

lifeline

WINTER 2021

a forum for emergency physicians in california

THIS ISSUE'S TOPIC: REIMBURSEMENT AND BILLING

ORIGINAL RESEARCH

Underutilization of the Emergency
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CALIFORNIA ACEP

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Lori Winston,
MD, FACEP
(She/Her)

WHAT IS A BALANCE BILL ANYWAY?

Greetings fellow emergency physicians! This is the reimbursement issue of Lifeline where we want to educate and update you on the financial environment that is currently shaping your practice. Frequently, residency programs appropriately focus on the clinical practice of emergency medicine with a much smaller portion of curricula on the finances of our health care delivery system. Many EM graduates get a job where they earn an hourly rate and they have been educated on how to document to achieve various levels of service. They are often not aware of the complicated system that is working behind the surface of the chart. It is a rare physician skillset to deeply understand the forces at work for payors, patients, and physicians. We are lucky to have the expertise of many reimbursement savvy CalACEP members that either serve on our Board of Directors or closely with our team. They help us best represent your interests when it comes to fair payment for the services that we provide.

This article's aim is to help members gain a better understanding of what happens after the chart is completed and to highlight the regulations that went into effect January 1, 2022, as a result of the 2020 No Surprises Act, a federal law to ban balance billing practices.

In the simplest of terms, when a patient receives care in the emergency department (ED) the encounter generates 2 bills, one for the facility services and one for the physician services. Most patients have some sort of insurance or health plan that will pay for at least part of the care that was rendered. Insurance companies work with hospitals and physician groups to negotiate rates that establish those providers as in-network. If a patient uses providers that are not in-network, they usually are expected to pay more out of pocket and the insurance company covers less of the bill. Sometimes a hospital may be in-

network for a particular insurance company but the physician who provided the service was out-of-network or vice versa. In the past, if the health plan did not cover the entire bill, the physician could bill the patient for the remainder "balance bill".

In the event of an emergency, patients do not have the luxury of shopping for hospitals and care providers that are only in-network, and they shouldn't be expected to. As far back as 2008, CalACEP sponsored legislation to ban balance billing, take patients out of the middle, and create a mechanism to ensure that emergency physicians would be reimbursed fairly. That bill was vetoed by then-Governor Arnold Schwarzenegger. There have been other legislative efforts to ban balance billing in California, all of which failed to include a fair payment standard. The last one was AB 72 in 2016. CalACEP was successful in

advocating that emergency medicine be exempt from this bill because the amount it required health insurers to pay for emergency services was so low it would have decimated reimbursement.

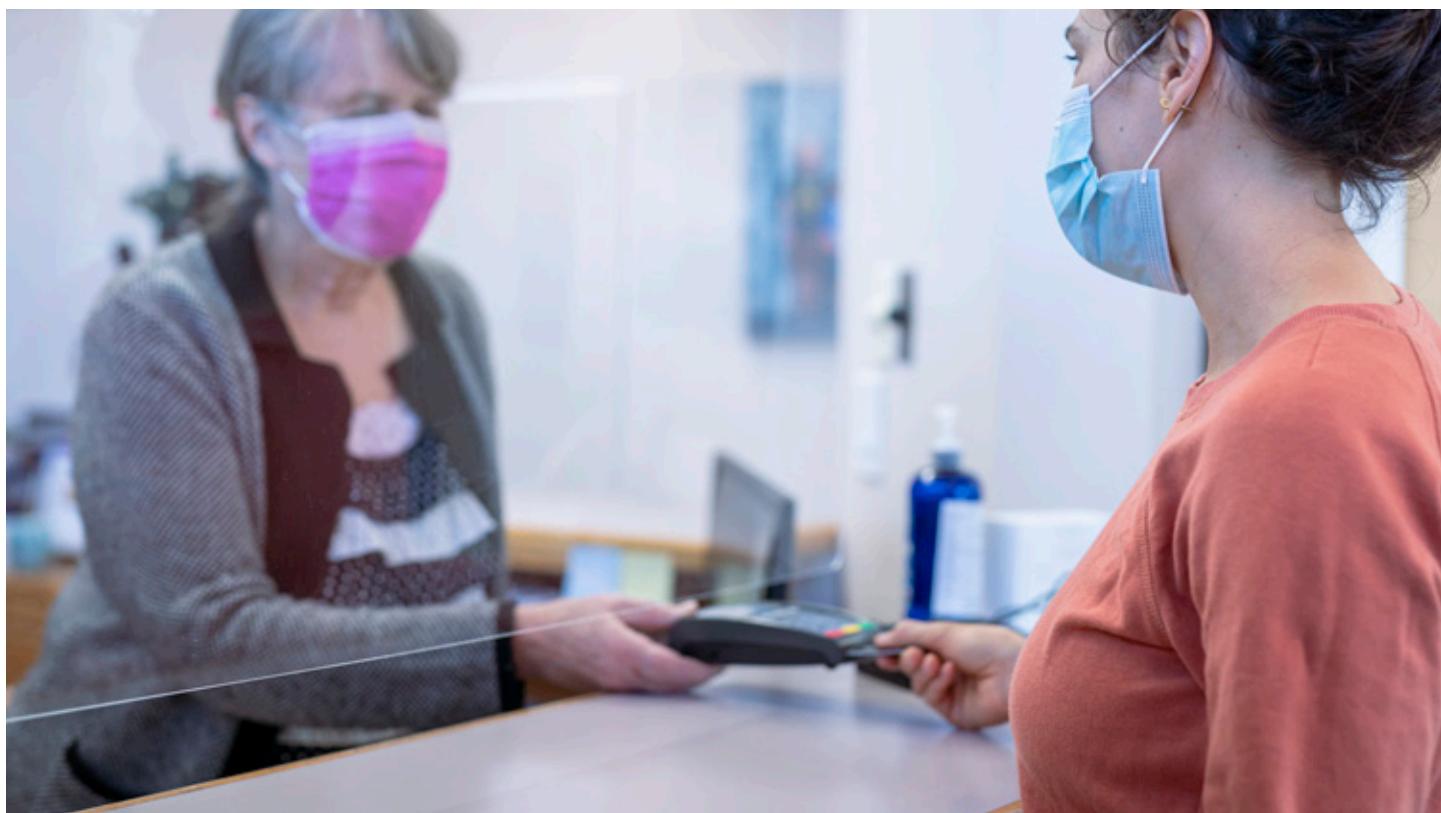
Since 2016, there has been a lot of bad press about these “surprise bills” that patients receive in other states and, as a result, Congress passed the 2020 No Surprises Act in an effort to take patients out of the middle of the discrepancies that result when the health plan and the provider do not agree on the cost of the service and the reimbursement that is due.

Under the 2020 federal No Surprises Act, if a patient receives physician services that are out-of-network, the physician bills the health plan. The physician cannot send a balance bill for any remaining amount to the patient that the health plan does not cover. The maximum that the patient can be expected to pay is the median in-network Qualified Payment Amount for similar services in that geographic area. The health plan has 30 days to pay the amount billed to them and the law doesn’t specify how much the plan is required to pay. The health plan pays what they believe is the amount due for the services and if the physician disagrees, they can dispute the amount through “open negotiation,” which lasts 30 days. If there is no resolution, then the parties enter an Independent Dispute Resolution (IDR), which is an arbitration process whereby an outside reviewer decides the fairest payment. The winner of the IDR not only gets the amount that they wanted the payment to be, but the loser must pay for the arbitration filing fees as well. While the law that was passed by Congress enacted a fair process, the regulations promulgated by CMS to implement the

law are shockingly different than what Congress intended. ACEP, along with other providers, has filed a lawsuit in an effort to stop the harmful regulations.

