Effects of Educational Messaging on Urgent and Emergent Care-Securing Behaviors Among Publicly Insured Populations

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BACKGROUND: The impact of messaging campaigns on influencing urgent care- and emergent care-seeking behaviors, including the use of in-network providers, is not well-understood. Although out-of-network healthcare utilization can have negative financial consequences for patients in narrow network Affordable Care Act plans, individuals with time-sensitive medical conditions, and especially patients visiting the emergency department, may not think about out-of-network issues. Inappropriate or avoidable emergency department visits can also create unnecessary costs for patients.

OBJECTIVE: To evaluate the impact of 5 messaging strategies to educate individuals about the use of in-network providers and when care should be sought in the emergency department, urgent care center, or other sites of care.

METHODS: Using a retrospective analysis, individuals aged ≥18 years who were enrolled in an individually purchased Affordable Care Act–compliant Humana plan as of July 1, 2015, were randomized to 1 of 5 messaging arms (e-mail, magnet mailer with or without e-mail, and key-tag mailer with or without e-mail) or to a control group. The outreach was implemented and evaluated in 2 distinct, geographically defined populations of Orlando, Palm Beach, and Tampa, Florida (Population 1); and Atlanta, Georgia, and San Antonio and Austin, Texas (Population 2). The relative number of each emergency department, urgent care, and out-of-network visits during follow-up was modeled using negative binomial regression. Cox proportional hazard models were used to calculate the risk for ≥1 of each visit type (assessed separately) and high emergency department utilization (defined as ≥3 visits during follow-up) relative to the control, while accounting for variable follow-up time.

RESULTS: The relative numbers of each visit type assessed were not significantly different for any message group compared with the control in either population. The risk for an emergency department visit was 4% lower in the e-mail arm of Population 2 (hazard ratio [HR], 0.96; 95% confidence interval [CI], 0.94-0.99; P = .005) and 7% lower in the e-mail/key-tag arm of Population 1 (HR, 0.93; 95% CI, 0.89-0.97; P = .001). The risk for high emergency department utilization was significantly reduced by the key-tag, magnet, and e-mail/key-tag strategies in Population 1, but no impact was found in Population 2.

CONCLUSION: Despite the mixed results, the study provides new insights into how different messaging strategies could be used to educate patients and influence healthcare utilization decisions by people with health insurance.

KEY WORDS: care-seeking behavior, emergency department, emergent care, in-network providers, messaging strategies, out-of-network providers, urgent care
Effects of Educational Messaging on Care-Seeking Behaviors

KEY POINTS

➤ Narrow healthcare networks can reduce healthcare costs, but the cost-savings cannot be realized if patients seek out-of-network service.

➤ This study examined the impact of different types of messaging strategies on use of in-network providers and visits to the emergency department, urgent care center, and other sites of care.

➤ Patients were divided into 2 populations based on their geographic areas.

➤ The likelihood for an emergency department visit was 4% lower in the e-mail arm of Population 2 and 7% lower in the e-mail/key-tag arm of Population 1 than in the other groups.

➤ The likelihood for increased emergency department use was significantly lower in the key-tag, magnet, and e-mail/key-tag arms in Population 1, but messaging had no impact on Population 2.

➤ Although some messaging strategies were effective, the results were not consistent across all outcomes; messaging was most effective in reducing emergency department visits.

➤ A deeper understanding of out-of-network utilization drivers could better align intervention strategies with patient knowledge and preferences.

Healthy insurance plans sold in the Affordable Care Act (ACA) marketplace have utilized narrower networks as a way to provide more affordable healthcare for individual plan purchasers. Narrow network plans offer limited provider choice, but they are attractive to premium-sensitive healthcare consumers, because premiums and out-of-pocket costs are lower than plans with broader provider networks. However, the intended cost-savings for individuals and health plans will not be realized if individuals seek out-of-network services, and health policy experts have expressed concern that patients may be unaware of the cost implications of going to out-of-network providers.

Although out-of-network healthcare utilization can have negative financial consequences for patients in narrow network ACA plans, individuals with time-sensitive medical conditions, and especially patients visiting the emergency department, may not think about out-of-network issues. In addition, facilities providing these services may be negatively affected by uncompensated care.

