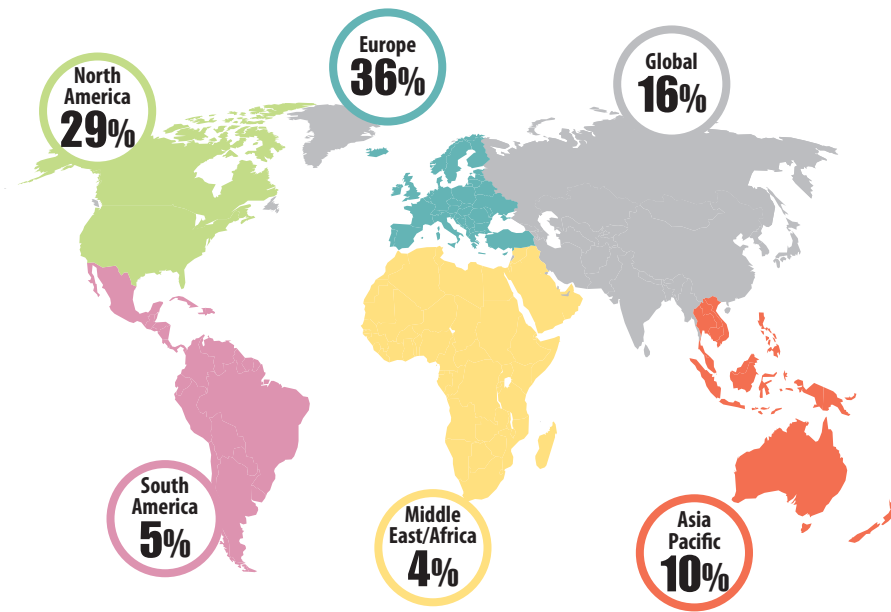


Brand Marketing	25%
Innovation Team	13%
Adherence Team	11%
Patient Engagement/Services	12%
Sales	4%
Other	36%

