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Digital healthcare is a rapidly evolving landscape. A key tenet of this new dynamic is the establishment of trusted relationships. Forging these is the cornerstone for unlocking the full potential of technology and ensuring patient well-being.

The healthcare industry, like other business sectors before it, now leverages recent groundbreaking advancements in digital technology. Increasingly, the pharmaceutical industry prioritizes the consumer experience and builds sustainable relationships with patients. It is essential to recognize this ongoing transformation in the patient engagement space, driven by the continuous expansion of digital technology. Innovative patient support models present a genuine opportunity for the pharma industry to redefine the type of experience it provides to patients.



Evolution of Patient Needs

Patients continually raise their expectations of pharmaceutical companies. As patient expectations rise, pharma must find ways to deliver the appropriate engagement through their patient support programs. Several prominent trends drive this demand.



HEALTHCARE CONSUMERISM The first trend is the ongoing influence of

healthcare consumerism.

60% of patients now anticipate that their digital health experience with pharma should match the seamless experiences they encounter in retail with companies like Uber and Amazon.¹



ACCOUNTABILITY/SELF-EDUCATION

Patients take more accountability for their health and become proactive in educating themselves. With this growth in interest, patients turn to pharma for support and guidance.

72% of patients express a desire to discuss self-care regimens with their doctors.²

VIRTUAL ENGAGEMENT

The increased familiarity of virtual engagement significantly contributes to these trends.

76% of patients express interest in using virtual health going forward, when only 11% used it Prior to the COVID-19 pandemic.³

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NEW TECHNOLOGY

Today's patients are attuned to the latest technological innovations and believe that these advancements should play a more prominent role in their healthcare interactions.

67% of patients state their comfort in utilizing emerging technologies such as artificial intelligence for their healthcare needs.⁴

Digital health solutions in the patient engagement market have seen remarkable growth due to the continuously evolving needs and expectations of patients. Digital health represents one of the fastestgrowing sectors in healthcare, and its market size is projected to reach nearly \$70 billion within the next four years. An increase in capital investment initiated this growth, reaching almost \$15 billion in 2021.

Investment and growth in this sector opened the door for the emergence of innovative solution providers in the digital patient engagement space and led to a substantial surge in virtual engagement. Virtual engagement increased by 38 times compared to the pre-COVID baseline, indicating a significant shift toward digital platforms and tools. In the United States alone, McKinsey estimates approximately \$250 billion of healthcare spending is expected to transition to these digital health models. These statistics highlight the potential of digital patient engagement solutions in reshaping the healthcare landscape.

Market Growth

Patient engagement solutions market size is expected to reach nearly **\$70B** by 2027⁵



Investment Focus

Total VC investment grew 2x from 2019 to 2021, up to nearly \$15B annually⁶



Shift to Digital

38x increase in virtual from precovid baseline, estimated \$250B of healthcare spend that could shift to these type of models⁶



We Still Have a Lot of Work to Do

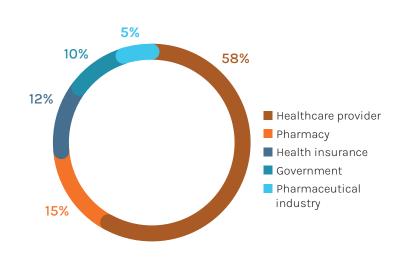
It is essential to evaluate how pharma is perceived by today's patients. Unfortunately, according to recent data, the pharmaceutical industry still has considerable work to do in gaining trust and meeting patient expectations.

In a recent survey conducted by Accenture, pharma ranked as the least trusted among all five healthcare players. Only 5% of consumers rated pharma companies as the most trusted constituent within the healthcare ecosystem. In comparison, twice that number considered the government to be the most trusted entity.

These findings seem discouraging, yet there is hope for pharma to attain greater patient trust. The industry's contributions to addressing the COVID-19 pandemic had a positive impact. More than one in three consumers reported that the pandemic increased their trust in the pharma industry. It is the industry's responsibility to build off this momentum and transform its approach to better meet the needs and expectations of today's consumers. Pharma must dedicate a concerted effort to bridge the existing gaps and create a positive healthcare experience that is based on trust, transparency, and patient engagement.