Inappropriate or avoidable emergency department visits can also create unnecessary costs for patients. Such visits are typically defined as those that require immediate care, but could have been avoided with ongoing care in the outpatient setting; require immediate care that could have been sufficiently provided in an outpatient setting; or do not require immediate care and should have been referred to an outpatient setting. Emergency departments typically charge higher visit rates than rates charged by primary care physicians or urgent care centers.

A systematic review of 34 studies concluded that a variety of strategies, including telephone triage, the use of urgent care and community health centers, out-of-hours general practice services, and emergency nurse practitioner services in residential elder homes, to curb inappropriate accident and emergency department visitation had little to no effect. Another systematic review of 39 studies reported that studies using patient education resulted in the greatest reduction in emergency department utilization (21%-80%), whereas the use of financial incentives and managed care strategies (eg, provider capitation or gatekeeping) represented the greatest number of studies with reductions. However, the authors of both systematic reviews rated the evidence quality of the studies included in their analyses as low.

Proponents of the ACA highlight increased insurance coverage as an opportunity to reduce the utilization of expensive services such as the emergency department, thereby decreasing the overall healthcare costs. However, studies examining the relationship between increased health insurance coverage and emergency department utilization found mixed results. The implementation of the ACA offers private insurers with ACA-compliant plans the opportunity to contribute their experiences to this body of evidence.

To date, no studies have evaluated strategies for reducing out-of-network and emergency department use in the ACA exchange population. Furthermore, we are unaware of any studies that investigate the effects of focused messages sent directly to individuals as a strategy for discouraging the use of out-of-network providers and the emergency department. The objective of the present study is to evaluate the impact of 5 messaging strategies aimed at educating individuals with ACA-compliant plans about the use of specific in-network providers and when care should be sought in the emergency department, urgent care centers, or other sites of care.

Methods

Study Design

We performed a retrospective analysis of a randomized messaging outreach implemented in July 2015 by Humana, a health and well-being company serving millions of people across the country through Medicare Advantage, stand-alone Prescription Drug Plan, and commercial plan offerings. The educational messaging
campaign was devised to include 3 messaging types (ie, e-mail, magnet mailer, and key-tag mailer) used alone or in combination (Table 1).

Because healthcare companies have limited resources and opportunities to reach out to patients, these interventions represented a readily available option that could efficiently communicate messages to a large population. The magnet mailer, which included a customized list of in-network providers near the recipient’s address, was only sent to individuals in health maintenance organization (HMO) plans, for whom in-network providers could reliably be identified. The e-mail messaging was launched on July 8, 2015, whereas the mailed messaging (ie, key-tag and magnet mailers) was launched on September 2, 2015.

The messaging outreach campaign was implemented and evaluated in 2 study populations, each comprising 3 distinct metropolitan areas of Orlando, Palm Beach, and Tampa in Florida (ie, Population 1); and Atlanta in Georgia and San Antonio and Austin in Texas (ie, Population 2). This was done to determine if any potential impact of messages in one population could be duplicated in another population.

To be included in the messaging campaign, individuals had to meet the following criteria: (1) be actively enrolled in an individually purchased, ACA-compliant Humana plan available through public (ie, on the exchange) or private (ie, off the exchange) exchange marketplaces as of July 1, 2015; (2) be aged ≥18 years at the start of the campaign; and (3) reside in one of the specified metropolitan areas.

Continuous healthcare coverage was not required, and individuals enrolled in plans that existed before January 1, 2014 (ie, before the implementation of the ACA), were excluded. There was no exclusion to account for undeliverable e-mail or mailed messages, because the same exclusion could not be applied to the control groups.

Randomization

Individuals from each population were randomly assigned in equal proportions to one of the messaging strategies or to a corresponding control group, to achieve maximum statistical power (Figure). Subsequently, the group randomized to receive an e-mail plus a mailed message (key tag or magnet) was split in half. Randomization was done at the subscriber level to eliminate individuals within a single household being included in the test and control groups.

Individuals in Population 1 were randomized to all 5 messaging strategies or to the control, whereas the participants in Population 2 were randomized only to the e-mail, key-tag mailer, or the control groups. All eligible individuals were included in the e-mail messaging control group (ie, control JUL), whereas the control group (ie, control SEP) for the key-tag and magnet mailer were limited to actively enrolled individuals on September 1, 2015, to better correspond with the time frame of the messaging outreach (Figure).