Because many states, like California, had already enacted state laws on this topic before Congress began looking at the issue, the No Surprises Act says that state law will govern in instances where there is a “specified state law.” The federal government is in the process of sending letters to states to explain to them what these new federal regulations mean, especially when the state has its own laws on balance billing. California received our letter in December, but it was based on an erroneous interpretation of state law as described by the California Department of Managed Health Care. As this goes to print, CalACEP is actively working to have this corrected.

The two pending issues of state law interpretation and the legality of the federal regulations leave a lot of unanswered questions. Even if CalACEP is successful in reversing course with the state law interpretation, the lawsuit challenging the federal regulations will take longer to reach resolution. Although national ACEP strongly engaged to represent our specialty’s position on this process, in the end it leaves us pessimistic as to the future of how health plans will behave when negotiating in-network contracts with providers under this new system. If you would like more information about the 2020 No Surprises Act, ACEP published a deeper explanation at <https://www.acep.org/federal-advocacy/no-surprises-act-overview/> and an overview from ACEP is included on Pages 14-17 in this issue of Lifeline. ■





CALIFORNIA ACEP
AMERICAN COLLEGE OF EMERGENCY PHYSICIANS



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EXPANDING REIMBURSEMENT IN THE *EMERGENCY DEPARTMENT*

By Elena Lopez-Gusman (She/Her) & Lauren Murphy (She/Her)

Emergency departments (EDs) have successfully provided immediate, high-quality health care so much so that the role of the ED has evolved over the years to serve a wide range of societal roles. These include, first and foremost, the provision of life-saving care to critically ill and injured patients. Increasingly, EDs are being used to facilitate the assessment and management of patients who need non-elective admission to the hospital, to perform complex evaluations of high-risk patients, and to provide acute care to insured and uninsured patients who cannot get timely access to care elsewhere.

As emergency physicians, you regularly see and treat patients with acute and chronic health conditions that are a direct result of the social determinants of health. You are an integral part of helping patients access services, receive smooth transitions in care, and connect to effective care coordination. When patients seek care in the ED, they are often connected to follow-up care, behavioral health care, substance use treatment, sobering centers, palliative care, hospice care, and all the other panoply of services needed to improve and manage long-term health. You have shown through the certified alcohol and drug counselor in the ED program that these connections to services through the ED can be impactful and successful.

The list of public health and case-management related tasks performed in the ED continues to grow as the Legislature leverages the ED as a means for accessing otherwise hard to reach populations. The 2018 homeless discharge bill, which requires hospitals to ensure that a homeless patient has been offered a meal, has adequate clothing, and has been screened for infectious diseases and offered vaccinations, is one example of changing the scope of care provided in the ED through legislation. The recently defeated mandatory HIV screening

bill is another example. While this bill died this legislative cycle, it was a continuation of an ongoing conversation about disease screening in the ED that will likely be brought up again in the future.

What the Legislature and the public do not realize is that even when there is a willingness to perform these case-management and screening tasks, there is no mechanism for emergency physicians to get paid for doing them.

This year, California ACEP is educating legislators and beginning policy discussions about a way to allow emergency physicians to seek reimbursement for the provision of services, including communicable disease testing and counseling, screening for substance use disorders and referral to treatment, smoking cessation intervention and referral to treatment, and administration of vaccinations. Other specialties already seek reimbursement through existing codes. Expanding these codes would come at a cost to the state and would likely face a great deal of opposition from other parties, like health plans. If legislation is introduced this year, it would be unlikely to pass, but it would be an important step in furthering the conversation about the role of the ED in California's health care delivery system. ■

The Strange Case of California's Mental Health Reimbursement System

By David Terca, MD (He/Him)



"That man is not truly one, but truly two." –Jekyll and Hyde

Robert Louis Stevenson published his iconic novel, *"The Strange Case of Dr. Jekyll and Mr. Hyde"* over 135 years ago. Since then, the story has been so successful that the phrase "Jekyll and Hyde" has entered the vernacular and become fully integrated into our modern lexicon. In fact, it is such a common phrase today that it often refers to the unexpected duality not only of people, but also of things.

California itself is a land of unexpected duality: a place that is home to misty forests of Giant Sequoias, but also to Death Valley. A place with some of the highest concentrations of wealth anywhere in the world, in Silicon Valley and Beverly Hills, while at the same time having the country's largest homeless population. The contrast and inequality, both in our natural and social settings, is immense. Just as Jekyll and Hyde are described in behavior as two men instead of one, our state healthcare system also functions as two instead of one.

Our mental health care system is reimbursed and funded completely differently than all other medical care in the state. Given its importance and the rising demand for psychiatric care, it is vital for us to understand our mental health system's background, history, and funding mechanism as we advocate for improvements and changes in the coming years.

Before the 1960s, California delivered mental health care through state-run institutions and mental hospitals. This all began to change in 1957, with passage of the Short Doyle Act, which aimed to transition mental health care from state-run hospitals to community-based programs. The transition to community-based mental health care was accelerated by the passage of Medicaid in 1965. It explicitly denied coverage for most adults hospitalized in the state-run psychiatric institutions and mental hospitals and led to the rapid closure of the state-run mental hospitals. In addition, it led to the de-institutionalization of many patients over the subsequent decades. As more and more state-run hospitals closed, mental health care delivery increasingly transitioned to community mental health programs.



California began a process of “realignment” in 1991 to direct mental health care programs to be administered by the counties. The Bronzan-McCorquodale Act set up the funding mechanism for county mental health programs. It used a formula to distribute collected funds from sales taxes and vehicle license fees to the counties. County programs still largely rely on this funding mechanism today.

Finally, in the mid-1990s, Medi-Cal consolidated all existing community mental health programs into one, all-encompassing, county-level mental health program. Since that consolidation, all psychiatric care is administrated by and paid for by each county’s Mental Health Plan. Counties that participate in the Mental Health Plans receive a federal Medicaid match, dollar for dollar, for psychiatric care. Mental health care for all Medi-Cal patients is funded through this county-based system, with the notable exception of prescription medications. Medications are paid through the regular Medi-Cal funding stream managed by the Department of Health Care Services and their corresponding Medi-Cal plans.

Many people have pointed to the inefficiency and variability of this county-based model. For example, to qualify for psychiatric specialty care, Medi-Cal enrollees must meet medical necessity criteria, which includes a specific covered diagnosis, known impairments, and defined intervention criteria. Access to care and integration of care has improved in recent years, but prior to 2014, Medi-Cal patients who did not meet the aforementioned mental health services criteria could only be seen by primary care providers or by Medi-Cal fee-for-service mental health providers. After January of 2014, Medi-Cal managed care plans took over mental health services for those patients who previously did not qualify (i.e., those with mild-to-moderate impairment from a mental health disorder outside the scope of a primary care physician, as defined in the legislative language). Currently, the county mental health plans coordinate care for patients with managed Medi-Cal

plans through a “memorandum of understanding,” which delineates the services covered and referral process for those patients, but of course every memorandum is different between counties across the state.

