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mobile

How Interactive Text Messaging Revolutionizes Patient Engagement

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The healthcare industry faces uncertain times. The steady transition to value-based care (VBC) will most likely continue, but there is little indication that this process will accelerate. Until any future reform, organizations operating outside of VBC delivery models are focusing on growth through effective acquisition and retention of patients.

Whether an organization's focus is on value, growth or both, the strategy that remains a cornerstone of effective care delivery is patient engagement. Patient engagement has a material impact on 92% of outcomes.[1] Engaged patients are 2.6 times more likely to remain with their existing providers, and it costs 90% less to get current patients to return for future care than it does to attract new patients[2,3]. From managing a diabetic population to maximizing retention of patients, engagement proves to be a critical strategy both now and into the future.

Leading healthcare organizations have embraced patient engagement as a core component of their strategy. Consistently, these organizations leverage Short Message Service (SMS) text messaging as a key communication channel to engage patients throughout the care continuum[4].

Why Is Text Messaging Effective?

Text messaging is one of the few communication channels that is actively used by nearly all segments of the population. 95% of the adult population own mobile phones; all mobile phones support text messaging; and 98% of mobile phone owners send text messages regularly, including age groups above 75 years old[5,6]. Perhaps the most compelling statistic is the read-rate of texts. 98% of text messages are read; 90% are read within 3 minutes of receipt[7]. There is no other communication channel that has this level of adoption and engagement.

In a recent research survey by New England Journal of Medicine, healthcare leaders reported texting as a leading engagement strategy[8]. After biometric measurement devices, texting was the second most likely technology to be considered highly effective at engaging patients. The study identified the top two benefits of using technology tools for patient engagement: 1) support patients in efforts to be healthy, and 2) provide input to providers on how patients are doing when not in the clinic. The text channel is particularly effective in both of these areas.

Text is the most effective channel to engage an individual, it is also one of the lowest cost channels to engage people (see Figure 1).

RELATIVE COSTS OF FIVE COMMUNICATION CHANNELS AND EFFECTIVENESS OF REACHING AND ENGAGING PATIENTS

	Setup	Maintenance Costs	Costs per Outreach	Engagement Effectiveness
Text	**$$**	**$**	**$**	**High**
App or Portal	$$$$	$$$	$	Medium
Phone	$$	$$	$$$$	Medium
Mailer	$	$	$$$$	Low
Email	$$	$	$	Low

Cost areas are 1) costs to set-up the channel, 2) costs to maintain the channel and 3) costs per outreach communication. Engagement effectiveness describes the likelihood that the recipient will receive, read and engage with the content.

Figure 1

Clinical Evidence

The impact of text messaging on healthy behaviors is well established. A 2015 meta-analysis of 38 randomized studies covering 19,641 patients demonstrated SMS messages had a significant positive effect.[9] These studies include text interventions for a range of health issues including medication adherence, immunizations, HIV testing, diet modification, smoking cessation and chronic condition management. The impact of text messaging is robust regardless of the population or the desired healthy behavior targeted. The impact is related to the volume of messages sent, so that one-time messages and weekly messages have less impact than more regular messaging.

EFFECT OF LIFESTYLE-FOCUSED TEXT MESSAGING ON RISK-FACTOR MODIFICATION IN PATIENTS WITH CORONARY HEART DISEASE[10]

Percentage of participants achieving target levels for four or more key risk factors

| TEXT INTERVENTION GROUP | 28.9% |
| CONTROL | 10.3% |

Outcomes: Cholesterol, blood pressure and BMI were significantly reduced in patients receiving SMS reminders. Text intervention participants were more likely to achieve combined risk factor control. 91% of patients found the text program to be useful.

Implementing Text Programs to Support Value-Based Care & Patient Outcomes

Text messaging is a powerful way to support value-based care initiatives. There is a trend for healthcare organizations to target text messaging programs at patient populations that are not meeting outcome performance targets. For example, healthcare organizations are identifying patients with chronic conditions that are non-adherent with their medication and targeting these patients with Rx Refill workflows. Text programs can also be deployed to address excessive 30-day hospital readmission rates and avoid value-based payment modifier penalties. Through interactive workflows, health systems can efficiently identify

patients that are non-adherent with their care plans. The key advantage of these text programs is universal adoption of the text channel, which ensures that virtually all patients can be engaged.