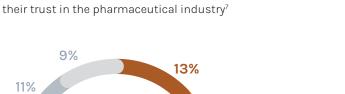
Trust in Healthcare Payers*

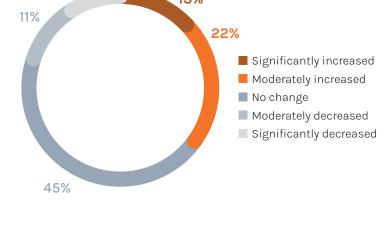
Only 5% of consumers rated pharma companies as the most trusted constituent within healthcare⁷



Impact of COVID-19 on Trust in Pharma

35% of consumers said that COVID-19 helped to increase







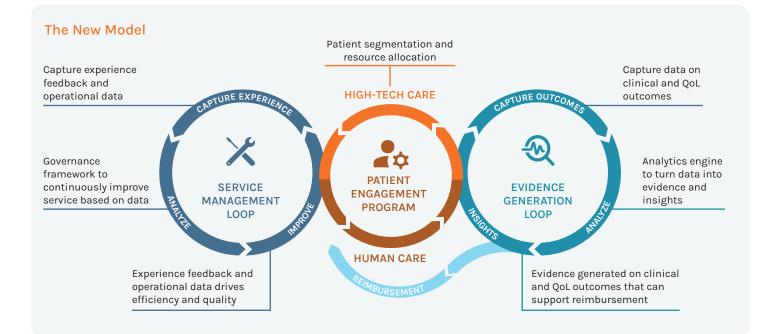
The Shift to Patient-Centric Models

Recent advancements in digital technology allow more companies to prioritize patient centricity. Technologies that focus on enhancing the patient's experience lead the way. Some of these technologies include mobile health apps, remote monitoring tools, natural language processing, and next-best action recommendations.

As technology shifts to a patient-centric focus, the biopharma industry is simultaneously moving away from the traditional "pill" model and embracing a commercial approach that goes beyond medication. This new adoption is a more innovative "platform" model that caters to all the patients' needs. It goes beyond simply providing medication and instead aims to build a commercial framework that encompasses various aspects of patient support. This approach to patient support is not limited to medical treatment for illnesses but also extends to wellness, preventive care, and the overall patient experience. To achieve this platform model, many pharma companies are establishing fully-integrated patient-centered ecosystems. These ecosystems include all the necessary services, data, and other technology products required to facilitate a patient engagement program "beyond the pill." The goal is to contribute to disease prevention, risk awareness, post-treatment support, and overall patient wellness.







A new generation of patient engagement programs started with the platform model. The programs create an integrated environment where human engagement, technology, and gathered data work together symbiotically to establish a new standard for patient-centric engagement.

Significant innovation has been directed towards realizing this model, which comprises three key elements:

- 1. High-Tech, Human Care: This element harnesses technology to enable scalable and personalized human engagement. Advanced tools and systems enhance the quality and effectiveness of interactions between healthcare professionals and patients.
- 2. Evidence Generation Loop: The evidence generation loop focuses on capturing real-world data related to health outcomes. This data serves as the foundation for establishing an evidence and insights engine. This enables the development of innovative commercial arrangements based on reliable evidence.
- **3. Service Management Loop:** The service management loop involves the capture of patient experience, operation, and other relevant data. This data drives continuous improvement in the patient engagement program. Insights gained from the data refine and enhance the program over time.