In recent years, some counties have attempted to incorporate and consolidate their mental health plans with regular Medi-Cal to better integrate care delivery and close coverage gaps. While it’s not clear that every county will make this change, it is clear that California’s mental health system remains a farrago of mixed parties, variably covered benefits, and different funding streams ranging across a multitude of different county-based programs. As emergency physicians, we must understand these complexities and idiosyncrasies of the state’s mental health funding system if we are to aid in the future of reform. To borrow Stevenson’s words, “The less I understood of this farrago, the less I was in a position to judge of its importance.” ■

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The Circle Expands: Understanding Medi-Cal Coverage of Mild-to-Moderate Mental Health Conditions. The California Health Care Foundation. August 2016. Available at: <http://www.chcf.org/wp-content/uploads/2016/08/CircleMediCalMentalHealth.pdf>





MICRA

CAMPAIGN UPDATE

By Lisa Maas, Executive Director of Californians Allied for Patient Protection

The California Chapter of the American College of Emergency Physicians (California ACEP) is a member of Californians Allied for Patient Protection (CAPP), the statewide coalition to protect access to health care through the Medical Injury Compensation Reform Act (MICRA).

MICRA ensures that injured patients receive fair compensation while preserving access to health care by keeping providers in practice and hospitals and clinics open. Without MICRA's protections, many of California's neediest populations could face reduced access to these much-needed services.

An initiative called the "Fairness for Injured Patients Act" (FIPA) will be on the ballot this November and, if passed, will effectively eliminate MICRA's protections. Funded by a wealthy out-of-state trial lawyer, this proposition is an end-run around MICRA.

This flawed initiative would:

- **Eliminate the Cap on Both Non-Economic Damages and Attorneys' Fees.** The initiative creates a new category of injuries not currently recognized under California law. This new "catastrophic injury" category allows for unlimited attorneys' fees and unlimited non-economic damages.
- **Reward lawyers before patients.** Current law allows for patients to be paid for future damages over time as their treatment and recovery continue. This measure requires all damages to be paid in a large lump sum, increasing the risk of patients running out of money before their recovery is complete. These lump-sum payments allow trial attorneys to collect more in fees.
- **Result in more, not less frivolous lawsuits.** Unlike other judicial transparency laws in California, this measure would expressly prohibit judges from independently verifying the truthfulness of statements made by trial attorneys in certain court filings known as "certificates of merit" and from disciplining them for dishonesty.



According to the non-partisan Legislative Analyst's Office, this flawed initiative will drive up health care costs for all Californians by tens of millions "to high hundreds of millions of dollars annually." This initiative would obliterate existing safeguards for medical lawsuits — resulting in skyrocketing health care costs and enormous windfalls for attorneys.

This initiative is not the first attempt to alter MICRA, but it is the most damaging. As you may recall, California ACEP was part of the coalition that helped defeat Proposition 46 in 2014. Prop. 46 would have quadrupled MICRA's cap on non-economic damages, but it was definitively rejected thanks to the work of CAPP's broad-based coalition.

Now, California ACEP and hundreds of other organizations are part of a growing coalition to defeat FIPA this November. Visit **protectmicra.org** to add your individual organizations to the coalition and join our efforts.

Since last year, the coalition to defeat FIPA has grown to more than 400 organizations. The campaign also began a Community Ambassador Training series. These trainings educate coalition members about FIPA and provide them with the tools to serve as leaders and educators within their own organizations and circles of influence. You can sign up for one of the future trainings here:

<https://forms.gle/EkZA48EjPJzZeCg97>

The campaign team continues to refine the messaging strategy that will put us in the best position to inform voters of the harm FIPA would cause and to debunk the myths and falsehoods presented by initiative proponents.

Additionally, the campaign has been speaking with local media outlets to educate reporters on the nuances of MICRA, and place stories that highlight the devastation FIPA would cause to California's health care system. Several coalition members have been quoted in stories and

press releases across California, and those efforts will be ramped up even more this year.

Our coalition will work together to educate millions of Californians about the disastrous impact this initiative would have on our health care system. We know that once Californians understand the issue and how beneficial MICRA is to our state, they will vote no on FIPA.

The future of MICRA is on the line. Together, California ACEP, CAPP, and hundreds of other health care organizations can ensure continued access to care for millions of Californians. For more information about the campaign and to stay up to date with current events and news about this initiative, and to learn how you can help defeat FIPA, please visit **protectmicra.org**.

We know that through our collective efforts, we can defeat FIPA this November. ■





8 PHYSICIAN EMPLOYMENT CONTRACT ITEMS YOU NEED TO KNOW ABOUT

By Kyle Claussen, JD

1. UNCLEAR WORK EXPECTATIONS

There are many potential pain points in any working relationship. They include:

- work schedules
- office locations
- call obligations
- patient allocation
- research time

In many cases, the contract will have ambiguous parameters for your actual hourly work expectations. It may state something as simple as “full-time” or give a minimum hourly range per week.

Like many contractual clauses, these hourly/shift expectations should be clearly outlined with objective parameters in your contract. You do not want to be blindsided by shifts that last four hours longer than you originally expected. And you don’t want to be required to work on holidays when you planned to have those days off.

Work expectations may seem basic. That is why they often go overlooked and why they deserve to be given close consideration.

Related Content: [Occupational Burnout: What Is It And Who Is At Risk?](#)

2. UNREASONABLE NON-COMPETES

Most physicians who have been through the employment contract negotiation process have been warned about non-compete clauses. A

non-compete restricts you from working within a certain geographic area after your contract terminates.

A typical radius would be anywhere from 2 to 50 miles. However, this will be highly dependent on the setting of your place of employment (i.e. rural vs. urban). If a non-compete restricts you from practicing within a large radius (50 to 100 miles), especially in a densely populated area, then you should consider negotiating these terms.

Also, the duration and scope of restriction should be reviewed to ensure they are in line with market standards. Some states have prohibited non-competes on physicians. In that event, the non-compete should be removed from your contract entirely.

3. DELAYED BENEFITS

Benefits are a huge part of what draws many physicians to an employed position. In your contract, an employer should offer you a benefits package that includes all or most of the typical components, including:

- health insurance
- disability insurance
- paid leave
- a retirement plan

These benefits should take effect when you begin your employment, but, in some cases, there can be a delay before you are eligible for certain benefits. Going without insurance coverage for any span of



time can be incredibly risky therefore COBRA costs should be a topic of negotiation.

4. WHERE IS THE TAIL COVERAGE?

There is a chance you will get sued after the termination of your employment for an incident that occurred while you were employed with the same organization. If your former employer did not offer you tail coverage in your contract, it is your responsibility to pay for this insurance.

The cost of tail coverage will vary depending on specialty. However, many times, it is more valuable than a signing bonus and should be reviewed carefully as part of the compensation package.

5. UNREALISTIC INCENTIVES

Most employers use some variation of a production bonus structure to reward your productivity. Production bonus systems can be based on the following:

- Work Relative Value Units (wRVUs)
- billings, or
- collections

There are pros and cons to each of these systems. It is important, however, to ensure that the targets provided are attainable and fair. Having access to market data is extremely useful when negotiating these terms.

