

Can Targeted Messaging Encourage PCP Contact Before ED Visits?

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The use of emergency departments (EDs) by consumers who have ready access to a primary care physician (PCP) can increase care fragmentation¹ and may also increase healthcare expenditures if equally effective care can be provided in an alternative setting.² Addressing ED utilization can be challenging for capitated plans that must provide high-quality care while accounting for rising healthcare costs.³

Recent studies indicate that Medicaid beneficiaries have rates of ED use disproportionate to other insured populations.⁴⁻⁶ States are currently moving increasing numbers of Medicaid beneficiaries into capitated plans as both a cost control and care coordination effort.^{7,8} This creates an additional incentive for capitated plans to safely and effectively influence members' decisions about ED use. The goal of our study was 2-fold. First, we developed messages (Phase I) designed to encourage members of a Medicaid capitated plan who had frequent ED use to contact their PCP practice prior to visiting the ED. Next, we assessed the messages' impact on patient-reported potential to change care-seeking behaviors.

METHODS

This study focused on the ED use of enrollees of Health Plus, a not-for-profit health plan based in Brooklyn, New York, that participates in New York's Medicaid and Child Health Plus programs. Whitman Insight Strategies, a strategic research and communications firm, conducted focus groups, interviews, and surveys. We recruited participants from 2 New York City neighborhoods—Southwest Brooklyn and the South Bronx—because each is home to large numbers of Health Plus (Medicaid capitated plan) members. All Health Plus member participants had an assigned PCP and access to a free 24-hour nurse call line.

The study was reviewed and approved by the institutional review board at the Lutheran Medical Center in Brooklyn.

Phase I: Message Development

To provide a basis for developing messages to help patients seek care in the most appropriate setting, we conducted a qualitative pre-study with Health Plus members identified as having had 5 or more ED visits in the previous 12 months.

Objectives: Targeted messaging that encourages consumers who are frequent users of the emergency department (ED) to contact their primary care physician in advance of an ED visit could reduce healthcare expenditures in select populations. However, such messaging has not been thoroughly evaluated. We used the input from consumers in a capitated plan to develop and test messaging designed to encourage primary care physician (PCP) contact prior to an ED visit.

Study Design: Cross-sectional study of managed care plan members with frequent ED use in Brooklyn and the Bronx.

Methods: Qualitative interview and quantitative phone survey methods were used to develop and test a variety of messages designed to encourage consumers to contact their primary care practice prior to an ED visit. Linear regression analysis determined which tested messages were most highly correlated with increased likelihood of primary care practice contact in advance of an ED visit.

Results: Health plan member interviews led to the development of multiple messages. The message that tested most successfully underscored “time and stress” inherent in an ED visit that could have been avoided by contacting one's PCP in advance via a convenient 24-hour call line.

Conclusions: A simple message that challenges consumers to think about whether the ED is truly more convenient and that provides a simple mechanism for finding out whether a trip to the ED is necessary (primary care practice contact) holds promise as a mechanism to reduce ED use for those who have ready access to primary care.

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Take-Away Points

The current rise in emergency department (ED) use is a challenge for providers and payers. While in some instances, heavy ED users may not have primary care access, capitated members have primary care provider (PCP) access by virtue of plan enrollment.

- We developed multiple messages designed to encourage capitated plan members who are heavy users of ED services to contact their PCP before visiting the ED, and assessed the impact of these messages on patient-reported potential to change care-seeking behaviors.

- One message shows particular promise.

- This message warrants further testing to determine its ability to safely reduce ED visits by increasing contact with PCPs.