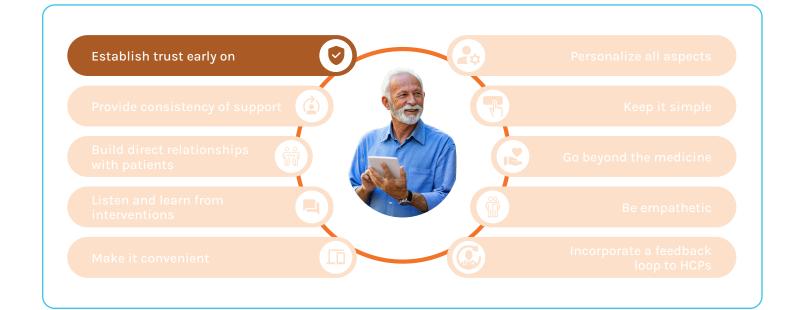


The Pillars of Patient Engagement Programs

As the shift to a "platform" model gains traction, solution providers recognize the crucial factors that lead to success in a patient-centric world. Companies developed key principles to strengthen the bond between patients and healthcare stakeholders. These principles facilitate a more personalized, convenient, and supportive healthcare journey. By, This digital healthcare transformation places patients at the core of their care by blending the building of trusted relationships with the fundamental pillars of patient engagement. Solution providers identified ten foundational elements for effective patient engagement programs, driving superior efficacy and efficiency. To achieve world-class patient engagement, it is vital that program design, implementation, and management incorporate and adhere to the guiding principles of these elements.







🕑 Establish Trust Early On

Introduce patients to their go-to resource for questions and help at time of consent.

Establishing trust with the patient early in the engagement program is the first step to creating a patient-centric environment. In a recent whitepaper, Deloitte reports that trust with patients is built through multiple positive interventions and plays a significant role in improvement of health equity and outcomes. To achieve trust, it is critical to introduce patients to their dedicated resource for ongoing support and engagement at the time of consent or opt-in. The initial hours and days of therapy can be particularly challenging for patients, and their needs often extend beyond financial and logistical aspects.

Partners who effectively incorporate this element ensure a two-way API feed between their HUB and patient engagement provider. This setup allows for immediate notification as soon as the patient consents and their information is sent to the HUB for the benefits verification process. As a result, the patient engagement provider can proactively reach out to the patient, enroll them in support services, and guide them through the difficult and complex stage of onboarding. Establishing an early

VALIDATION FROM THE INDUSTRY

Trust is earned over multiple positive interventions with patients, and this can contribute to improved health equity.

- Deloitte

APPROACH

API Integration between HUB and patient engagement provider, so the latter entity can reach out within a few hours of Rx versus waiting until BI/BV is completed or product is shipped.

connection from the start allows companies to foster trust, address immediate patient needs, and enhance the patient experience during the critical early phase of therapy.





(Provide Consistency of Support

Patients are paired with a primary point of contact throughout their time on therapy, not needing to transition from stakeholder to stakeholder in the process.

Pharma is beginning to establish a consistent support resource throughout the patient's journey. In traditional patient engagement models, patients were often passed from one stakeholder to another. However, the industry starting to understand and prioritize the needs of patients and implement a consistent support champion. Wolters Kluwer highlighted this in an article on patient engagement. The article said appointing a champion is one of the best ways to foster patient engagement success. In the new model, an increasing number of companies are adopting primary point-of-contact models, where patients pair with a consistent support resource providing engagement and adherence assistance from the time of prescription onwards.

This consistent and dedicated resource ensures patients have a reliable contact person or coach for their questions, needs, and concerns. This model eliminates the sense of being "handed off" that often exists in the traditional model. To ensure that the health coach has access to all the necessary information to support the patient, they work within a platform with data feeds from other

VALIDATION FROM THE INDUSTRY

Appointing a champion is seen as one of the best ways to set the stage for patient engagement success.

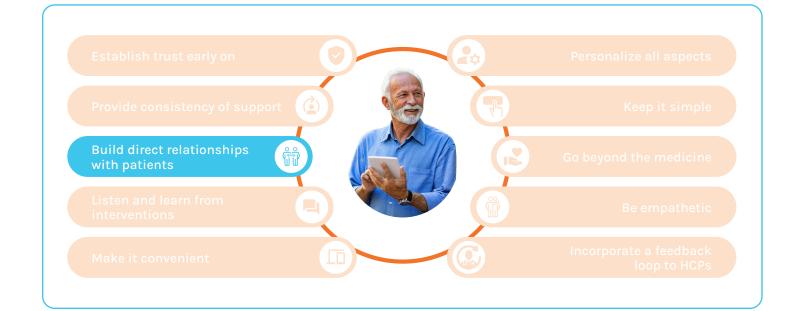
- Wolters Kluwer

APPROACH

Provide patients a dedicated, consistent go-to health coach from time of Rx through ongoing adherence, while other stakeholders, like the HUB, SP etc. work in the backward and are triaged in by the health coach as required.

providers in the patient support program. This allows for seamless sorting of those resources when expertise beyond the health coach's scope is required.