6. TERMINATION LANGUAGE IS UNCLEAR

Every contract will feature a termination section that will spell out potential causes for the termination of your employment. This section should not be so extensive as to overwhelm you with what might get you fired. However, it should provide a realistic view of the reasonable causes.

This sets a clear expectation for how you should practice within the organization's framework. And, in the event of your termination, it may be useful in filing a wrongful termination suit. The contract should provide termination procedures for both parties to be equitable.

7. INDEMNIFICATION CLAUSES

An indemnification clause is a contract clause where one party is responsible for losses incurred by another party – in this case, the organization employing you. Indemnification clauses are important. They should be reciprocal for both parties in the contract.

Your employer will not want to be responsible for losses caused by your negligent actions. And, you should not assume the risk for their negligence either. Try to negotiate your way out of a one-sided indemnification clause which may make you responsible for damages which your malpractice insurance cannot cover.

8. INTELLECTUAL PROPERTY

Do you have an interest in developing intellectual property? What about creating a social media following? Your contract terms should be clear about whether the employer has any right to the ownership and revenue derived from the creation of intellectual property by you during the term of your employment.

THE BOTTOM LINE

Whether you are negotiating your first employment contract or your 10th, it is important to read the fine print of the contract and seek expert legal advice if any part of it is unclear. ■

Kyle Claussen, JD, has an LL.M. from Boston University and is a member of the American Health Lawyers Association. He is one of the leading physician contract attorneys in the nation and has assisted thousands of physicians across all specialties.

This article was originally published on July 21, 2021 on The Doctor Weighs In. Read more at www.thedoctorweighsin.com.





THE NO SURPRISES ACT

By the American College of Emergency Physicians

The 2020 No Surprises Act (NSA) established new federal protections against surprise medical bills and balance billing, most of which took effect January 1, 2022. Below is a summary of the major No Surprises Act requirements and what they mean for you.

Overview of the Law

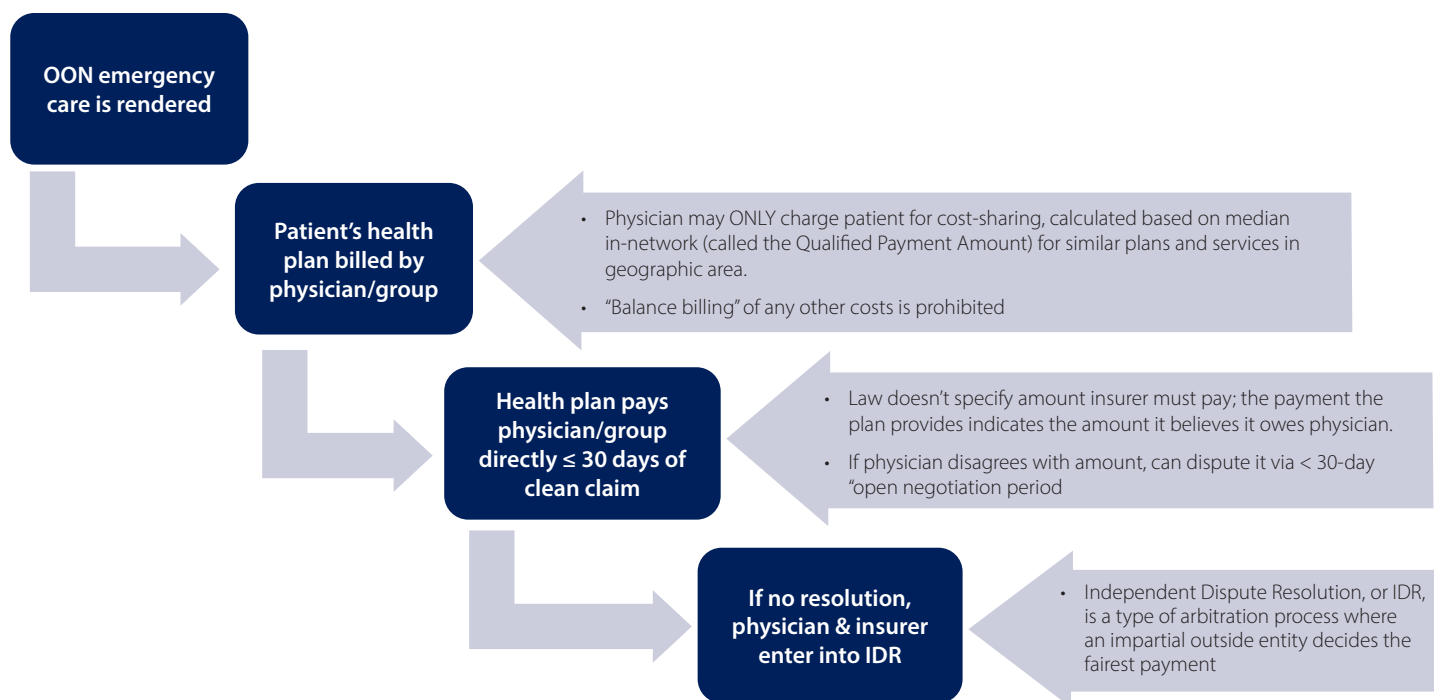
The No Surprises Act:

1. Bans balance billing for out-of-network emergency care (provided in hospital EDs and independent freestanding EDs) and for post-stabilization care until the patient can consent and safely be moved to an in-network facility.
2. Bans balance billing for scheduled out-of-network services (such as by a radiologist, pathologist, anesthesiologist, etc) at an in-network facility when the patient hasn't been notified or provided consent.
3. Prohibits insurers from assigning higher deductibles (and other cost-sharing) to patients for out-of-network than they do for in-network care without patient notification and consent.

4. Provides similar patient protections for air ambulance services, but not ground ambulances.

What It Means for Emergency Physicians

- Following out-of-network emergency care, the patient's health insurer is billed by the physician/group for the emergency services provided.
 - » The physician/group can ONLY charge the patient for their cost-sharing amount. This amount is calculated based on the median in-network amount for similar plans and services in that geographic area (called the Qualified Payment Amount, or QPA).
 - » "Balance billing" by the physician/group of costs in excess of the patient's in-network cost-sharing is prohibited.



- The insurance plan must make a payment directly to the physician/group within 30 days, indicating the total amount the plan believes it owes.
- If the physician/group disagrees with this amount, you may dispute it with the insurer during a 30-day "open negotiation" period.
- If you still can't come to agreement on a fair payment amount, you can initiate the independent dispute resolution (IDR), a type of arbitration process where an impartial outside entity decides the fairest payment.

Post-stabilization Services

The *No Surprises Act* does NOT make any changes to your EMTALA obligations, including the medical screening exam and stabilization definitions and requirements that have been in place for decades.

However the law DOES extend the ban on balance billing to additional services that patients may receive in conjunction with an emergency visit even *after* they are stabilized—a new concept known as "post-stabilization services" in the law.

Thus, a patient coming to your ED to be treated for a medical emergency cannot be balance billed for any of the out-of-network services they receive up to the point of stabilization, NOR for the care they receive once they are:

- admitted to the hospital; or,
- transferred to another facility via ambulance or other form of emergency medical transportation; or,

- placed into observation.