Plus member families in which multiple family members had visited the ED at least 5 times in the past 12 months. Since we were interested in the use of EDs for non-emergent care, we excluded patients who were subsequently admitted for inpatient care or were pregnant during the 12 months. Contact information was provided by Health Plus and families were contacted at random. Participants received a \$25 gift card. Interviews and the subsequent surveys were conducted, using Computer Assisted Telephone Interviewing techniques, by trained interviewers employed by our data collection partner. Interviewers were fluent in English and Spanish, and interviewed the member of the household who identified her- or himself as the family's medical decision maker. Interviews aimed to: a) gauge participants' understanding of the role of both the ED and their PCP in their overall care and that of their families; and b) measure awareness of factors relating to ED usage and the decision-making pathway leading to ED visits and PCP visits. After reviewing results from 30 interviews, it was agreed that we had reached a point of theoretical saturation (no new conceptual insights would be generated).⁹

Phase II: Messages and Patient-Reported Behavioral Change

Phase I findings were used to design and evaluate a series of messages meant to encourage appropriate use of one's PCP as an ED alternative.

From August 5 to August 15, 2010, messages were evaluated via a quantitative phone survey with 118 Health Plus members. Participants were obtained from a sample of 528 Health Plus member households with frequent ED use (families with 4 or more ED visits in the past 12 months with at least 2 family members making ED visits). The threshold number of ED visits was lowered from 5 per family to 4 per family to ensure a sufficiently quantifiable sample size. Data on non-responders were not collected. Interviews testing messages were conducted with the member of the household who makes medical decisions and were conducted in English or Spanish by trained interviewers. Participants received \$25 gift cards.

Interviews were structured in a "pre-post" format. First, participants were asked their preferences on visiting their PCP versus the ED (predictor variable). Next, participants were exposed to and asked to evaluate a series of messages, after which their preferences were rechecked to determine whether the messaging had any measurable impact on reported care-seeking preferences related to PCP versus ED use (primary outcome

variable). Every participant evaluated and rated every message in a randomized order. By asking an initial "pre-test" question, exposing respondents to numerous individual messages that attempt to influence behavior related to that question, then re-asking the same initial question after exposure to messages, we could design a regression model examining the impact of each message on the patient's stated willingness to contact the PCP for guidance about whether or not to go to the ED.

This methodology allowed the initial PCP versus ED preference to be held constant in order to determine which messages had the strongest impact on persuading respondents to contact their PCP prior to an ED visit.

We employed an ordinary least squares linear regression analysis to determine which message or messages were most highly correlated with an increased likelihood of contacting the PCP instead of the ED. The impact of individual messages with their respective beta coefficients is reported.

RESULTS

Phase I: Message Development

In patient interviews, 3 themes emerged: perceived barriers to PCP use; assumptions about appropriate care setting; and lack of alternatives to the ED.

Theme 1: Perceived Barriers to PCP Use

Overall, wait times and PCP availability were the main barriers patients cited that hindered their acceptance of the PCP as a first choice for medical attention. Many respondents indicated that their PCPs were too far away to visit on short notice, and reported EDs kept them waiting for a shorter period of time than their PCP's office. Participants indicated a willingness to call their PCPs prior to visiting the ED, and many had tried but were unsuccessful.

Theme 2: Assumptions About Appropriate Care Setting Based on Presenting Problem

Most participants chose to see their PCP for preventive care and health maintenance issues. In general, participants

reported specific reasons including prolonged or acute symptoms that, while potentially manageable in an ambulatory setting, led them to choose the ED. Participants reported PCP offices are not equipped to handle certain types of illnesses and injuries, and that only EDs have the ability and equipment necessary for some types of procedures.

Theme 3: Lack of ED Alternatives

Overall, participants reported resistance to using services such as walk-in clinics instead of EDs because many remain unfamiliar with them; however, the concept was appealing to some who use EDs for routine medical care simply because their PCP is not available at the time when care is needed.

Phase II: Messages and Patient-Reported Behavioral Change

Of the 118 Phase I participants, 86% were female. Most (58%) were between the ages of 25 and 44, 93% had at least 1 child in the home, and 69% had less than a college education. Half of the participants self-identified as Hispanic or Latino, 7% were black or African American, and 19% were white.

Most Phase II families (85%) believed their family was in “excellent” or “good” health. The majority indicated they regularly visited their PCP and specialists and were satisfied with the care they received (see **Table 1**). Consistent with our findings from the Phase I patient interviews, participants stated they go to the ED because of convenience and perceived urgency, and at times they believe their PCP office to be closed. Most (64%) respondents indicated that when a family member needs care the first thing they do is go to the ED or call an ambulance, and 85% of participants indicated satisfaction with their ED visits.