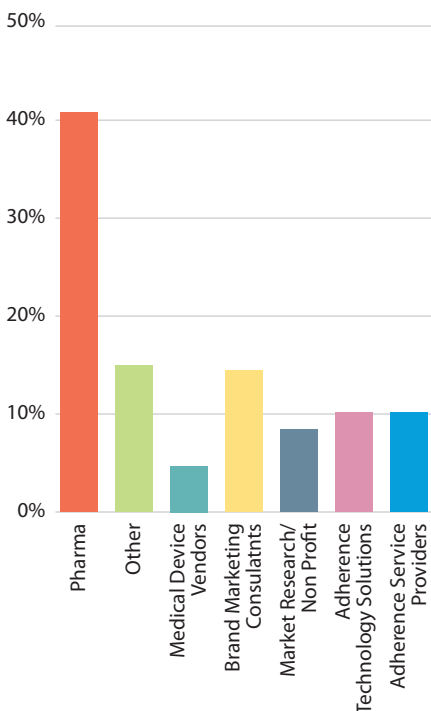
## Respondents by revenue



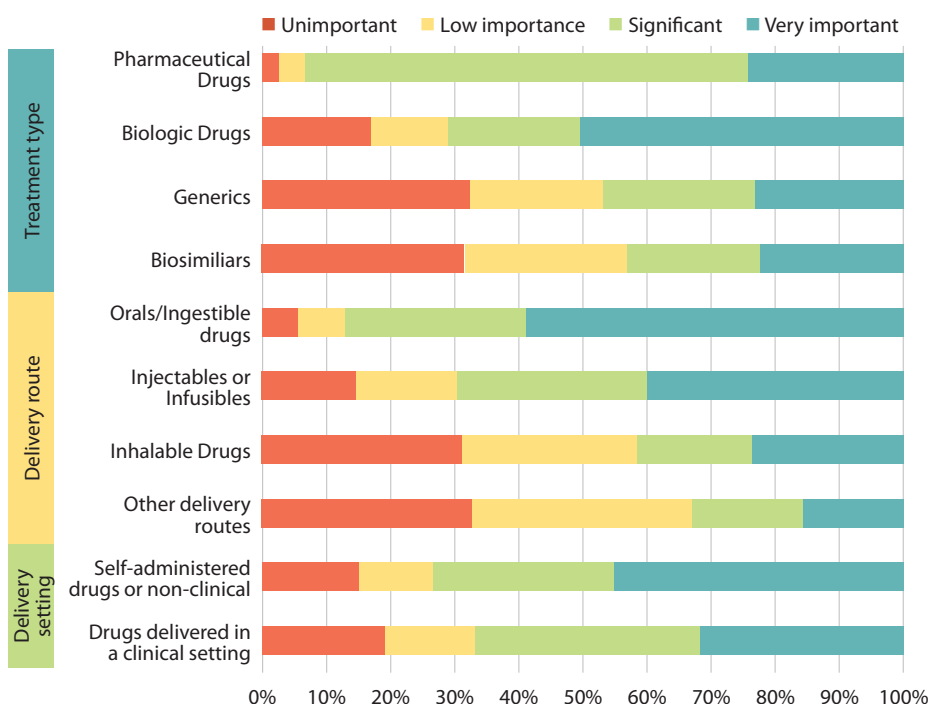
## Respondents by geography



## Industry participants

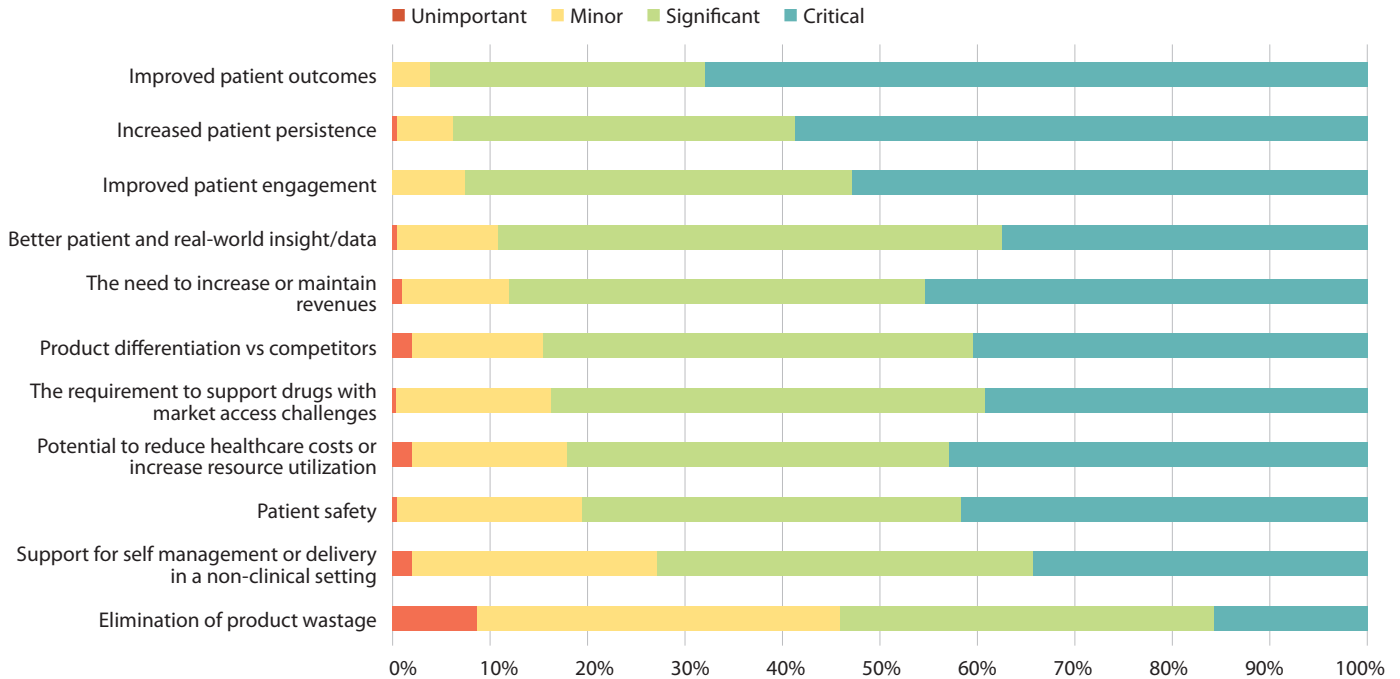


## Areas of focus



# Motivations

## What motivates pharma companies considering investment in medication adherence programs?



### Key Findings:

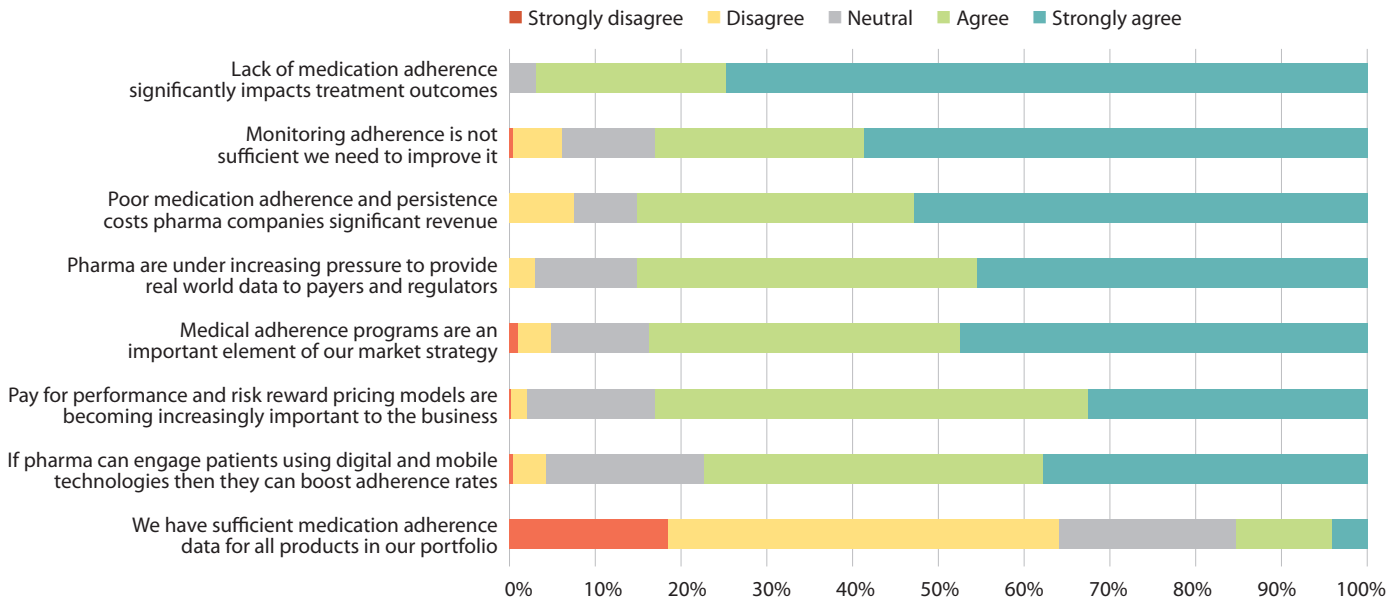
- **Patient outcomes are the single biggest motivator** for pharma companies considering investment in medication adherence programs. This is great news because if outcomes are at the centre of these programs, they can deliver win-win-win scenarios for patients, clinicians and pharma companies alike.
- **Patient persistence** is a huge issue for pharma companies, as indicated in the above graph. Multiple studies show that adherence to medication erodes over time and that this lack of long-term adherence poses problems for the patient, healthcare system, and the pharma industry. Pharma companies that can improve persistence stand to improve patient outcomes and reduce the total cost of care while simultaneously increasing their own revenue – what’s not to like?
- Commercial drivers for pharma are also seen as significant. The desire to **maintain or increase revenues, reduce costs, improve product differentiation and support drugs with market access challenges** are seen as important factors for over 80% of respondents when considering medication adherence programs.
- When we look at pharma respondents the emphasis on patient outcomes is even greater with 82% considering outcomes critical. Pharma respondents also place more emphasis on product differentiation than those looking in from the outside.