In addition, individuals who were not enrolled in HMO or on-exchange HMO plans were subsequently excluded from the magnet outreach and the control groups (ie, control JUL HMO and control SEP HMO) to ensure an equal comparison. The outreach groups were compared with the corresponding control groups on a variety of demographic characteristics (ie, age, sex, plan type) and were found to be numerically similar, which indicates successful randomization.

Outcomes and Analyses

The outcomes of interest assessed in the follow-up period included emergency department, urgent care, and out-of-network visits, and high emergency department utilization. Out-of-network visits included emergency department, physician office, and urgent care visits. High emergency department utilization was defined as ≥3 emergency department visits within the follow-up period based on the distribution and natural cut points in the data. Each outcome was measured from the date of the messaging (July 8, 2015, or September 2, 2015) until December 31, 2015, encompassing 16 or 24 weeks of follow-up.

Individuals within each population who received messages were compared with their respective control group taken from the same population. After calculating the

Table 1 Messaging Outreach Options

<table>
<thead>
<tr>
<th>Message type</th>
<th>Message content</th>
<th>Plans included</th>
<th>Launch date</th>
</tr>
</thead>
</table>
| E-mail           | • Guidance on when to visit a primary care physician, urgent care center, or emergency department  
|                  | • Phone number for a nurse advice line                                           | All plans       | July 8, 2015      |
| Key tag          | • Guidance on when to visit a primary care physician, urgent care center, or emergency department  
|                  | • Phone number for a nurse advice line                                           | All plans       | September 2, 2015 |
| E-mail and key tag | • Guidance on when to visit a primary care physician, urgent care center, or emergency department  
|                  | • Phone number for a nurse advice line                                           | All plans       | E-mail: 7/8/2015  
|                  |                                                                                  |                 | Key tag: 9/2/2015 |
| Magnet           | • Information on an individual’s nearest in-network providers, based on geolocation data and the individual’s address | HMO plans       | 9/2/2015          |
| E-mail and magnet | • Guidance on when to visit a primary care physician, urgent care center, or emergency department  
|                  | • Phone number for a nurse advice line                                           | HMO plans       | E-mail: 7/8/2015  
|                  |                                                                                  |                 | Magnet: 9/2/2015  |

HMO indicates health maintenance organization.
total number of visits, negative binomial regression was used to model the relative number (risk ratio [RR]) of each visit type (ie, emergency department, urgent care, or out-of-network visit) for each messaging group compared with the control group. Repeated measures were used to account for within-household correlation (ie, clustering).
because randomization was done at the subscriber level.

To account for variable follow-up times, Cox proportional hazard models were used to calculate the risk (ie, hazard ratio [HR]) for having a visit type of interest and high emergency department utilization at any point in the study for messaging groups compared with the control group.

The visits were identified from Humana medical claims based on the service date and internal group codes. All analyses were completed using SAS version 9.4 (SAS Institute, Inc; Cary, NC) with statistical significance set at an a priori alpha level of <0.05. This study was approved by Schulman IRB, an independent Institutional Review Board.