Using Messaging to Change Behavior

A total of 14 messages were developed based on Phase I data. Messages were evaluated based on their ability to influence participants’ report that they would contact their primary care physician instead of the ED.

Messages are listed in **Table 2** with their beta (standardized regression) coefficient. The beta coefficients represent the patients’ likelihood of visiting their PCP comparing pre- and post-message exposure. Larger beta coefficients have higher relative importance in a multiple regression model: for example, an item with a beta of 0.3 is twice as powerful as is an item with a beta of 0.15. The model was significant at the 98th percentile.

■ **Table 1. Self-Reported Health and Connection to Outpatient Care**

	N (%)
Health status excellent or good	100 (85)
Visit PCP for check-ups	84 (71)
Visit specialists for non-PCP outpatient care	98 (83)
Relationship with PCP very or somewhat close	98 (83)
PCP familiar with family’s health history	107 (91)
PCP indicates primary care physician.	

With a beta coefficient of .29, the message that yielded the greatest likelihood to persuade respondents to contact their PCP instead of the ED was:

“Waiting in line at the Emergency Room in the middle of the night is a hassle—especially if you’re not sure you even need to be there. Use your primary care doctor’s 24-hour on-call number to speak to your doctor or one of their colleagues and find out if you really need to go to the Emergency Room. It will save you time and stress.”

This message scored almost twice as high as any other message in our model, and explains twice as much of the model’s variance as the second-highest message. This was the most promising in its potential to change respondents’ expressed willingness to contact a PCP before the ED in the future, and is 99% accurate with an r^2 value of .74 (Table 2).

In comparisons of participant attitudes before and after hearing all messages, the percentage of respondents who reported they would contact their PCP before visiting the ED increased from 56% to 72%.

Messaging that did not prove effective at influencing participants’ reported likelihood to contact their PCP instead of the ED included:

- Soft appeals that do not dissuade people from heading to the ED
- Stressing that your PCP has a personal relationship with you and is better suited to care for you than another doctor at the ED
- Implying that patients are overreacting to routine medical issues
- Suggesting that ED visits involve unnecessary paperwork
- Suggesting that EDs are meant for life-saving care

DISCUSSION

Overall, 1 message holds particular promise in its ability to encourage frequent ED users to contact their PCP prior to an ED visit. It may resonate with respondents because it speaks