Increased Persistence = Better Outcomes + Reduced Cost + Increased Pharma Revenue



# Perspectives & Attitudes

Please indicate the level of agreement with the following statements



## Lack of adherence data – is pharma in the dark?

**86%** of respondents are seeking better patient and real-world insight/data



But only...

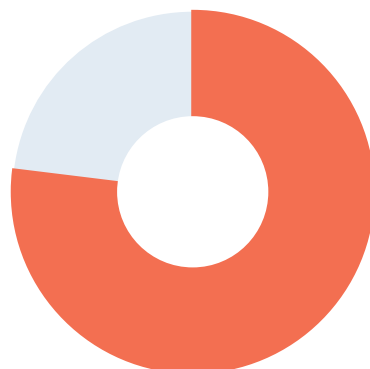
**14%** think they have sufficient medication adherence data for all products in their portfolio.

### Key Findings:

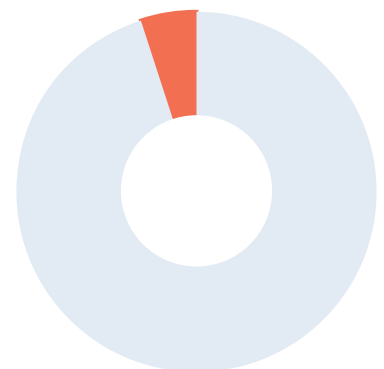
- What is notable about these findings is the extent to which respondents agree on the status quo – non-adherence is bad for patient outcomes and bad for pharma companies. Fixing the problem is an important element of their market strategy [84%].
- The need for medication adherence data contrasts dramatically with its availability.
- It is also interesting to note the level of optimism that adherence rates can be boosted using digital and mobile technologies, with 77% agreeing that if pharma can engage patients using digital and mobile technologies then they can boost adherence rates. Only 5% of respondents disagreed with this.

Do you agree that if pharma can engage patients using digital and mobile technologies, then they can boost adherence rates?

