

made them more likely to visit an ED in the future. A small proportion (5%; 95% CI: 3 – 8%) indicated people should be allowed to bring weapons into the ED. Nearly one fifth of respondents reported metal detectors were somewhat or very inconvenient (19%; 95% CI: 15 – 24%) or somewhat or very much limited their privacy (21%; 95% CI: 16 – 26%). For respondents that reported a concern about privacy or inconvenience, over two thirds still favored having metal detectors (71%; 95% CI: 55 – 84%). There were no significant differences between respondents about metal detectors based on age, education, gender, race, prior exposure to violence, or personal ownership of weapons.

**Conclusion:** In this single center study, patients and their companions reported feeling safer with metal detectors in the ED, despite modest concerns about their impact on convenience and privacy. These results are similar to much smaller studies from 25 years ago.

## 20 The Role of Call-Back Systems in Older Patients Discharged from the Emergency Department

Jennifer Roh; Cassandra Saucedo; Darius Martins

**Objectives:** UC Irvine in partnership with CipherHealth has incorporated an automated call-back system utilizing a Geriatric Emergency Nurse Initiative Expert (GENIE) to follow-up with older patients. This study aimed to discover the most significant concerns older patients have after discharged from the ED, impact of a call-back system, impact of a dedicated GENIE in the follow-up process, and to highlight areas for further research.

**Background:** Emergency departments (ED) can be challenging to navigate for elderly patients. Geriatric visits to the ED are common and costly for both patients and health systems. Additionally, older patients are more likely to have a longer length of stay, increased complications and worse health outcomes. Over the past decade, there has been increasing efforts to incorporate geriatric specific care in emergency departments. The goal of these programs was to better communicate with older patients regarding their health and reduce recidivism.

**Methods:** CipherHealth data regarding call-back rates and intervention details for UC Irvine Medical Center and UC Irvine Health were collected from June to November of 2021. Additionally, call-back data from the geriatric specialist nurse was collected during this time period and compared to

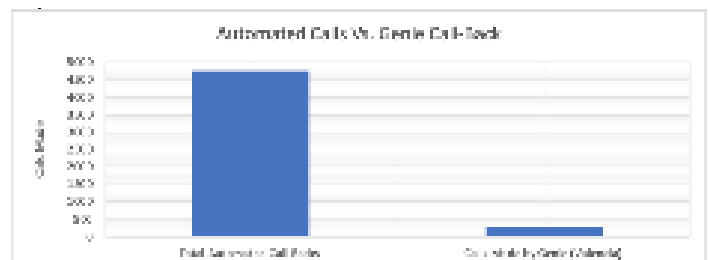
the call-back rates of the automated CipherHealth system. Using the GENIE call-back data, we grouped call-backs into categories based on specific patient concerns. Finally, recidivism rates were obtained prior to the implementation of CipherHealth and geriatric nurse specialists and compared with those seen after.

**Results:** There were a total of 4,748 initial calls made with the Cipher Health system and 292 individual follow-up calls made by the GENIE. Of the calls made by the GENIE the most common issue was with follow-up appointments (99 recorded issues). The next most common issue was with discharge instructions (82 recorded issues), followed by general status issues (80 recorded issues), issues obtaining prescriptions (18 recorded issues), and medication questions (13 recorded issues). Additionally, the rate of recidivism for patients over the age of 65 prior to the implementation of the call-back system was 20.9 percent compared with 15.6 percent in the months following implementation of these systems.

**Conclusion:** Our data suggests that there are specific areas of intervention that many older patients have issues with post-discharge. These concerns centered around follow-up appointments and discharge paperwork, suggesting an avenue for future quality improvement. Additionally, the decrease in recidivism after implementation of the call-back systems are a promising sign. A future study would be needed to prove true causation however there are reasons for optimism.

Intervention	Call Rate
Total Number of Calls Plus Followings From the ED	4748
Follow-up calls made by the GENIE for patients represented in the Automated Calls	292

Table 1.



Graph 1. Automated calls vs. Genie call-back.

ED Visits with 20 Days or more EDs, UCI Medical Center, July 1, 2016 through April 30, 2019 and ED Visits with 20 Days or more EDs, UCI Medical Center, October 1, 2017 through November 30, 2019

ED Visits (7/1/16-4/30/19)	Frequency	Percent	ED Visits (10/1/17-11/30/19)	Frequency	Percent
Yes	313	20.9	Yes	136	15.8
No	1,187	79.1	No	750	84.1
Total	1,500	100	Total	886	100

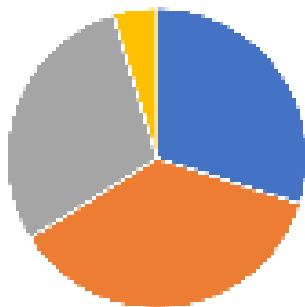
**Table 2.** Number of older adults with repeat ED visits and the percentage of all elder visits this represents.

**Table 3**

Intervention Details	Number of Issues Identified
Diagnosis Improvement - Issues	13
Follow-Up Appointment Help - Issues	46
General Status - Issues	10
Medication (Overdose) - Issues	17
Prescribing Prescription - Issues	16
Total Issues Made by the GMM	112

**Table 3.**

Card-Back Issues Identified by the GMM



**Graph 2.**

## 21 Impact of Shared Visits with Midlevel Providers or Residents on Resource Use and Admission Rate

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**Objectives:** To validate and expand upon prior data suggesting that visits shared with a midlevel or resident influence EP behavior as measured by resource use and propensity to admit a patient.

**Background:** Variability exists in Emergency Physicians' (EP) resource utilization as measured by ordering practices, propensity to admit patients, and whether a visit is shared with a resident or midlevel provider (nurse practitioner or physician assistant).

**Methods:** This is a retrospective study of routinely gathered operational data from two community, suburban hospitals within an academic emergency network. We analyzed 34 EPs with 141,433 patient visits from July 1, 2016 to June 30, 2019. We collected individual EP data on advanced imaging (CT, US, MRI), admission rates, and whether a visit was shared with a midlevel or resident for each patient encounter. To investigate whether there might be distinct groups of practice patterns relating these resources, we used a Gaussian Mixture Model (GMM), a classification method used to determine the likelihood of distinct subgroups within a larger population. The total number of groups and covariance structure were determined by Bayesian Information Criteria.

**Results:** Our GMM revealed three distinct groups of physicians based on their ordering practices. The largest group is characterized by a homogenous pattern of neither high or low resource utilization (n=19, 58% female, median years' experience: 9 [IQR 2-16]; rates of Advanced Imaging: 44%, Admission: 21%, Midlevel/Resident staffing 35% with a modest group of low-resource users (n=10, 0% female, median years' experience: 7 [IQR 5-11]; rates of Advanced Imaging: 31%, Admission: 17%, Midlevel/Resident staffing 32%), and far fewer members of a high-resource use group (n=5, 20% female, median years' experience: 15 [IQR 5-16]; rates of Advanced Imaging: 49%, Admission: 22%, Midlevel/Resident staffing 35%) [Figure 1]. This variation suggests that use of advanced imaging and propensity to admit may be influenced by whether a patient visit is shared with a midlevel or resident provider.