Build Direct Relationships with Patients

Patient engagement solution providers are systematically and compliantly sharing patient data with their pharma clients to allow for direct outreach and connectivity.

It is important for pharma companies to work with solution providers that are willing and able to share data in a compliant manner. These patients are customers of the pharma company, and establishing a direct relationship empowers the company to better understand their patients' needs and behaviors. To facilitate this data sharing, it is essential to incorporate sophisticated consent strategies and approaches, such as e-consent. These strategies enable partners to obtain appropriate permissions and opt-ins from patients, ensuring systematic and compliant sharing of data with the company's teams.

Through this level of data sharing, the pharma company cultivates a more direct relationship with the patient. This enables a deeper understanding of patients' unique requirements, allowing for the tailoring of patient services and the development of individualized communication approaches.

PA Consulting recently posted on this topic saying, "Pharma business leaders know that end-customer intimacy, based on data mastery to achieve personalization and trust, drives competitive advantage." ©2023 VMS BioMarketing. All Rights Reserved.

Pharma business leaders know that endcustomer intimacy, based on data mastery to achieve personalization and trust, drives competitive advantage.

- PA Consulting

APPROACH

including e-consent, into your patient engagement ongoing basis.

As a result, the industry should expect further advancements in this area and encourage patient engagement providers to enhance connectivity with patients. By establishing a direct relationship with patients and leveraging data mastery, pharmaceutical companies enhance their understanding of patients' preferences, improve personalization of services, and gain a competitive edge in the industry.





Listen and Learn from Interventions

Capture the voice of the market from patient engagement interventions and use this actionable data to influence program optimizations and overall brand strategy.

Sharing data without other capabilities is insufficient; patient engagement programs must be able to mine and derive actionable insights from the data. As stated in a recent article by pharma Times, "proper insights serve as the eyes and ears of the life science industry, providing crucial guidance and preventing us from operating blindly." What sets patient engagement providers apart? A direct and ongoing relationship with patients. This unique position enables companies to capture front-line insights that would be difficult to obtain through other means. These insights play a vital role in identification of market preferences, informing optimizations and enhancements to patient support programs, and guiding brand strategy.

Patient engagement solution providers with advanced technology and robust data management stacks leverage natural language processing and other forms of AI. These technologies extract valuable information from call recordings during patient interventions. The information obtained includes identifying key topics discussed with patients, analyzing patient sentiment, and conducting ad-hoc queries to address specific strategic questions.

VALIDATION FROM THE INDUSTRY

Proper insights are the eyes and ears of the life science industry. Without them, or without the proper use of them, pharma companies are flying blind.

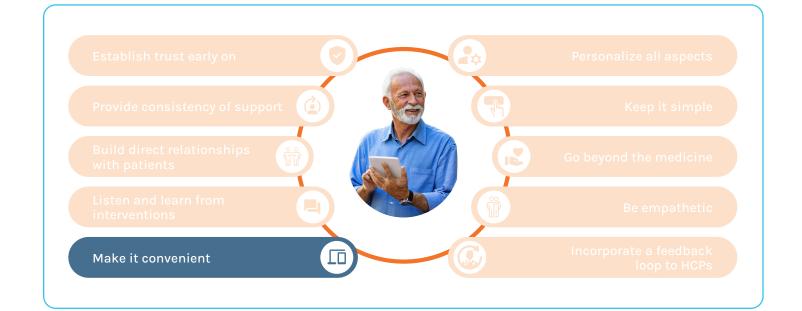
- PharmaTimes

APPROACH

Use natural language processing (NLP), a form of artificial intelligence (AI), to systematically mine data from call recordings and understand key topics and sentiment.

With interaction analytics, brands gain a level of context often overlooked. This context enriches the understanding of patient interactions and enables brands to extract valuable insights.





🔟 Make it Convenient

Deliver a patient engagement program that meets patients when and where they need and want support, and seamlessly integrates into their day-to-day lives.