**77% agree**

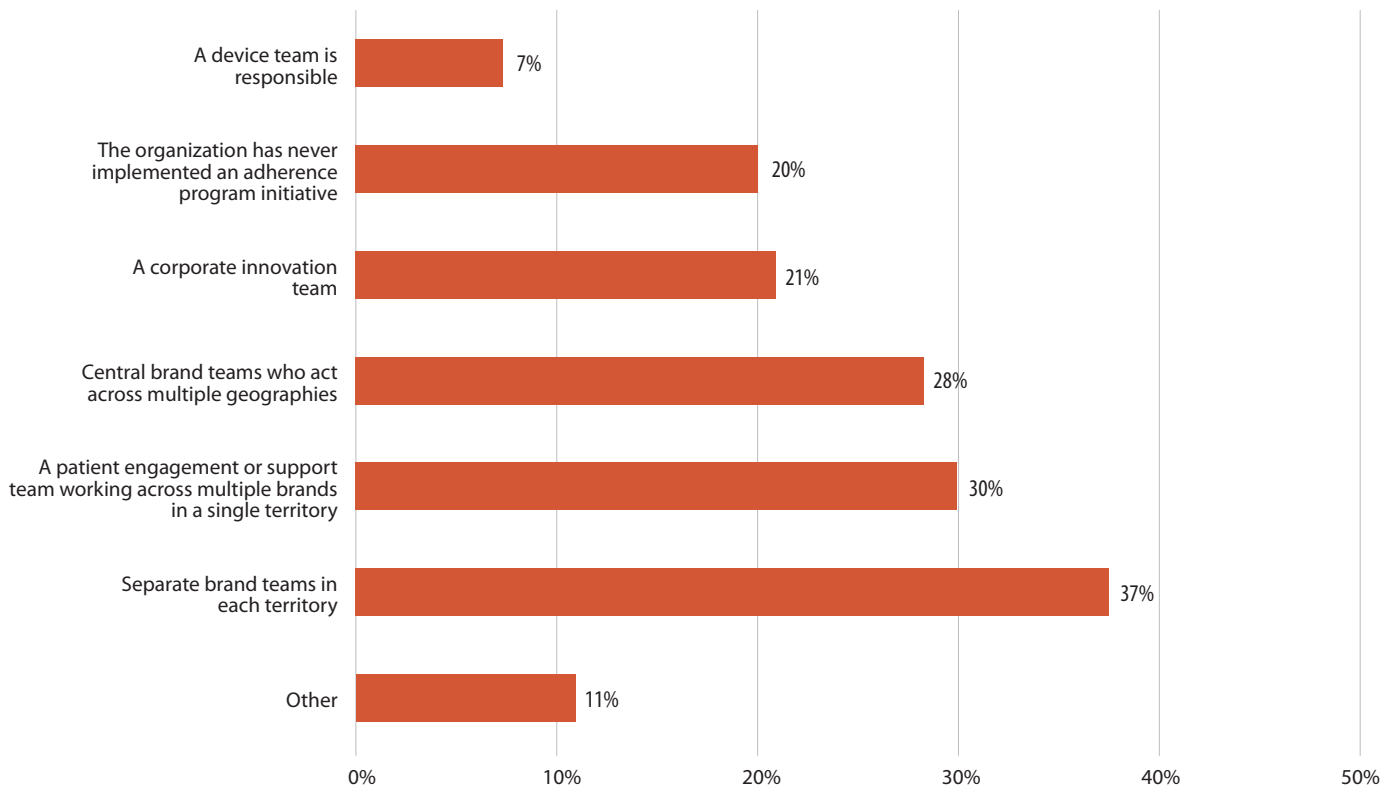


**5% disagree**



# Organizational Responsibility

**Who funds and initiates adherence programs in your organization?**



Organizational responsibility for medication adherence appears not to follow a set pattern. Indeed, it would appear that pharma companies have not decided whether medication adherence programs should be rolled out locally on a per-territory basis, or centrally for multiple territories. Our data seems to indicate a slight preference for dealing with the issue locally rather than centrally. To us, this seems inefficient – lack of medication adherence is an issue across territories. While solutions have some local and cultural elements, it is possible to deliver medication adherence solutions across territories that benefit from economies of scale. Respondents from organizations where responsibility for medication adherence was vested in local brand teams are twice as likely to rate their initiatives as poor [37%] compared to satisfied or very satisfied [16%]. Respondents are most satisfied when adherence is looked after by a local patient engagement team or a devices team, indicating that specialist or focused teams are more effective than other alternative ways of assigning responsibility.

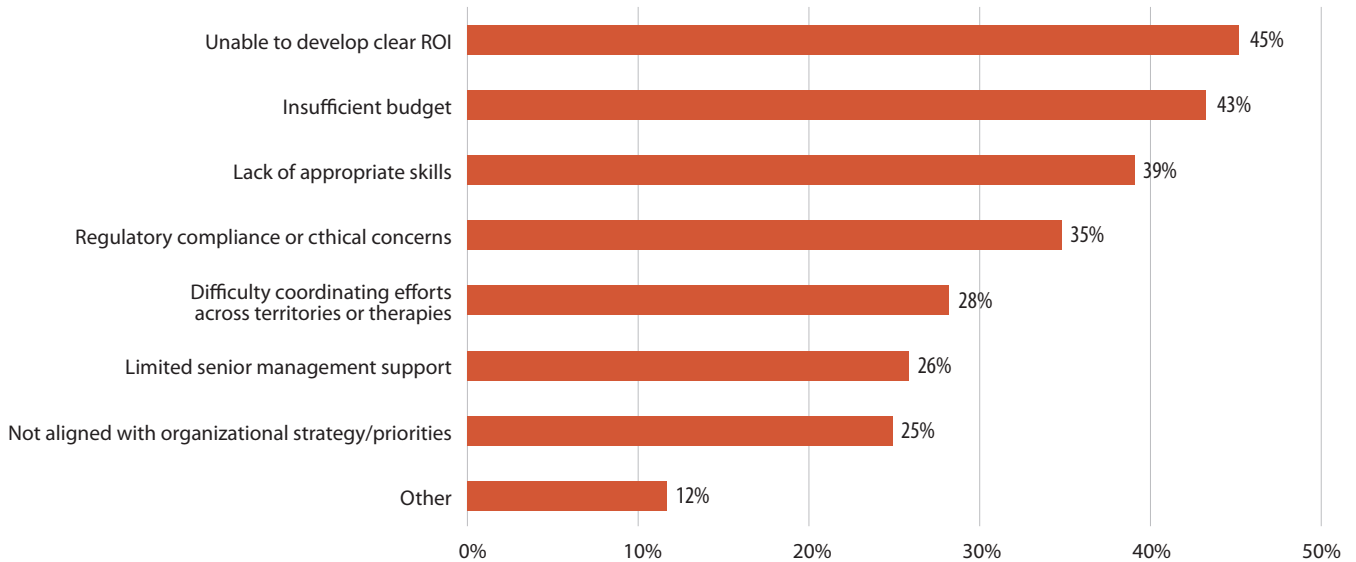
Respondents from organizations where responsibility for medication adherence was vested in local brand teams are twice as likely to rate their initiatives as poor [37%] compared to satisfied or very satisfied [16%].