The balance billing protections end when you discharge the patient. They also can end when under your clinical judgment the out-of-network patient could have been transferred to a participating facility safely and without undo financial burden using a non-emergency form of transportation (like the patient's car, a bus, or a taxi), AND the patient signs a notice-and-consent given to them by the subsequent clinician.

How IDR Works

Generally, the IDR process will follow a "baseball-style" approach, following these steps.

1. Physician Submits Claim for Payment

ER physician submits claim to patient's insurer. The patient is only responsible for any costs as if in-network, and is now out of the middle.

2. Insurer Underpays Physician

Physician/group can dispute the amount during the 30-day open negotiation period.

3. Physician Takes Insurer to IDR

If that fails, either party can take the dispute to IDR using an online portal. They'll select an arbiter from a pre-vetted list of IDR entities. Both parties must pay the IDR fee up-front (\$200-500 for one claim; \$268-670 for "batched" claims of similar services with that same insurer).

4. IDR Submission

Each party submits offer < 10 days for reasonable payment. Offer must include:

- Calculate QPA (provided by the insurer)
- Physicians training and experience
- Complexity of procedure or medical decision-making
- Patient's acuity
- Market share of health plan and physician/group
- Whether care was provided at a teaching facility
- Scope of services
- Any good faith efforts to agree on payment amount
- Contracted rates from the prior year

5. Independent Review

An impartial reviewer evaluates both submission and chooses one of the two payment amounts within 30 business days after the reviewer is selected. They can't come up with their own amount; it must be one of the two proposed.

6. Loser Pays

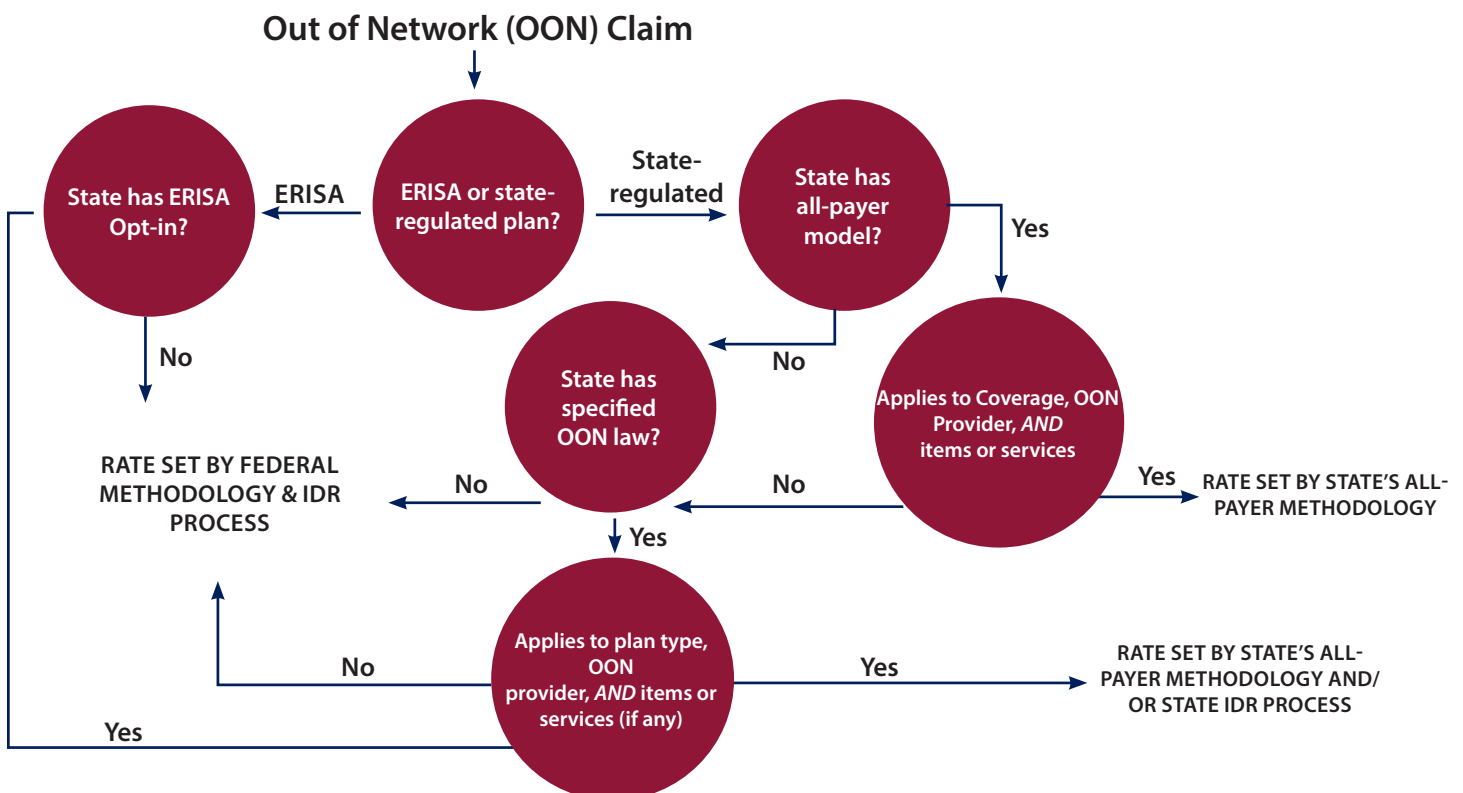
The loser has to make the other side whole and pay for the IDR fee within 30 calendar days. The winner gets their filing fee refunded within 30 business days.

Remember, this federal IDR process will only be used for disputes for which no specified state law applies (see section below).

State Balance Billing Laws

1. For emergency patients under a state-regulated insurance plan (such as employer-sponsored commercial plans):
 - If that state already has a balance billing law deemed by the federal government as meeting certain criteria, the state law will govern the OON payment amount and IDR process (if any exists in that state).
 - If a state does not have such a qualifying law, then the federal law's initial payment and IDR process governs the OON payment.
2. For federally regulated insurance plans (such as ERISA/employer self-funded or federal Marketplace plans under the ACA), the federal law's initial payment and IDR process governs the OON payment amount. Note: In some states, ERISA plans are allowed to opt-in to the state law.

The federal government has already released guidance designating some states as having a qualifying law. See table below, which will be updated as more guidance comes in on the remaining states.





Definitions

- *Collaborative Enforcement Agreement:* State and Federal government will share responsibility of coordinating and enforcing NSA provisions
- *Federal Government (CMS) Enforcement:* CMS will enforce the provisions of the NSA in the state
- *Federal External Review Process:* CMS will intervene on behalf of the state for adverse determinations
- *Federal IDR Process:* CMS will enforce the provisions of the IDR process laid out in the NSA.
- *Federal Process Applies:* CMS will enforce dispute resolution process laid out in the NSA.

Disclosure Requirements You Are Responsible for as a Physician

Physicians/groups and other providers eligible under the No Surprises Act must inform all their patients about the new patient protections against balance billing.

This information must be provided in three ways:

1. Prominently at the location of the facility;
2. As a fact sheet provided to the patient either in person, by mail, OR by email—the fact sheet can be created using a template (see last page at link) provided by CMS; and,
3. On a public website

For emergency care, your hospital can take responsibility for the first two requirements if you have a written agreement in place between you for this. It is recommended that the sheet be provided to the patient at the place and time of care. If your hospital does not take on this responsibility, then you must provide the disclosure fact sheet to the patient at or before you collect any cost-sharing payment from them, or at least before you file a claim with the patient's insurer.