SMS Messaging and HIPAA Compliance

Text messaging is not considered a secure communication channel, which means there are restrictions to the inclusion of Protected Health Information in messages. In practice, mPulse Mobile demonstrates that a wide range of healthcare-focused text messaging programs can be implemented that either 1) do not contain any PHI, or 2) incorporate PHI into text messaging workflows in a manner that satisfies the requirements of stringent risk assessments. In both cases, the careful management of PHI does not limit the ability of text programs to drive significant business results.

Client Program Results: Patient Access

Over 50% of individuals with 'moderate mental illness' do not receive treatment[11]

Problem

A behavioral health therapy provider, contracted to provide services to Medicaid beneficiaries with anxiety and depression, needed to increase awareness and enrollment to its service. The company tried online advertising and mail outreach, but it was costly and minimally effective. They reached out to mPulse Mobile to deliver a more effective and efficient mobile engagement strategy to increase enrollees into the therapy program.

Target

Custom segments within a wider population of 400,000 Medicaid beneficiaries.

Solution

The company implemented mPulse's Patient Access solution to efficiently reach and engage large segments of the population in a short period. Initially, clinical and demographic datasets were used to assess and segment the 400,000-member population. Next, messaging workflows were implemented with segment-specific language and tone. Individuals had to reply in order to get details of the program and receive a text that contained an embedded link to the therapy site. The link was trackable to allow insights into the source of site traffic.

Results

Immediately following the introduction of text outreach, there was a large increase in web traffic to the therapy site compared to the baseline level driven by online advertising and mailers. Over the next 10 months, mPulse's text dialogues were responsible for 79% of the total new program sign-ups (see Figure 2). Opt-out rates from the program were 5.0%.
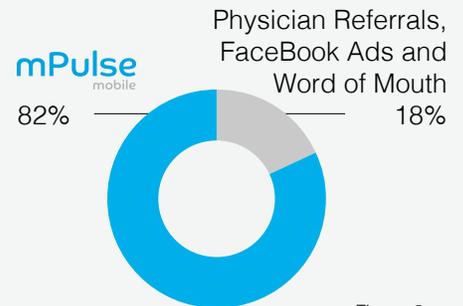
ONLINE THERAPY SIGN-UPS BY OUTREACH CHANNEL

mPulse mobile
82%

Physician Referrals, FaceBook Ads and Word of Mouth
18%

Figure 2

Client Program Results: Medication Adherence

50% of patients do not adhere to their care plans[12]

Problem

Kaiser Permanente needed to address low medication refill rates in a specific segment of its Medicare patients with chronic conditions. The Pharmacy Operations Director engaged mPulse Mobile to help find a better solution to increase the refill rates and reduce the workload demands on the pharmacy call center staff.

Target

80,000 Medicare patients with diabetes, hypertension and/or high cholesterol who are partially or completely non-adherent with their medication based on incomplete Rx Refills.

Solution

The IDN implemented mPulse's Rx Refill solution for Care Management. The solution delivered an interactive text workflow that notified patients that one or more refills were overdue. Patients were then able to complete the refill directly through an interactive text workflow. A 'phone scrub' determined a high proportion of devices were feature phones (not smart phones), so the workflow was adjusted to require only simple numeric (1,2,3) patient responses. The solution incorporated a proprietary self-identification functionality to maintain identity-related security.