Respondents are most satisfied when adherence is looked after by a local patient engagement team or a devices team

# Organizational Barriers

## Organizational barriers to the implementation of medication adherence programs



▮ **45%** of respondents consider their ability to develop a clear ROI to be the biggest barrier to implementing medication adherence. ▮

The survey shows almost unanimous agreement that patient outcomes can be improved by increasing adherence

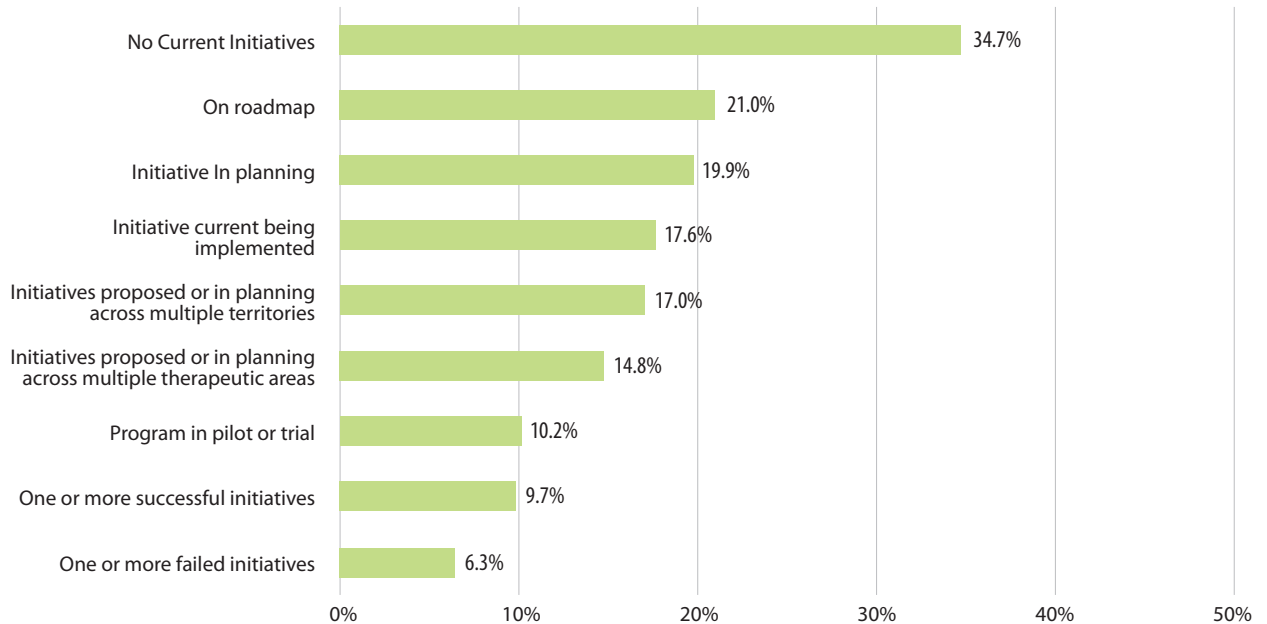
### Key Findings:

- One of the most interesting findings in the entire study is that 45% of respondents consider their ability to develop a clear ROI to be the biggest barrier to implementing medication adherence. However, the potential financial return for solving the problem seems to be a slam dunk - with 87% of respondents stating that an improvement in adherence and persistence would increase pharma revenues and 86% expressing the belief that adherence could be improved by 10% or more. Moreover, the survey shows almost unanimous agreement that patient outcomes can be improved by increasing adherence.
- It would appear that the issue with developing a clear ROI is some combination of ability to execute and cost. However, when asked, twice as many respondents reported successful programs as reported failures - so success is achievable.
- Costs are also tumbling with the use of smart interventions and mobile technology allowing us to reach and engage patients more effectively than ever before. Pharma has convinced itself that the benefits of these programs exist and the figures show that there is a high probability of success while implementation costs are falling. Why then the issue with ROI? Perhaps it goes back to the data; the difficulty that pharma companies have in establishing a baseline for adherence and predicting what the improvement might be? Pharma companies want certainty before they invest, not vague aspirations. Perhaps this is why so many are still engaged in pilot programs and trials rather than in large scale implementations. If fortune really does favor the brave, we wonder to what extent the pharma companies who are strategically investing in medication adherence and patient engagement will gain the upper hand on more conservative peers?
- It is interesting to note that while 58% of Brand Team respondents indicated that building an ROI model was an impediment, only 36% of Innovation Team respondents felt the same way. This may indicate that innovation teams help overcome this particular barrier.