NOTE: Your group is responsible for the third requirement—i.e., the disclosure notice must be posted on your group's website, if your group has one.

Good Faith Estimates—do I need to provide these to patients?

The No Surprises Act requires clinicians providing non-emergency care to provide good faith estimates of services when care is scheduled at least 72 hours in advance or upon request from individuals who are uninsured or self-pay. **You do not need to issue a good faith estimate for emergency care. ■**

REFERENCES

- For more provider-specific guidance, please visit the Provider Webpage from CMS (<https://www.cms.gov/nosurprises/Policies-and-Resources/Providerrequirements-and-resources>).
- How the Median In-network Amount (the QPA) is calculated (<https://www.cms.gov/CCIIO/Programs-and-Initiatives/Other-Insurance-Protections/CAAQualifying-Payment-Amount-Calculation-Methodology.pdf>)
- Detailed guidance on how the IDR Process works (<https://www.cms.gov/CCIIO/Resources/Regulations-and-Guidance/Downloads/Federal-Independent-Dispute-Resolution-Process-Guidance-for-Certified-IDR-Entities.pdf>)
- This article was adapted for print from <https://www.acep.org/federal-advocacy/no-surprises-act-overview/>



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Case Management Reduces Length of Stay, Charges, and Testing *in Emergency Department Frequent Users*

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INTRODUCTION: Case management is an effective, short-term means to reduce emergency department (ED) visits in frequent users of the ED. This study sought to determine the effectiveness of case management on frequent ED users, in terms of reducing ED and hospital length of stay (LOS), accrued costs, and utilization of diagnostic tests.

METHODS: The study consisted of a retrospective chart review of ED and inpatient visits in our hospital's ED case management program, comparing patient visits made in the one year prior to enrollment in the program, to the visits made in the one year after enrollment in the program. We examined the LOS, use of diagnostic testing, and monetary charges incurred by these patients one year prior and one year after enrollment into case management.

RESULTS: The study consisted of 158 patients in case management. Comparing the one year prior to enrollment to the one year after enrollment, ED visits decreased by 49%, inpatient admissions decreased by 39%, the use of computed tomography imaging decreased 41%, the use of ultrasound imaging decreased 52%, and the use of radiographs decreased 38%. LOS in the ED and for inpatient admissions decreased by 39%, reducing total LOS for these patients by 178 days. ED and hospital charges incurred by these patients decreased by 5.8 million dollars, a 41% reduction. All differences were statistically significant.

CONCLUSION: Case management for frequent users of the ED is an effective method to reduce patient visits, the use of diagnostic testing, length of stay, and cost within our institution. [West J Emerg Med. 2018;19(2)238-244.]

POPULATION HEALTH RESEARCH CAPSULE

What do we already know about this issue?

Frequent users of the emergency department (ED) are high utilizers of healthcare resources. Case management has been proven to reduce the number of ED visits by frequent users of the ED.

What was the research question?

How does case management for ED frequent users affect ED and inpatient length of stay? Is the use of healthcare resources affected?

What was the major finding of the study?

Case management in this group reduced ED and inpatient length of stay. Admissions, testing, and hospital charges also decreased.

How does this improve population health?

Case management for ED frequent users can reduce overutilization of healthcare resources by ED frequent users, allowing EDs to provide faster care to ED patients with normal ED use.

INTRODUCTION

Frequent users of the emergency department (ED) represent a complex group of patients who overuse ED resources. This group accounts for as many as 28% of all ED visits, with the number of annual visits by this group continuing to rise.¹⁻⁴ Frequent users of the ED are defined as patients making four or more ED visits per year; however, some “ultra”-frequent users may make 20 or more visits per year.²⁻⁸ It has been well established that ED frequent users increase healthcare costs and contribute to ED and hospital crowding.

While the reasons underlying frequent ED visits are often complex and may represent failure of the healthcare system to provide for patients with complex needs, ED frequent users incur significant charges and time for treatment and testing as a part of their evaluation and treatment. Additionally, as a part of each ED visit, evaluation, and treatment, patients spend time occupying EDs bed and using hospital services such as phlebotomy and radiology.^{5,7,9-14} ED bed time and hospital resources are a valuable commodity, particularly as ED visits continue to rise nationwide, making the reduction of such resources by ED frequent users a desirable goal.

Case management, as defined by the Case Management Society of America, is a “collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy for options and services to meet an individual’s and family’s comprehensive health needs through communication and available resources to promote quality, cost-effective outcomes.”¹⁵ Given the complex medical and social needs of ED frequent users, case management has been extensively used in this group of patients, with multiple studies showing

successful reducing in the use of ED services and cost of care in the ED.^{5,9,13,16-23} A 2017 systematic review identified 31 different studies of interventions to decrease ED visits by frequent users.¹⁹ However, despite the large number of studies published, there has been little research on the effect of ED case management for frequent users on length of stay (LOS), either in the ED or in the inpatient setting. To the best of our knowledge, this is the first study to evaluate the effect of case management on ED, inpatient, and total hospital LOS for all types of visits by ED frequent users.

The goal of this investigation was to explore the effect of ED case management in frequent users of the ED on LOS, both in the ED and the inpatient setting. To better understand the impact of case management in this population, we also chose to look at the effect of this intervention on ED and hospital charges as well as utilization of hospital services. We hypothesized that ED case management would reduce ED visits, admissions, ED LOS, inpatient LOS, charges, and diagnostic studies.

METHODS

We conducted this study at a 225-bed hospital in a suburban area, with approximately 56,000 ED visits per year. The surrounding healthcare community consists of a variable mix of county-run primary care





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clinics and private practice physicians – in both primary care and specialty care. There are few free clinics in the surrounding area. Two other hospitals are within 30 miles of our institution, one of which is a county hospital.

The study consisted of a retrospective chart review of ED and inpatient visits by patients in our hospital's Emergency Department Recurrent Visitor Program (EDRVP), comparing the visits made in the one year prior to enrollment in the program, to the visits made in the one year after enrollment in the program. This study was considered exempt by our hospital's institutional review board.

The EDRVP is run by an ED social worker or registered nurse (RN), with emergency physicians, social workers, ED RNs, chemical dependency providers, behavioral health RNs, case managers, and representatives from local insurance providers. At monthly meetings, members of the EDRVP discuss approximately 10 patients who have been referred to the program. If a care plan does not appear to be working to address frequent ED visits or a new issue has come up for the patient causing recurrence of heavy ED use, the patient's case and care plan is re-visited at the next meeting. If a truly urgent or emergent issue arises, the staff will correspond via secure email or in person to address it and develop new care plans or revisions to existing care plans. The program was developed initially in 2006 by ED staff at our hospital to

address increasing visits by frequent users. As the program has grown, additional hospital staff and services have been recruited to assist us with the growing number of patients requiring case management, and to meet newly identified needs of patients in the program.