Results

All 80,000 patients received standard refill reminder outreach. 12,000 of these patients additionally received mPulse's Rx Refill Solution. The test group receiving mPulse's solution achieved a 44% refill rate, compared to the comparison group that had a refill rate of 30% (see Figure 3). The 14pp difference was statistically significant. 13,000 Rx Refill dialogues were sent during the 3-month study, and the average time to complete a refill in the dialogues was just 23 minutes from first contact. 96% of the 1,240 patients who were surveyed from the program found the mPulse Rx Refill solution easy to use, and opt out rates from the program were 1.6%. In addition, text communication decreased the back-office processing time for each prescription which enabled staff to double their capacity. The methodology and results of this research by Kaiser Permanente and mPulse Mobile are published in full in JMIR mHealth and uHealth[13].
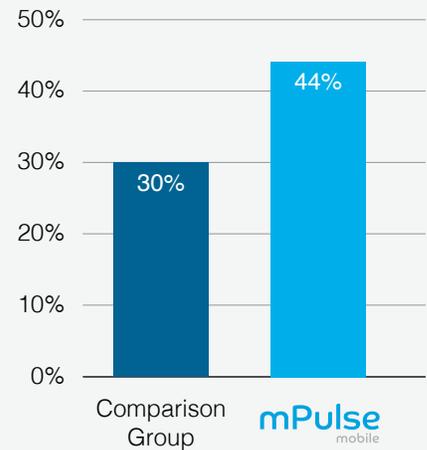
REFILL RATE BY OUTREACH CHANNEL

Figure 3

Client Program Results: Appointment Reminders

Even well run clinics have a daily average of 12% no-shows and last-minute cancellations[14]

Problem

A leading provider of advanced wound care services with over 600 sites nationwide, was looking to reduce the rate of appointment cancellations and improve the patient experience. Recognizing texting had become the consumer preferred channel of communication, the organization sought mPulse's expertise to develop an Appointment Reminder solution that reduced appointment no-shows and created efficiencies for their site workflows.

Target

All patients with scheduled appointments that provided their mobile number at registration (over 50k appointments per month).

Solution

The organization implemented mPulse's Appointment Reminder solution to deliver personalized, interactive and automated message workflows for appointment reminders, no-show follow-ups and satisfaction surveys. Patients had the ability to initiate a rescheduling workflow by replying 'RS' to the reminder message (see Figure 4). No-shows triggered automated messages to patients and initiated a rescheduling workflow. They could also respond with their desire to cancel, freeing up a slot for clinic staff to fill with patients wanting appointments and reducing unfilled slots.

Results

mPulse's Appointment Reminder solution generated an 8% improvement in appointment cancellations. Overall, there was an 18% average decrease in cancellations for half of the centers and 678 more patients healed. After demonstrating a significant impact at 30 sites, the company rolled-out mPulse's solution across over 400 additional sites.

APPOINTMENT REMINDER WORKFLOW

Path Health: Hi Jenny, please arrive promptly for your scheduled appt tomorrow. Reply RS to reschedule. Click http://path.in/online for details about your appt.

RS

Path Health: Thank you for letting us know that you wish to reschedule. We will call you soon to schedule a preferred date.

Figure 4

NO-SHOW RATE REDUCTION

⬇20%

Client Program Results: Portal Adoption

Portal adoption is only 29%[15]

Problem

A large, multi-state IDN had invested significant resources into a patient-facing portal wanted to increase adoption, knowing that patients who registered for the portal were 2.6 times more likely to remain loyal patients of the organization. They identified the 'unengaged' patient segment that had not responded to previous outreach attempts and reached out to mPulse Mobile to leverage the text channel to drive portal sign-ups among this population.

Target

55,746 patients who had not previously registered for the portal.

Solution

The IDN partnered with mPulse to reach these patients in a different and cost-effective way. A 'phone-scrub' was performed to determine which patient phone numbers were landline or mobile phone numbers. A text message was sent to all mobile phone numbers with a unique link to register to the portal.

Results

Of the target patients, 51,632 (93%) had a mobile phone on record (see Figure 5). 10,313 patients (18%) that received the text messages registered on the portal. In comparison of this population only 16,229 (29%) had emails on record.