Table 2 Populations 1 and 2 Demographics

<table>
<thead>
<tr>
<th>Measure</th>
<th>Population 1 (N = 195,799)</th>
<th>Population 2 (N = 281,554)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E-mail (N = 41,965)</td>
<td>E-mail/key tag (N = 41,870)</td>
</tr>
<tr>
<td>Age, yrs, mean ± SD</td>
<td>41.1 ± 16.1</td>
<td>41.0 ± 16.2</td>
</tr>
<tr>
<td>Female, N (%)</td>
<td>22,362 (53.8)</td>
<td>11,263 (53.9)</td>
</tr>
<tr>
<td>On exchange, N (%)</td>
<td>36,384 (87.5)</td>
<td>18,404 (88.1)</td>
</tr>
<tr>
<td>Plan type, N (%)</td>
<td>.83</td>
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<tr>
<td>HMO</td>
<td>15,896 (38.2)</td>
<td>7933 (37.8)</td>
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<tr>
<td>HMO-exchange</td>
<td>21,753 (52.3)</td>
<td>11,150 (53.4)</td>
</tr>
<tr>
<td>POS</td>
<td>3633 (8.7)</td>
<td>1699 (8.1)</td>
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<td>PPO</td>
<td>249 (0.6)</td>
<td>128 (0.6)</td>
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<tr>
<td>Unknown</td>
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<td></td>
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<table>
<thead>
<tr>
<th>Measure</th>
<th>Population 1 (N = 195,799)</th>
<th>Population 2 (N = 281,554)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E-mail/magnet (N = 18,790)</td>
<td>Control JUL/HMO (N = 37,950)</td>
</tr>
<tr>
<td>Age, yrs, mean ± SD</td>
<td>41.4 ± 15.7</td>
<td>41.6 ± 15.7</td>
</tr>
<tr>
<td>Female, N (%)</td>
<td>10,151 (54.0)</td>
<td>20,753 (54.7)</td>
</tr>
<tr>
<td>On exchange, N (%)</td>
<td>18,085 (96.3)</td>
<td>36,603 (96.5)</td>
</tr>
<tr>
<td>Plan type, N (%)</td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>HMO</td>
<td>7921 (42.2)</td>
<td>15,870 (41.8)</td>
</tr>
<tr>
<td>HMO-exchange</td>
<td>32,119 (33.4)</td>
<td>32,721 (33.9)</td>
</tr>
<tr>
<td>POS</td>
<td>60,031 (62.8)</td>
<td>60,031 (62.3)</td>
</tr>
<tr>
<td>PPO</td>
<td>3570 (3.7)</td>
<td>3576 (3.7)</td>
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<tr>
<td>Unknown</td>
<td>.64</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: P values were calculated using chi-square testing, except for age, which was assessed using ANOVA. After Bonferroni correction for multiple comparisons, statistical significance was set at a P value threshold of .002.

*JUL control groups were used for interventions with an e-mail component, which launched in July 2015 and did not exclude any patients.

*SEP control groups for the key-tag and magnet interventions included only patients who were enrolled as of September 2015, to correspond with the launch date of those interventions.

ANOVA indicates analysis of variance; EPO, exclusive provider organization; HMO, health maintenance organization; POS, point of service; PPO, preferred provider organization; SD, standard deviation.

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Results

The final study population of 477,353 individuals representing 319,281 plan subscribers was identified after excluding 464 individuals who were not linked to a subscriber, 9,043 individuals who were not enrolled in an HMO plan (magnet outreach only), and 101,554 patients who terminated coverage before the start of the messaging campaign (ie, July 8, 2015, or September 2, 2015).

Table 2 shows the baseline demographic comparisons for each intervention group versus its corresponding control group. Based on an adjusted P value threshold of .002 after performing a Bonferroni correction for the 30 different comparisons, the baseline demographics were similar between the messaging and the control groups for the populations studied.

No significant differences were found in the relative number of emergency department, urgent care, and out-of-network visits per person in the messaging groups compared with the control groups for any of the messaging strategies tested in either population (Table 3).

Although the relative number of emergency department visits per person trended lower in individuals from Population 1 who received the key-tag mailer compared with the control group (RR, 0.92; 95% confidence interval [CI], 0.83-1.01; P = .06), this difference did not reach significance. Similarly, there was an insignificant trend toward a lower relative number of out-of-network visits per person with the e-mail/magnet strategy in Population 1 compared with the control group (RR, 0.84; 95% CI, 0.67-1.02; P = .06).

Although the risk for having certain visit types was significantly different between the messaging and the control groups, any such effect was inconsistent across the messaging types and the populations (Table 4). Individuals who received the e-mail outreach (Population 2) and the e-mail/key-tag mailer (Population 1) were 4% (HR, 0.96; 95% CI, 0.94-0.99; P = .005) and 7% (HR, 0.93; 95% CI, 0.89-0.97; P = .001), respectively, less likely to visit the emergency department at any time during the study compared with the control group, which accounts for the variable follow-up time.

An evaluation of urgent care visits showed that individuals in both populations who received the key-tag mailer were significantly less likely to have a visit at any time compared with the control group. In contrast, the magnet mailer resulted in an increased, albeit insignificant, risk for urgent care visits compared with the control group. Only the magnet outreach significantly decreased the risk for out-of-network visits for Population 1. No such effects were noted in Population 2.