For inclusion criteria, patients are referred to the program for any of the following reasons: concerning ED use (as identified by an ED staff member); 10 or more ED visits in 12 months; six or more ED visits in six months; four or more ED visits in one month; or activity by a patient that demonstrates a propensity for future problematic ED encounters – such as violence in the ED or prescription forgery. Patients exhibiting such high-risk activity were believed to be potentially problematic patients, and therefore a plan was developed to preempt frequent, potentially dangerous, recurrent, and problematic visits. There are no exclusion criteria, and patients of any age may be referred. Once a patient has been referred for enrollment in the program, his or her visits are reviewed to determine the underlying medical, psychiatric, and social issues causing the multiple ED visits. A plan of care for the patient is then developed, with the intent to address these issues in the outpatient setting. Care plans may include referring the patient for a case manager, referring the patient to a needed specialist, assisting the patient with unstable housing, or requiring that patients only receive medications from their primary doctor – rather than coming to the ED for refills.

We studied all patients enrolled in the EDRVP between October 2013 and June 2015. For each patient, we reviewed all ED and inpatient visits for the one-year time period before they were enrolled as well as the one- year time period after they were enrolled. Visits were reviewed using the hospital's electronic medical records system, Sunrise Clinical Manager (Version 14.3; Allscripts Healthcare Solutions, Chicago, IL). We recorded the number of each of the following parameters for the year before and year after enrollment: number of ED visits; number of inpatient admissions; ED LOS; inpatient LOS; ED charges; inpatient charges; number of computed tomography (CT) scans; number of ultrasounds; number of radiographs, and number of ED visits at which blood work was performed.

Additionally, we noted six main reasons why patients were referred to the program: needing pain management; complex psychosocial issues; complex medical conditions; psychiatric illness; substance abuse; and needing resources or referrals. We recorded the reason for referral for each of our patients. Six chart reviewers reviewed all of the visits and recorded the data using a standardized data collection spreadsheet in Microsoft Excel (Excel 2013; Microsoft Corporation, Redmond, WA). The lead author supervised the chart reviewers to ensure that data collection was standardized and accurate between them.

After data collection was complete, we proceeded with data analysis. As we wanted to determine the effect of ED case management on the study parameters listed above, we compared each of the parameters for each patient from the one-year time period before enrollment in the program to the one-year time period after enrollment in the program. To evaluate for statistical significance, we then used a paired Wilcoxon signed-rank test, comparing the year before enrollment





Table 1. Population in a study examining the effects of case management on frequent users of the emergency department. n = 158

	Total	Percent of total group
Homeless	12	7.6
Male	71	44.9
Female	87	55.1
Insurance		
Medicaid	90	57.0
Medicare	32	20.3
Tricare	3	1.9
Commercial	23	14.6
None	6	3.8
Other	4	2.5

Age at enrollment (mean) = 42.4 years

to the year after enrollment. Statistical analysis was performed with Microsoft Excel and Max Stat (Version 3.60; MaxStat. Jever, Germany).

RESULTS

Between October 2013 and June 2015, we enrolled 158 patients into the EDRVP program, which reflects our process of enrolling approximately 10 patients per month over this 19-month period. For administrative reasons, enrollment was significantly less than 10 patients per month on a few occasions. Demographic information of the patients can be found in Table 1. The oldest patient enrolled during this time period was 75 years old at the time of enrollment, with the youngest being nine months old at the time of enrollment.

In the one year prior to enrollment, patients in the program made 1,685 ED visits with 159 inpatient admissions, as compared to 855 ED visits with 97 inpatient admissions after enrollment. The number of

CTs, ultrasounds, radiographs, and ED visits during which blood testing was done all decreased as well from the year prior to enrollment to the year after enrollment. All differences were statistically significant with a p-value of <0.05. The complete data on utilization of services is displayed in Table 2.

In the one year prior to enrollment, patients in the program occupied 125 days (a full 24-hour period) of ED bed time, along with 334 days of inpatient bed time, for a total of 459 days of ED and inpatient bed time. After enrollment in the program, this decreased to 83 days of ED bed time, 198 days of inpatient bed time, for a total of 281 days of ED and inpatient bed time. All differences were statistically significant with a p-value of <0.05. The complete data on LOS are displayed in Table 3.

In the one year prior to enrollment, charges incurred by ED visits by patients in the program were \$5,827,162, with charges incurred during inpatient stays totaling \$8,453,761, for a grand total of \$14,280,923. In the one year after enrollment in the program, charges incurred by

Table 2. Utilization of testing and services before and after enrollment of frequent ED users in a case management program.

	Pre-intervention	Post-intervention	Absolute change	Percent change	P-value
ED visits (1 year)	1685	855	-830	-49.26	<0.0001
Inpatient admissions (1 year)	159	97	-62	-38.99	0.002
Computed tomography	201	119	-82	-40.80	0.0001
Ultrasounds	71	34	-37	-52.11	0.01
Radiographs	384	239	-145	-37.76	<0.0001
ED visits during which blood testing was done	724	386	-338	-46.69	<0.0001

ED, emergency department.

Table 3. Length of stay (LOS)

	Pre-intervention	Post-intervention	Absolute change	Percent change	P-value
Length of stay (LOS) in minutes					
ED LOS	450041	299514	-150527	-33.45	<0.0001
Inpatient LOS	1204099	711671	-492428	-40.90	0.001
Total LOS	1654140	1011185	-642955	-38.87	<0.0001
Length of stay (LOS) in days					
ED LOS	125.01	83.20	-41.81	-33.45	<0.0001
Inpatient LOS	334.47	197.69	-136.79	-40.90	0.001
Total LOS	459.48	280.88	-178.60	-38.87	<0.0001

ED, emergency department.

ED visits by patients in the program were \$3,041,473, with charges incurred during inpatient stays totaling \$5,405,175, for a grand total of \$8,446,648. All differences were statistically significant with a p-value of <0.05. The complete data on charges are displayed in Table 4.

Finally, we reviewed the reasons that patients were referred to the program. The greatest number were referred for issues regarding substance abuse, and the need for improved pain management. Additionally, the majority of patients had more than one issue for which they were identified as needing assistance, with the average number of reasons for referral being two per patient. The complete data are displayed in Table 5.

DISCUSSION

Our study clearly demonstrates that ED case management reduces utilization of services, LOS, and cost in a population of ED frequent users. Clearly in the current U.S. healthcare environment, which is characterized by expensive care and crowded hospitals and EDs, this is critical information and may provide some ideas to develop solutions to the problems of high cost and crowding. In reviewing the data on the reason for referrals to the program, it is apparent that this group of patients has complex needs, with less than a third of the group being referred to the program to address only one issue. This supports the need for a comprehensive case management program like the one

**Table 4.** The change in charges (in U.S. dollars) before and after frequent users were enrolled in care management program.

	Pre-intervention	Post-intervention	Absolute change	Percent change	P-value
ED charges	5,827,162	3,041,473	-2,785,690	-47.81	<0.0001
Inpatient charges	8,453,761	5,405,175	-3,048,586	-36.06	0.003
Total charges	14,280,923	8,446,648	-5,834,275	-40.85	<0.0001

ED, emergency department.