CONTACT INFORMATION FOR TARGET POPULATION

55,746 Patients

- Mobile number only
- Mobile number & email
- Email only

Figure 5

PORTAL REGISTRATION

18%

Registration achieved in unengaged population through text outreach

Client Program Results: Colonoscopy Pre-Procedure Compliance

Poorly prepared patients cause 21% of procedure no-goes[16]

Problem

A large, integrated health system was looking for a more effective solution when preparing patients for outpatient procedures. The current paper mailings and staff phone calls were expensive and not consistently effective. They sought mPulse Mobile's help to develop a more cost-effective, timely and consumer-friendly solution.

Target

3,418 patients who were scheduled to have a colonoscopy procedure. The patients had a median age of 57 with 29.75% falling into the 60-70 age band. The target population were evenly divided by gender.

Solution

The IDN implemented mPulse's Procedure Compliance solution. Text messages were triggered automatically at 4 weeks, 3 weeks, 2 weeks and 3 days before the surgery date. The messages included reminders about the date, location, transportation requirements, and preparation to be completed the day prior to surgery.

Results

Following the introduction of the text program, the no-show reduction decreased from 5.0% to 2.8%. 3,418 patients received the Procedure Compliance solution, with a total of 18,311 conversations completed. 72.3% rated their visit a 5 on a 1-5 satisfaction scale. The IDN calculated annual cost savings of $110,180 per site.

CHANGE IN NO-SHOW RATE FOLLOWING INTRODUCTION OF MPULSE SOLUTION
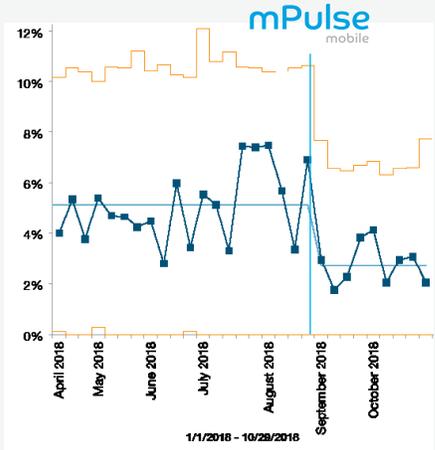
Client Program Results: Diabetes Self-Management

50−80% of individuals with diabetes demonstrate knowledge and skill gaps that negatively impact their ability to integrate diabetes self-management into daily life[17]

Problem

A large IDN needed to improve diabetes self-management to help patients with controlled diabetes stay in control. Over the 6 months following each A1c visit, 24% of diabetic patients with A1c levels less than 7% would rise to levels above 7%. The organization engaged mPulse Mobile to assess the effectiveness of Conversational AI solutions to target these in-control patients and drive behavior change to improve their diabetes self-management.

Target

Over 22,000 patients with controlled diabetes. The majority of patients were over 60 years old, with 86% English speakers and 14% Spanish speakers. There was an even divide by gender.

Solution

The IDN implemented mPulse's Conversational AI Diabetes Self-Management solution to drive improved diabetes self-management skills. Members received their A1c results directly in the text channel after an identity verification process. After which, the solution used mPulse's Activation Intelligence product to deliver automated tailored conversations to controlled diabetic members over a period of 6 months following their A1c test result. The interactions focused on uncovering barriers at the individual patient level and tailoring conversations that improved their understanding and confidence levels to manage their health.

Results

An assumed opt-in was used to engage 22,650 patients and 11,238 (49.6%) elected to receive their A1C results directly in the text channel. >276,000 dialogues were delivered, an average of 21 tailored conversations per member focused on behavior change. 78% of patients requested to be messaged 2 or more times per week, with a 23.2% overall response rate for the program. There was a reduction in controlled diabetics falling out of control from 24% to 17%. Conversational AI solutions required minimal staff involvement and freed up key care resources to focus on more challenged patients.