Finally, the use of the key-tag, e-mail/key-tag, and magnet strategies in Population 1 significantly reduced the risk for high emergency department utilization, with the e-mail/key-tag combined strategy demonstrating the largest impact. High emergency department utilization in Population 2 was not affected by any of the messaging strategies.

Discussion

Our results indicate that the 5 separate outreach strategies used in this study to educate patients in 2 separate populations on the appropriate use of in-network providers and emergency department facilities had no consistent effect on the overall utilization patterns. Although direct comparisons between this study and the available literature are difficult because of vastly different study designs and research objectives, other studies have investigated education and messaging strategies and out-of-network or emergency department utilization patterns separately.

A cross-sectional study aimed at developing and testing targeted messaging in a population with frequent emergency department use found that the only message likely to encourage contact with a patient’s primary care physician before going to the emergency department was a message focused on patients’ convenience. That message highlighted the frustration of waiting in line at the emergency department and urged patients to use the 24-hour physician on-call number to determine if an emerg-

<table>
<thead>
<tr>
<th>Visit type</th>
<th>Message type</th>
<th>Population 1 (N = 195,799)</th>
<th>Population 2 (N = 281,554)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency department</td>
<td>E-mail</td>
<td>0.97 (0.88-1.08)</td>
<td>0.99 (0.88-1.10)</td>
</tr>
<tr>
<td></td>
<td>Key tag</td>
<td>0.92 (0.83-1.01)</td>
<td>0.96 (0.85-1.06)</td>
</tr>
<tr>
<td></td>
<td>Magnet</td>
<td>0.97 (0.87-1.06)</td>
<td>—</td>
</tr>
<tr>
<td>Urgent care</td>
<td>Key tag</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Out-of-network</td>
<td>Key tag</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

NOTE: Negative binomial regression models were used for data analysis.

aOnly the e-mail and e-mail/key-tag messaging outreaches were sent to Population 2.

bOut-of-network visits included physician office, urgent care, and emergency department.
Emergency department visit was truly necessary.9 Messages highlighting the personal relationship between a doctor and a patient, or focused on emergency department visits diverting life-saving care and increasing healthcare costs, were not well-received.9 However, this study only assessed patient preferences based on survey data and did not evaluate actual care utilization after the patients received the messages.9

In another study, Morgan and colleagues found mixed results, despite testing several interventions in various populations.5 Of the 5 studies they examined that evaluated patient education interventions, only 2 noted significant reductions in emergency department utilization: one provided a self-care booklet to Air Force base residents, and the other focused on education regarding ear pain.5

In a study based on data from 2013 to 2014, out-of-network emergency department utilization was shown to be related to out-of-network emergency department proximity and density within the area where patients live, having a history of using out-of-network emergency departments, and a patient’s connection to their primary care provider.10

Although we were not able to assess the proximity to in-network or out-of-network facilities, this current study was conducted in large metropolitan areas with multiple service locations. Furthermore, randomization into the messaging and the control groups should ensure that the 2 sets of groups have comparable access to services, mitigating any possible bias as a result of the differential distance to network providers.

Nonetheless, assessing health service proximity and access is an important area for future study. Another study reported that patients with involuntary out-of-network physician use shared certain perspectives, such as a lack of transparency about a physician’s network status and the notion that emergent illness often precludes the ability to choose or confirm in-network status.11 Kyanko and colleagues concluded that patient-education strategies are unlikely to address system failures such as these.11

The mixed results in our study align with the published literature. Although some messaging strategies were effective, the results were not consistent across all outcomes or all populations studied. Of note, the key-tag mailer significantly reduced the risk for urgent care visits in both populations. More information is needed to understand if this unexpected reduction represents diversion to other, and perhaps more appropriate, services or foregone care.

In addition, the relatively short follow-up postintervention of approximately 5 months for e-mail messages and 3 months for mailed messages might not have allowed sufficient time to capture meaningful effect on healthcare resource utilization. Not excluding patients in the intervention group whose e-mailed or mailed message could not be delivered might also have diluted any possible effect.