# Online initiatives

## What is the status of online medication adherence initiatives in your organization?



### Key Findings:

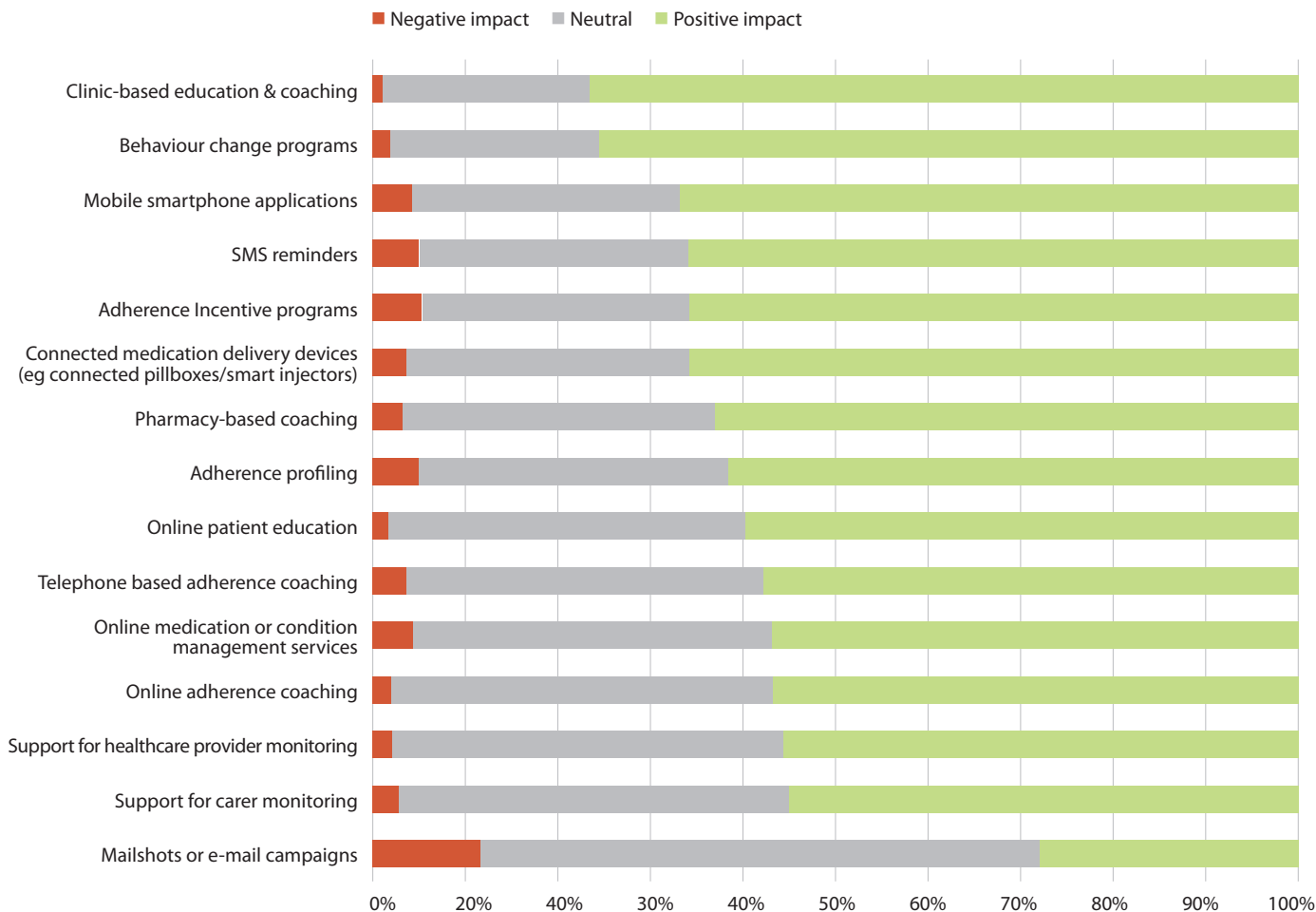
- Our survey indicates that nearly 2 in every 3 respondents have an online medication adherence initiative in the pipeline. This means that pharma brands should expect their competition to have some form of online medication adherence program in place.
- Another encouraging fact is that twice as many respondents have reported successful initiatives as failed ones.
- A small minority of respondents reported having adherence programs which encompass multiple therapies and territories. This suggests that there are considerable untapped opportunities for pharma companies to achieve efficiencies of scale by taking a strategic view of adherence and patient engagement.
- Overall, the findings indicate that pharma is very active in this space and that online medication adherence initiatives will start coming to market soon.



**2** in every **3** respondents have an online medication adherence initiative in the pipeline

# Effectiveness of Existing Tactics

**How would you rate the effectiveness of the following tactics used in existing medication adherence management systems?**



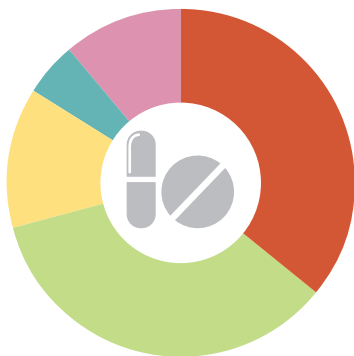
## Key Findings:

- While it is clear that most adherence programs use a range of tactics to tackle adherence and persistence, it is interesting to gauge how pharma rate various intervention types. Adherence requires a significant and consistent behavioral change and therefore, the most effective methods to improve adherence are those that engage the patient, make it easier for them to comply and nudge patients towards establishing the right set of habits. From our survey, it looks like clinic-based coaching is the most favored tool, just edging out behavior change programs, while its close relation pharmacy-based coaching is also highly regarded.
- It is interesting to see how technology aids like apps, SMS reminders and connected medication delivery devices are all highly rated. This finding shows that there is a consistent optimism that digital and mobile technologies, when used appropriately, can boost medication adherence rates.
- Further down the scale, mailshots and email campaigns have a poor reputation, with only 28% indicating that this tactic delivers a positive result. Healthcare provider and carer monitoring are also among the lowest ranked tactics.
- We can conclude from these responses that the best way to drive positive behavior change regarding medical adherence rests on two pillars: education, coaching, and incentives on the one side; and, incorporating today's technology as a facilitator of the process on the other side.