A key principle that applies to any consumer experience is convenience. Convenience entails delivering patient support that meets patients' needs and preferences, seamlessly integrating it into their day-to-day lives. In a recent Harris Poll, over 60% of consumers expressed a desire for their healthcare experience to resemble the convenience services provided by platforms like Amazon Prime and Instacart. Patient engagement programs strive to achieve convenience by capturing patient preferences and assessing preferred learning styles from the outset. This data then informs and guides interventions during the patient engagement journey. It considers factors such as timing, communication channels, intervention frequency, total volume, and time intervals between interventions. By tailoring outbound support to be convenient for patients, programs enhance patient satisfaction and engagement. Moreover, it is crucial for all patient engagement programs to incorporate inbound connectivity, enabling patients to reach their dedicated support resource whenever the need arises. This ensures that patients have a reliable and accessible point of contact for assistance.

VALIDATION FROM THE INDUSTRY

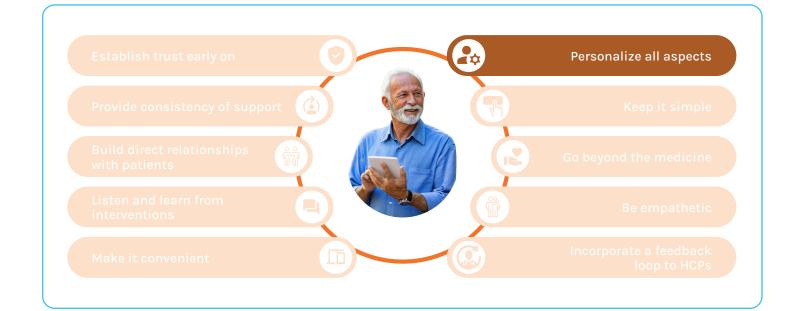
61% of consumers state they would like their healthcare experience to be more like the customer experience of an online convenience service app, such as Amazon Prime, Uber, or Instacart.

– Harris Poll

APPROACH

Capture patient preference and assess learning style upfront to guide the delivery of support interventions, including timing, channel, frequency, and cadence, while offering inbound connectivity.





Personalize All Aspects

Tailor all facets of the patient engagement program, including the types of interventions, level of support and areas of focus based on each individual patient.

The era of one-size-fits-all patient engagement programs is gone. Leading programs in the market embrace personalization and tailoring every aspect of patient support to create individualized experiences. A comprehensive report by McKinsey highlights the impact of personalization in patient engagement. By implementing personalization strategies, brands enhance the overall patient experience, improve the quality of care, reduce medication non-adherence, and ultimately achieve better outcomes, all while reducing costs. Companies leverage AI tools, such as predictive analytics, to assess each patient's adherence risk score. These models consider various data sources--including demographics, psychographics, medical history, and social determinants of health--to create a comprehensive view of the patient. The combination of these inputs into a mathematical model shows patient adherence risk on a scale of 1-100. This risk score is the basis for the design of their patient journey. Al enables highly specific segmentation, allowing for the delivery of personalized experiences. One of the most compelling aspects of these predictive models is an ability to gain predictive power over time. As more

VALIDATION FROM THE INDUSTRY

Personalized engagement leads to a better patient experience, higher quality of care, and reduction of avoidable costs such as medication non-adherence.

- McKinsey

APPROACH

Leverage advanced analytics, like predictive modeling, to execute a patient experience that maximizes engagement and outcomes by analyzing data points to create an individual experience.

data is collected and analyzed, the decisions made by AI based on patient risk levels and the likelihood of being influenced correlates with actual impact and success. This iterative process further refines and enhances the personalization of patient engagement programs.





🔫 Keep It Simple

Design and build the patient engagement program to be intuitive, with a focus on reducing complexity versus adding complexity to an already overwhelming process.

In addition to convenience and personalization, patients increasingly seek simplicity in engagement with healthcare programs. Managing a chronic disease already entails dealing with various complexities related to reimbursement, dosing, administration, and side effect management. Therefore, optimized patient engagement programs strive to design and build intuitive experiences that reduce complexity at every stage. Likewise, the National Institutes for Health emphasizes the importance of design techniques that enhance simplicity and ease of engagement for patients. By focusing on simplicity, programs improve perceived usability and increase the likelihood of patient engagement. Companies employ several strategies to create a simple patient journey. First, they reduce barriers that hinder patients' continuation in the program. Second, they ensure user-friendly interfaces and functionalities through continual evaluation of technology. Lastly, offering selfserve support tools enhances simplicity and usability. Patients appreciate having aspects of the program they can learn and perform independently, reducing the need for constant handholding. Empowering patients with

VALIDATION FROM THE INDUSTRY

Design techniques should be explored as ways of increasing patients' simplicity ratings, hence, improving the perceived usability of and the likelihood of actual use.