In our study, messaging appeared to be most effective at decreasing the risk for high emergency department utilization, because the key-tag, magnet, and e-mail/key-tag strategies were associated with significant reductions in emergency department visits. This is an important consideration, given the high cost of emergency department utilization to patients and plans. More important, high emergency department utilization may be indicative of the increased utilization of other healthcare services, so decreasing this risk could have far-reaching effects.

Evaluating the impact of messaging in a population known to have high emergency department utilization would be another key area of future research.

### Table 4

<table>
<thead>
<tr>
<th>Visit type</th>
<th>Message type</th>
<th>Population 1 (N = 195,799)</th>
<th>Population 2 (N = 281,554)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥3 visits</td>
<td>E-mail</td>
<td>0.99 (0.95-1.02)</td>
<td>0.96 (0.94-0.99)</td>
</tr>
<tr>
<td></td>
<td>Key tag</td>
<td>0.98 (0.95-1.02)</td>
<td>1.0 (0.98-1.03)</td>
</tr>
<tr>
<td></td>
<td>Magnet</td>
<td>1.01 (0.97-1.05)</td>
<td>—</td>
</tr>
<tr>
<td>≥1 urgent</td>
<td>E-mail/key tag</td>
<td>0.93 (0.89-0.97)</td>
<td>—</td>
</tr>
<tr>
<td>visit</td>
<td>E-mail/magnet</td>
<td>1.02 (0.97-1.08)</td>
<td>—</td>
</tr>
<tr>
<td>≥1 out-of-</td>
<td>E-mail</td>
<td>0.96 (0.92-1.01)</td>
<td>1.00 (0.97-1.03)</td>
</tr>
<tr>
<td>network</td>
<td>Key tag</td>
<td>0.93 (0.89-0.97)</td>
<td>—</td>
</tr>
<tr>
<td>visit5</td>
<td>Magnet</td>
<td>0.94 (0.90-0.98)</td>
<td>0.97 (0.94-1.00)</td>
</tr>
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<td>≥1 high</td>
<td>E-mail</td>
<td>1.12 (0.94-1.34)</td>
<td>0.89 (0.77-1.03)</td>
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<td>emergency</td>
<td>Key tag</td>
<td>0.69 (0.56-0.84)</td>
<td>1.01 (0.88-1.17)</td>
</tr>
<tr>
<td>department</td>
<td>E-mail/key tag</td>
<td>0.78 (0.61-0.99)</td>
<td>—</td>
</tr>
<tr>
<td>utilization</td>
<td>E-mail/magnet</td>
<td>0.80 (0.63-1.02)</td>
<td>—</td>
</tr>
</tbody>
</table>

**NOTE:** Cox proportional hazards models were used for data analysis.  
*Only the e-mail and e-mail/key-tag messaging outreaches were sent to Population 2.  
Significant difference.  
Out-of-network visits included physician office, urgent care, and emergency department.  
High emergency department utilization was defined as ≥3 visits based on the distribution of the data.  
CI indicates confidence interval.
Our study highlights the complicated nature of patient preferences and healthcare utilization. Future studies may investigate more fully the impact of 24-hour on-call physician or nurse access. Assessing whether the increased use of on-call phone services correlates with decreased emergency department utilization could help to identify the true impact of such services. A deeper understanding of out-of-network utilization drivers could help to better align intervention strategies with patient knowledge and preferences.

**Limitations**

Certain study limitations are important to consider when interpreting our results. The large number of comparisons in the analysis increases the possibility that some statistical significance resulted from chance alone.

Issues inherent with any claims-based analysis, such as miscoded or missing data, are applicable to this study. Emergency department visits could not be reliably classified as appropriate or inappropriate, because a visit coded as emergent might have had nonemergent coded diagnoses.

Individuals might have received information on out-of-network utilization as part of normal health plan operations. For example, a letter regarding higher cost-shares (ie, the maximum allowable fee) for out-of-network emergency department services was sent to individuals with on-exchange HMO plans in Georgia, Kentucky, Louisiana, Michigan, Ohio, and Utah. However, any impact on outcomes from such education would have affected the message and control groups equally.

Finally, this intervention was designed to reflect what could realistically be accomplished by a healthcare company with a large, diverse population. Because the analysis of this number of comparisons increases the risk for finding significant differences, these results were interpreted conservatively and require future validation.