Pharma employees rank behaviour change as the #1 tactic

# Satisfaction with Current Efforts

## Satisfaction level with current efforts to maximize medication adherence



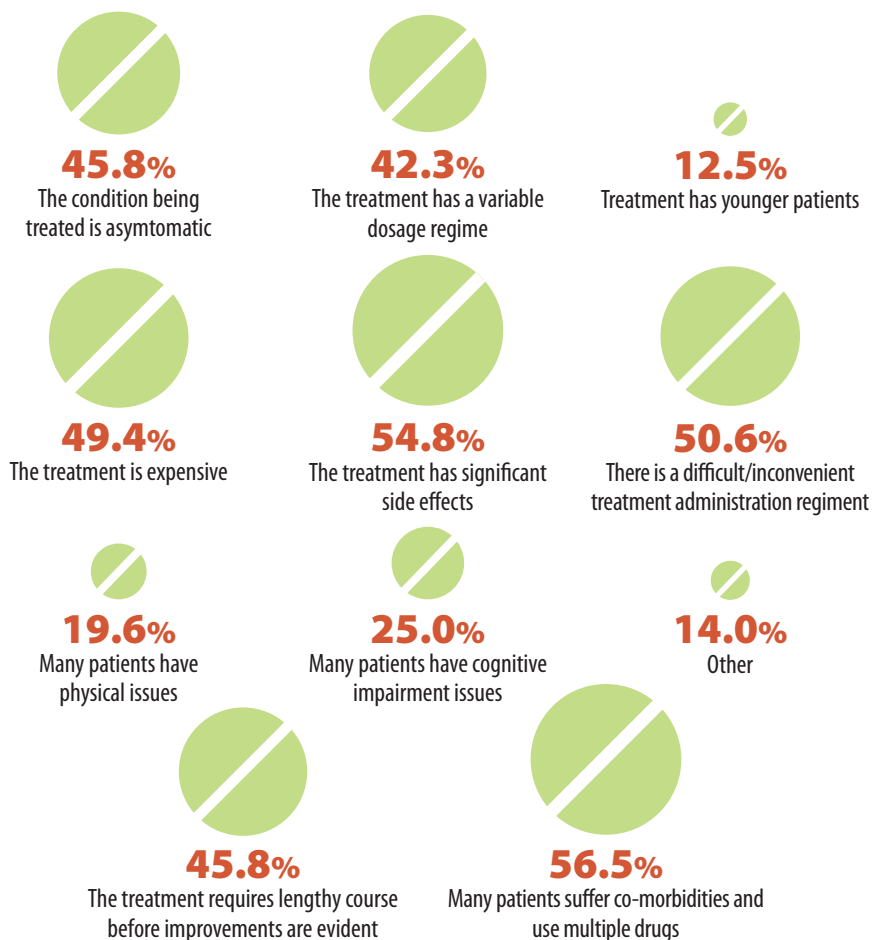
Poor	36%
Neutral	35%
Satisfied	13%
Very satisfied	5%
Don't know	11%

### Key Findings:

- Pharma respondents seem generally dissatisfied with organizational efforts to improve medication adherence; 1 in 3 who expressed a preference were satisfied but twice as many were unhappy that enough was being done to tackle the issue.
- It is not surprising that the most satisfied group actually worked in medication adherence teams, but unfortunately we don't have enough data to say whether this is just a bias or whether having a dedicated medication adherence team actually results in better medication adherence.
- The least satisfied groups in the survey worked in brand marketing and innovation. Half of the 22 innovation team respondents stated that they thought current efforts to improve medication adherence were poor and not one of them said that they were satisfied with the status quo.

# Factors Impacting Adherence

## What do you think impacts adherence for drugs in your portfolio?



### Key Findings:

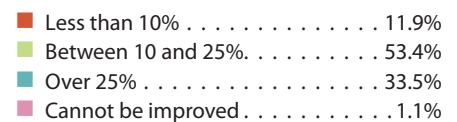
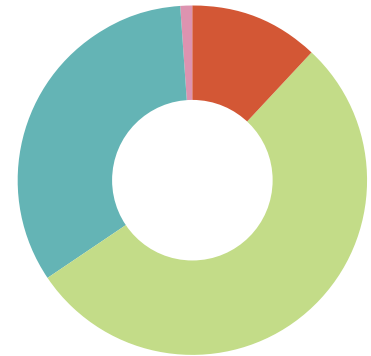
- Respondents believe that adherence for drugs in their portfolios is mostly impacted by certain **treatment-related issues** (such as patients suffering co-morbidities and using multiple drugs, significant treatment side-effects, inconvenient treatment administration regimen, asymptomatic conditions, treatments requiring lengthy courses before improvements become evident, and treatments with variable dosages), as well as by **affordability issues**.
- While it might be expected that patients' cognitive impairment issues and physical issues would have a significant impact on adherence for some conditions, these impairments are not prevalent across all therapeutic areas and therefore are not as important when considered across therapeutic areas.