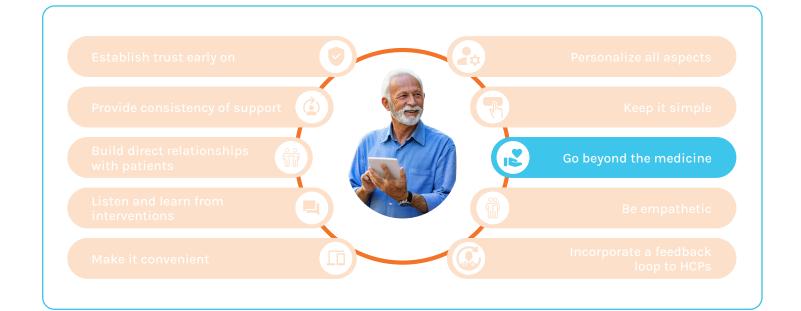
- NIH

APPROACH

Incorporate a journey design with limited barriers to continuation, digital technology that is user friendly, and support tools that are self-serve.

self-serve resources and tools promotes self-efficacy and improves overall engagement. By prioritizing simplicity, patient engagement programs alleviate the burden of complexity for patients, enhance their usability, and increase their likelihood of active participation.





Go Beyond the Medicine

Integrate patient engagement elements focused on patient needs beyond the typical financial, logistical, and clinical areas of support.

Pharmaceutical companies' traditional models of patient engagement focused primarily on addressing patients' financial and logistical needs. However, with the demonstrated benefits of expanding beyond clinical services, more innovative programs embrace holistic support models that encompass various aspects of patients' well-being.

For example, patient engagement programs now include elements such as nutritional, wellness, lifestyle, and emotional health coaching. Companies implement various tactics to address dietary support, such as online assessments, nutrition education and coaching, meal planning and tracking, answering dietary-related queries, setting nutrition goals, and even gamifying the process. Additionally, patients are referred to more comprehensive dietary support programs, including in-home meal services or kits.

Similarly, in mental health support, companies use tactics like cognitive behavioral health support to reduce stress, anxiety, and depression. They also incorporate

VALIDATION FROM THE INDUSTRY

The patient benefits of 'beyond clinical' services are now accepted across the life sciences sector.

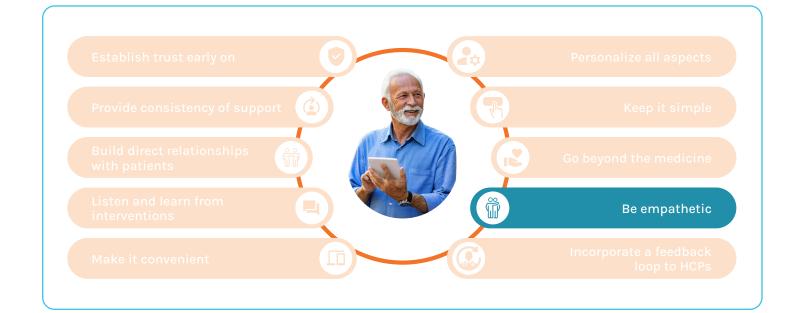
- McKinsey

APPROACH

Include nutrition, wellness, lifestyle and emotional health coaching into the topics addressed throughout the patient journey, providing services like physical activity tracking to deliver more holistic support.

psychological interventions, continuous monitoring and assessment, inbound support services, meditation, and wellness coaching. Moreover, they provide referrals to more extensive mental health support programs, including popular direct-to-consumer apps like HeadSpace and Calm.





(Be Empathetic

Use technology to augment and enhance the human element of patient engagement, not replace it entirely.