% OF DIABETIC PATIENTS FALLING OUT OF A1C CONTROL

	Pre-mPulse Solution	mPulse
	24%	17%
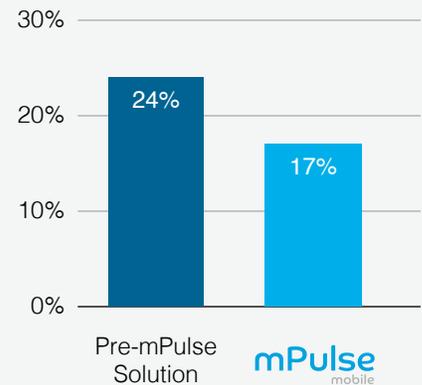
Client Program Results: Docent Health

Patient experience is consistently positively associated with patient safety and clinical effectiveness across a wide range of healthcare delivery areas[18]

Problem

Docent Health, a leading healthcare experience technology and services company, helps healthcare organizations embrace a consumer-centric approach in care journeys. As their business grew they needed to communicate with patients at scale without losing the high level of personal interaction that defines their approach. The company wanted to leverage conversational text messaging to improve patient engagement and satisfaction, which improving business efficiencies.

Target

Docent Health leveraged mPulse Mobile's industry-leading solutions to engage an initial patient population of over 2,500. The group ranged in age from 16-85 years old and were organized across three of Docent's service lines: maternity, cardiovascular, and orthopedics.

Solution

Docent leveraged its close relationship with patients to drive high text opt-in rates with 71% of all patients proactively opting in, and over three quarters of all opt-ins coming via direct conversations with staff. Another 20% joined through automated follow-up dialogues delivered using the mPulse solution. After opting in, patients received conversational text touchpoints from Docent that supported their core workflows. The touchpoints engaged patients with conversations about their health, delivering post-discharge instructions and personalized invitations to health and wellness programs while managing expectations.

Results

Immediately following the introduction of text outreach, Docent saw an increase of over 20% in tracked patient interactions by care managers in the first 3 months. Overall, the conversation response rate across all service lines was 60%. When Docent used text messages to drive engagement with online content via trackable links, they achieved an industry-leading 63% click-through rate. This level of engagement ensured patients received the information they needed, in a convenient way that advanced their care experience.

MARKET-LEADING ENGAGEMENT RATES FOR DOCENT ACTIVITIES

63%

Link click-through rate

60%

Conversion response rate

Client Program Results: CityMD

Over half of Urgent Care patients do not follow key post-visit care instructions[19]

Problem

CityMD, a leading Urgent Care group with over 100 sites in New York, New Jersey and Washington had been using telephone outreach for post-visit patient follow-up. The patient response rate to these clinical and service related touchpoints was only 10% which highlighted an opportunity to engage patients in a more effective way. CityMD partnered with mPulse Mobile to help increase the level of engagement of their patients to ensure they were getting all the care they needed.

Target

Patients completing urgent care visits who needed post-visit follow-up.

Solution

CityMD incorporated mPulse's omnichannel mobile messaging capabilities into their Aftercare operations. The solution delivered a conversational text program that included follow-up messages that were automatically triggered when specific follow-up services were needed. Patients would then receive follow-up text dialogues or emails based on their communication preferences. The solution included a broad range of follow-up areas such as coordinating referral follow-up, notification of lab and diagnostic imaging results, satisfaction surveys and information on urgent clinical topics.

Results

Patients were significantly more engaged with CityMD's Aftercare services when conversational text messaging was used. Text messaging had a 60% response rate compared to 10% with telephone outreach. Over the initial 8 months over half a million messages were triggered. These messages were a direct substitute for calls, which meant the CityMD Aftercare staff had capacity to take on higher value activities such as inbound call handling and more clinically focused follow-up.

FOLLLOW-UP OUTREACH RESPONSE RATES

60%
For text messaging

10%
For telephone

mPulse
mobile

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About mPulse Mobile

mPulse Mobile, the leader in Conversational AI solutions for the healthcare industry, drives improved health outcomes and business efficiencies by engaging individuals with tailored and meaningful dialogue. mPulse Mobile combines behavioral science, analytics and industry expertise that helps healthcare organizations activate their consumers to adopt healthy behaviors.

With over a decade of experience, 100+ healthcare customers and more than 300 million conversations annually, mPulse Mobile has the data, the expertise and the solutions to drive healthy behavior change.

To ask a question or request a call, go to: mpulsemobile.com/contact

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