# Room for Improving Adherence Rates

## Do you think it is possible to improve medication adherence for products in your portfolio?

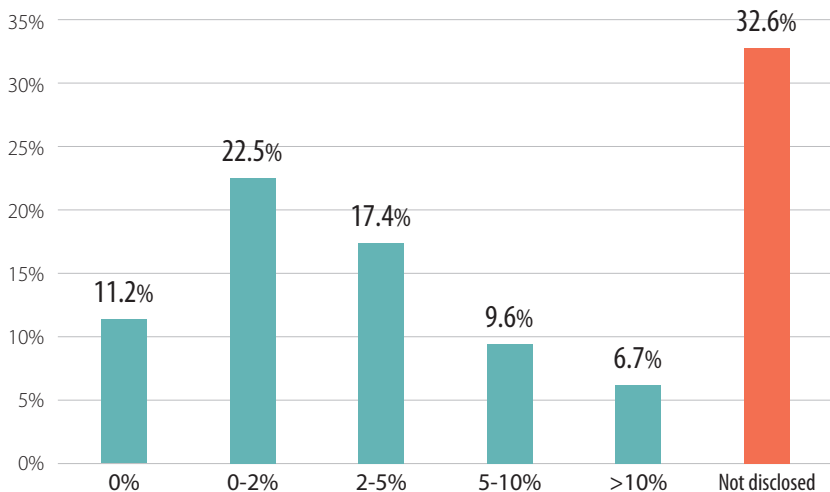
### Key Findings:

- We learned that respondents are very optimistic about the potential for improvement of medication adherence. More than one half believe it is possible to improve adherence by 10-25%, while one third consider an improvement of more than 25% possible.
- Practically everybody agreed that there is room for improvement.
- While it is clearly speculative, an improvement of 10% in medication adherence creates a market opportunity for pharma equivalent to a market the size of Japan.



# Current Budgets & Future Investment

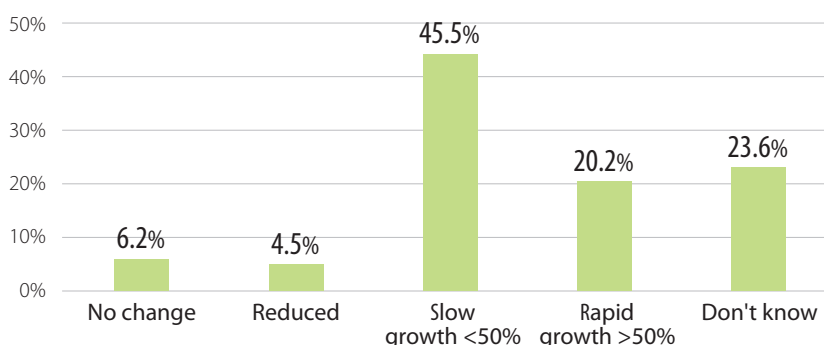
## % Current brand marketing budget allocated to adherence



### Key Findings:

- While funding is a touchy subject and a third of respondents avoided it, our survey reveals that the majority of medication adherence programs are funded with not more than 5% of the company's current brand marketing budget. On both sides of this range, we have 11% of programs that have no budget at all and 16% with a budget of more than 5%.
- We are a little wary of these figures – we think that the budget amounts shown here are likely to be overstated. Annual spend on advanced adherence programs tend to be under 0.5% of brand revenue.
- As a follow-up to the previous question, we asked the participants in our survey what change they expect to see in investment levels in medication adherence programs over the next 3 years. Possibly related to the low current levels of investment, combined with the importance of the issue, more than two thirds of respondents expect investment to grow – either slowly (45%) or rapidly (20%).
- Only 10% expect no growth and possibly a reduction of investment.

## Investment in adherence programs over the next 3 years



# Conclusions & Recommendations

## 1. Boldly Go

The survey indicates that medication adherence is a cornerstone issue for many organizations. Pressure is mounting from payers to prove efficacy and improve adherence; pressure is being applied internally to increase patient retention and revenue; and, of course, there are the usual market pressures from customers, competitors and changing market demands. In this context, it is no longer acceptable to overlook the potential opportunity and threat associated with medication non-adherence. Medication adherence is no longer an undifferentiated issue common to all pharma organizations. It is an issue that the pharma industry is already tackling. Indeed, smart pharma are already rolling out strategic digital services around and beyond the pill to:

- **Improve patient outcomes, engagement & persistence**
- **Better patient and real-world insight/data**
- **Increase product differentiation vs competitors**
- **Reduce healthcare costs or increase resource utilization**
- **Increase or maintain revenues**
- **Support drugs with market access challenges.**

To deliver these objectives, a specialized pharma platform for digital services delivery is a key need. The survey indicates that there is a significant gap between the perceived benefits of improving adherence and the amount of activity and investment currently evident – if this is true in your organization, then it is time to consider whether standing still, or even keeping pace, is a winning bet. Retail, tourism and financial services have all been revolutionized by digital – why not pharma?

## 2. Organize for success – focused teams

The issue of medication adherence is complex. A multi-disciplinary team is required to address issues encompassing commercial and market access experts, regulatory experts, clinical expertise, patient engagement, behavioral change, program design and implementation, and service delivery.

In many organizations, these roles are sidelined. The collective effectiveness in addressing issues like adherence is further eroded by the dilution of skills, responsibility and budgets across multiple territories. Our data suggests that giving organizational responsibility to teams with a specific focus on adherence delivers higher levels of activity and higher numbers of successful initiatives than alternative options.

## 3. Consider scale

While there are differences between medication adherence program design for patient groups across therapies and territories, we believe that these differences are over-emphasized. Solutions across territories and therapies have many common components.

While there are always corner-cases which will disprove a general rule, we believe that pharma companies should pool human and capital resources to solve this problem. To do this, pharma brands and territories need common objectives and toolsets to deliver services that are globally developed while remaining locally relevant.