It is important to remember that tech is meant to augment and enhance the human element of patient engagement, not replace it. Striking a balance between technological advancements and compassionate human interaction is crucial for providing the best possible care to patients. While technology enhances patient engagement, it cannot fully replicate the essential human connection due to its lack of emotional intelligence. Further, despite advancements in NLP and technology, tech cannot replace the soft skills necessary for building connections with patients. Tech lacks the intuition, sensitivity, and empathy required to support patients' needs. Additionally, technology often lacks the complete picture and context surrounding a patient's situation. Patients recognize empathy, and they can tell when a brand truly understands their needs. It is essential to not adopt 100% digital or automated patient engagement strategies, and to ensure that a human element remains. This approach is key to forging trusted relationships with patients.

VALIDATION FROM THE INDUSTRY

Patients and consumers know empathy when they see it. They know when a brand 'gets it' and when it doesn't.

- WorldHealth

APPROACH

Adopt patient engagement strategies that involve the human connection and are not just 100% automated or digital offerings.





(Incorporate a Feedback Loop to HCPs

Key information from the patient engagement program is shared back to the HCP/office in an easy to consume manner to aid in a more progressive patient-physician dialogue.

An essential factor for superior patient engagement programs is establishment of a connection to the patient's healthcare provider. According to an article published in The New England Journal of Medicine, feedback loops that connect patients and their doctors are crucial for patient engagement and the patient's success in effective therapy management.

Unfortunately, patient support and engagement often occur in isolation. This leaves HCPs with limited knowledge about their patients' progress. Leading programs recognize the importance of establishing an automated feedback loop from the patient engagement program to the HCP portal. This integration provides greater visibility into patient progress, and, in turn, enables a more dynamic and productive patient-physician dialogue. It facilitates effective communication and reinforces the quality of support provided to patients. The creation of a seamless connection between patients and healthcare providers enhances patient engagement, improves therapy management, and delivers superior care.

VALIDATION FROM THE INDUSTRY

Feedback loops connecting patients and their doctors are key to engaging and helping patients to be successful in their therapy management.

– NEJM Catalyst

APPROACH

Build an automated feedback loop from patient engagement program to HCP portal that provides visibility into patient progress and reinforces support being provided to the patient.



A Complex Challenge

There is no silver bullet. It is a complex set of affairs, but it is our responsibility to continue to evolve patient engagement strategies to build authentic and sustained relationships with patients in this digital healthcare era.

Delivering superior and differentiated patient engagement is a complex challenge. Pharma acknowledges the importance of allocating resources to patient engagement, and the innovations in this field are paving the way for an environment where pharmaceutical companies can genuinely delight their patients. We now see progress towards an experience comparable to what Amazon, Netflix, Uber, and Apple offer in the healthcare space. The innovation in patient engagement is still in its early stages, and there is much more to come. As we continue this transformative journey and establish trusted relationships in the digital healthcare era, there are three key ideas to follow.

First, it is essential to shift focus towards outcomes, such as measuring increased therapy adherence, rather

than relying solely on activity metrics of engagement. By setting expectations that patient engagement investments intend to improve outcomes, we ensure we gather the right data and evaluate the appropriate key performance indicators.

Second, we should be open to integrating the patient experience across all healthcare stakeholders. Increasingly, patient engagement models in pharma involve the participation of healthcare systems, payors, and other industry entities. By embracing this collaborative approach, we enhance the overall patient experience and achieve better outcomes.

Last, it is crucial to adopt a global patient engagement investment perspective while implementing localized strategies. Investing in enterprise-level services and strategies is important, but it is equally essential to tailor patient engagement tactics to the specific needs and preferences of individual patients.

About VMS BioMarketing

VMS BioMarketing is the leading provider of patient engagement solutions integrating human connection, advanced technology, and real-world data to deliver holistic support in a dynamic and personalized environment. Leveraging 25+ years of experience in patient engagement, we know consumers want to build and develop relationships with the pharma companies whose products they utilize, and the research shows these relationships are vital to achieving the right health outcomes for patients and business outcomes for clients. Our innovative and award-winning platform, One Voice[™], can empower your brand teams to build authentic relationships with patients by uniquely combining data-driven technology and human interventions using our proprietary, intelligent algorithm to determine the right level of support for each patient based on disease state, product type, adherence risk profile, social determinants of health, real-world evidence, demographics, and psychographics to optimize the right mix of human and technology-driven interventions.