**Conclusion**

This study identified little-to-no consistent impact of various messaging strategies on urgent care– or emergent care–seeking behaviors across 2 populations. Of the 5 messaging strategies, 3 significantly reduced the risk for high emergency department utilization and may be worth further exploration given the broad implications of high emergency department use. Despite its mixed results, this study offers new insights into how various messaging strategies could be used to educate patients and influence healthcare utilization decisions.

Much work is still needed to assess the challenges associated with network status transparency, aligning education strategies with patient preferences, and studying the impact of messages in subgroups with suboptimal care-seeking behaviors.

**Author Disclosure Statement**

Mr Cambon was an employee of Humana; Mr Cordier is an employee of, has stock in, and receives support from Humana. Dr Munnich, Dr Renda, Dr Kapur, and Dr Hoxhaj reported no conflicts of interest. Dr Williams is an employee of Humana, a part-time employee of Southern Emergency Medical Specialists, and a speaker receiving honoraria from the American Gastroenterological Association.

**References**


**Stakeholder Perspective next page**
Opportunities to Improve Urgent and Emergent Care Utilization

By Cody Olsen, PharmD, BCPS
Clinical Pharmacy Coordinator, SelectHealth, Murray, UT

PAYERS: Increasing healthcare costs and limited resources require a calculated approach on how to allocate healthcare dollars most effectively. An expense receiving attention from many payers and health systems is the inappropriate utilization of urgent care and emergent care services, which can contribute to higher healthcare costs, put pressure on limited resources, increase patients' wait times, and crowd emergency departments.1

As mentioned in the article by Cambon and colleagues, the frequent use of urgent care and emergent care services can lead to higher out-of-pocket expenses for insured patients, because they often receive services from out-of-network facilities.2 Cambon and colleagues aimed to evaluate the impact that various messaging strategies to insured individuals would have on the inappropriate or unnecessary utilization of urgent care and emergent care services. Although their study ultimately yielded mixed results, the study does provide valuable lessons to be considered.2

The study shows that the risk for emergency service overutilization was significantly reduced by key-tag, magnet, and e-mail/key-tag strategies in one of the studied populations, but not in the other.2 As a payer, knowing your population is crucial for understanding whom to target with intervention strategies. One way to become more familiar with your population is to measure regularly the impact of clinical programs and messaging campaigns to see if the cost was offset by the desired outcome and to assess the response among certain subpopulations, as was done by Cambon and colleagues. Another point to consider from this research was the moderately limited follow-up time after intervention (approximately 5 months for e-mail messages and 3 months for mailed messages).2

Perhaps more time is needed to see an impact from a payer’s perspective when a public education campaign such as this is implemented, because of inertia. These results demonstrate that there is a role for messaging campaigns from payers, but that they are likely best applied as part of a multifaceted, organized effort to improve the appropriate utilization of urgent care and emergent care services.

PATIENTS: Educated and empowered patients can save money directly by utilizing the most appropriate healthcare services, which may slow the curve of premium rate increases.1 With patients facing more considerations, such as high deductibles, narrow networks, and increasing premiums, there is an opportunity for patients to become more informed and accountable in their healthcare.4 In part, this has led to a greater focus on preventive medicine to maintain health, rather than the use of urgent care and emergent care services if they are not the most appropriate choice.3

Patients who are aware of the costs related to out-of-network healthcare and emergent and urgent care use and who know—through resources such as those provided by Cambon and colleagues—what conditions require immediate attention, and the appropriate locations to receiving care, are then empowered to save money and potentially improve their health outcomes.

PHYSICIANS: Although multiple studies have evaluated which interventions tend to have the largest impact on inappropriate urgent care and emergent care utilization, the results have generally been inconclusive, and have often involved weaknesses in the study design.6 Historically, patients who inappropriately use these services are a difficult-to-reach population with difficult-to-change behavior. There may be an opportunity for urgent care and emergency department physicians to work as part of a concerted effort when they can educate patients face to face and disseminate resources to them, such as those distributed by Cambon and colleagues, about appropriate urgent care and emergent care utilization. This ultimately would allow physicians to spend more time treating those with true urgent and emergent medical needs. ■