■ **Table 2.** All Tested Messages Ordered by Beta Coefficient

Message	Rank	B Increased Likelihood to Visit PCP
Waiting in line at the ED in the middle of the night is a hassle—especially if you’re not sure you even need to be there. Use your PCP’s 24-hour on-call number to speak to your doctor or one of their colleagues and find out if you really need to go to the ED. It will save you time and stress.	1	0.29
We know that sometimes you or your child needs medical advice right away. That’s why you can call your PCP 24 hours a day and get good advice about whether you need to go to the ED or whether you should go to your PCP as soon as you can.	2	0.15
Your PCP knows you and your family best, and they can often address your problems more quickly and completely than the ED can since they know you and your medical history better. Your doctor cares about your family and can give you the close personal care you and your family deserve.	3	0.13
For routine checkups, colds, and minor problems, your PCP’s office has the proper medical equipment and can send you for tests at other locations when you need them. We know it’s sometimes easier to go to the ED where everything is in 1 place, but rest assured your doctor will only send you for testing when absolutely necessary and you can usually get the tests you need that same day or the next day.	4	0.05
Your doctor is working to improve wait times by implementing a new computer system that will lessen the time you have to fill out paperwork and get you in to see your doctor right away. Paperwork is a headache, and now with this new system, you’ll only need to provide your name and insurance card.	5	0.03
Everyone knows that the ED is for emergencies, and using it for routine checkups, colds, and other minor problems keeps the ED crowded, making it harder for people with severe injuries and illnesses to get the life-saving care they need. Seeing your PCP for non-emergency care makes sure that those who need life-saving treatment will never have to wait.	6	0.01
When it comes to your family and your children, wouldn’t you want to take your loved ones to be seen by someone you and your family are comfortable with? If your child is sick or in pain, it’s always better to go see a familiar face rather than a stranger.	7	0.01
Your PCP is available by phone when you need your medical questions answered in a timely manner or are unclear about whether to come in for a visit or not. Since your doctor knows you and your family best, it’s a good idea to speak to them first before heading to the ED.	8	0.00
Your PCP knows you best. Call them the next time you’re thinking of going to the ED to find out if they can get you the help you need quicker, without having to spend all night waiting in line at the ED.	9	0.00
Your doctor knows you best, and everyone knows that when it comes to caring for you and your family it’s best to have someone who knows you, and who you know too. Seeing your PCP is the smart choice for your family.	10	0.00
We all know that it’s sometimes easier to just go to the ED when you or your child needs to see a doctor rather than wait for an appointment with your PCP, but the truth is, seeing your PCP is often the smarter choice. You get more personal attention as you’re not seeing him in a busy ED, and you can also take the time to ask all the questions you need to make sure you understand what’s going on.	11	−0.01
When you or your child is sick, your PCP knows what to do because they know you and your family’s medical history. Before you rush off to the ED to get examined by someone that has never met you or your child, call your doctor first to make sure it isn’t something they can handle sooner.	12	−0.01
When it comes to you and your children, you want to make sure that they receive the best, most caring treatment when they’re ill. Who better to address your family’s medical needs than your PCP?	13	−0.07
There are always false alarms, and it can be better to call our 24-hour hotline before you rush off to the ED, just to be sure. Our trained nurses and physicians can tell you within a matter of minutes whether you have an emergency on your hands, or something that can wait until morning.	14	−0.13
ED indicates emergency department; PCP, primary care physician.		

Messaging to Encourage PCP Contact Before ED

directly to a primary reason for using the ED highlighted in Phase I of this study—convenience—and provides a clear disincentive for doing so. The message challenges whether the ED is truly more convenient in all cases, and provides a simple mechanism for finding out whether a trip to the ED is necessary (the 24-hour on-call line).

We found that 72% of high-ED usage participants could be persuaded to choose contacting their PCP before visiting the ED the next time someone in their family gets sick and our regression model indicated 1 message that was twice as powerful as any other message in persuading them to do so (explained nearly twice as much variance as the next-highest message). The 24-hour call line service is a critical message component. Both the lead message and the second-ranked message (Table 2) explicitly stated the availability of this service, which many participants were not aware of.

Because participants were quite satisfied with the ED care they received, it was more effective to create a disincentive for consumers by comparing the effort involved with an ED visit with the relatively simple step of making a phone call.

Soft appeals and messages that stressed the personal relationship between the patient and her PCP were not as effective. Appeals that claimed ED use diverted life-saving care or taxpayer dollars from those who truly need it did not work, nor did an implication in the messages that patients were overreacting to routine medical issues. Finally, citing the paperwork burden that can come with an ED visit in terms of registration and other forms had no impact.

It is important to note that our study was conducted in a capitated plan population with ready access to primary care. Recent work has indicated that barriers to primary care access significantly impact ED use,⁵ so for populations without available or accessible primary care, this need must be considered.

Most participant families had strong connections to their PCPs, which may render them more amenable to messaging than a population disengaged from primary care. This in combination with the study population's lack of knowledge about the 24-hour call line indicates that messages similar to the lead message in our study hold promise.

Limitations

Our study was restricted to an urban, low-income population insured by a health plan that offers a 24-hour PCP office call line. The majority of our Phase II respondents were women, though they were meant to represent the household. In addition, half were Hispanic. These factors may influence the generalizability of our results. This was a preliminary study

to test the potential for messages to impact patients' self-reported potential to change care-seeking behaviors. However, our results reflect participants' opinions about how their future PCP and ED could be affected, and does not reflect an actual change in service use patterns.

CONCLUSIONS

Targeted messaging holds the potential to increase utilization of PCP resources prior to an ED visit. Promising messages should be tested further to determine their impact on real-world behaviors in order to optimize their use for both patients and capitated plans.

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