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we have instituted, as we believe that addressing only a single issue underlying recurrent ED use may not decrease ED utilization. From an ED administration standpoint, the most compelling piece of data appears to be the effect of ED case management on LOS. EDs across the U.S. struggle with crowding, often with critically ill or injured patients being forced to wait in waiting rooms when no beds are available. Our study showed that ED case management for ED frequent users helps this problem in two ways. First, by reducing ED visits and ED LOS, the program directly decreases the amount of ED bed time occupied by these repeat visitors, freeing up beds for patients in the waiting room. Second, by reducing inpatient LOS, ED patients are more likely to have inpatient beds available when needed, reducing the frequency of ED boarding. With less ED boarding, there is more available bed time in the ED for new patients from the waiting room. This increased ability to place new patients from the waiting room allows for new patients to be roomed much more quickly, allowing for critically ill and injured patients to receive time-sensitive treatment more quickly and reducing the door-to-doctor time for all patients in the department.

In looking at the cost implications of our analysis, we must consider the payer mix when considering the implication of reducing ED and inpatient charges in such a drastic fashion, as insurance plans reimburse at variable rates. A 2016 Texas study found that for every \$1.00 paid by Medicare to reimburse medical services, private insurance paid between \$1.15 and \$2.35, while Medicaid paid between \$0.61 and \$0.85.²³ When looking at charges for services on the order of several million dollars, as in our study, the difference between reimbursement by private insurance and public insurance is enormous, also on the order of millions of dollars.

In our study, the majority of patients (57%) had Medicaid insurance, which (as demonstrated by the study above) results in lower reimbursements to the hospital as compared to other insurance programs. While we were unable to perform a formal cost analysis of the charges and reimbursements to the hospital due to limitations in access to the data, the fact that our intervention reduced visits predominantly by patients with Medicaid insurance is not likely to be financially harmful to the hospital. Furthermore, in reducing charges by the patients in our program, our intervention was able to save significant monies for all insurance programs in our healthcare system, which could be used for other health improvements and interventions, such as prevention and education.

Finally, it is clear that our intervention – case management for ED frequent users – decreased ED visits, with the results evident from our study, as well as multiple previous studies cited above. In our study, we noted a decrease in inpatient admissions, ED and inpatient LOS, charges, and the use of testing. The question arises as to whether case management reduces these metrics simply by keeping people out of the ED, or whether case management has some additional effect on utilization of services. In looking at Table 2, it becomes clear that

ED visits decreased by 49%, with admissions and utilization of testing decreasing by about the same percentage, or slightly less. Continuing with Tables 3 and 4, LOS and charges decreased by less than 49%. This would suggest (although a formal analysis was not performed) that the most effective aspect of ED case management for frequent users is the ability to decrease ED visits, with all other decreased metrics the result of the patient not being in the ED (and therefore subjected to testing, charges, and possible admission).

LIMITATIONS

Our study had several limitations. First, because we looked at ED and hospital visits at just one institution our study includes a relatively small number of patients. It is possible that patients in the program simply chose to seek care at other hospitals and EDs. Thus, while we were able to significantly reduce cost, LOS, and utilization at our hospital, similar parameters may have increased at neighboring hospitals due to patients avoiding our institution. A study of the effect of ED case management on multiple hospitals within a geographic region would provide valuable information on this issue.

Table 5. Reasons for referrals to Emergency Department Recurrent Visitor Program. n = 158

Reason for referral	# of patients	% of total patients
Substance use	101	63.5
Need pain management	96	60.4
Psychiatric illness	46	28.9
Complex psychosocial issues	26	16.4
Needing resources/referrals	21	13.2
Complex medical conditions	20	12.6
Average number of reasons for referrals per patient		2
Number of reasons for referral		
Referred for 1 reason	47	29.7
Referred for 2 reasons	79	50.0
Referred for 3 reasons	23	14.6
Referred for 4 reasons	9	5.7

Second, our study consisted of a retrospective chart review of a program in existence at our hospital, with no control group for comparison. While case management likely accounted for the significant changes in the parameters studied, it is possible that other



factors, or simply regression towards the mean, accounted for part or all of our significant decreases.

Another limitation was that we did not look at testing utilization over the long term, but rather only compared the year prior to the intervention to the year after the intervention. For patients with recurrent complaints, physicians may not choose to perform imaging if imaging has recently been done. So, it is possible that robust imaging done on our patients in the year prior to enrollment decreased physician ordering of imaging studies in the year after enrollment. To be certain that our intervention decreased imaging study utilization, we would have needed to compare imaging in several years prior to enrollment to the year after enrollment.

Finally, as previously mentioned we did not conduct a formal cost analysis of charges and reimbursements to our institution to determine the impact of the significant reduction in ED charges. While again we speculated that with the majority of enrolled patients having Medicaid, the reduced charges represented savings to the hospital, it is possible that the program may have reduced reimbursements to the hospital in an unfavorable way.

CONCLUSION

Case management is an effective means for reducing recurrent ED visits by frequent users. As a result of decreased ED visits, case management also was shown to reduce cost, length of stay, and utilization of testing – both in the ED and the inpatient setting. ■

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Conflicts of Interest: By the WestJEM article submission agreement, all authors are required to disclose all affiliations, funding sources and financial or management relationships that could be perceived as potential sources of bias. No author has professional or financial relationships with any companies that are relevant to this study. There are no conflicts of interest or sources of funding to declare.

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EMERGENCY

Underutilization of the Emergency Department *DURING THE COVID-19 PANDEMIC*

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INTRODUCTION: The novel coronavirus 2019 (COVID-19) pandemic in the United States (US) prompted widespread containment measures such as shelter-in-place (SIP) orders. The goal of our study was to determine whether there was a significant change in overall volume and proportion of emergency department (ED) encounters since SIP measures began.

METHODS: This was a retrospective, observational, cross-sectional study using billing data from January 1, 2017–April 20, 2020. We received data from 141 EDs across 16 states, encompassing a convenience sample of 26,223,438 ED encounters. We used a generalized least squares regression approach to ascertain changes for overall ED encounters, hospital admissions, and New York University ED visit algorithm categories.

RESULTS: ED encounters decreased significantly in the post-SIP period. Overall, there was a 39.6% decrease in ED encounters compared to expected volume in the pre-SIP period. Emergent encounters decreased by 35.8%, while non-emergent encounters decreased by 52.1%. Psychiatric encounters decreased by 30.2%. Encounters related to drugs and alcohol decreased the least, by 9.3% and 27.5%, respectively.

CONCLUSION: There was a significant overall reduction in ED utilization in the post-SIP period. There was a greater reduction in lower acuity encounters than higher acuity encounters. Of all subtypes of ED encounters, substance abuse- and alcohol-related encounters reduced the least, and injury-related encounters reduced the most. [West J Emerg Med. 2020;21(6)15-23.]

Disclaimer: Due to the rapidly evolving nature of this outbreak, and in the interests of rapid dissemination of reliable, actionable information, this paper went through expedited peer review. Additionally, information should be considered current only at the time of publication and may evolve as the science develops.

Population Health Research Capsule

What do we already know about this issue?

The coronavirus disease 2019 (COVID-19) pandemic resulted in widespread social distancing measures, leading to concern for decreased emergency department (ED) visits.

What was the research question?

Was there a change in overall volume and proportion of various types of ED visits following shelter-in-place (SIP) orders?

What was the major finding of the study?

Total ED volumes decreased, with the greatest reduction in low acuity visits and the least in drug- and alcohol-related visits.

How does this improve population health?

This study shows the link between SIP orders and ED use during the initial weeks of the COVID-19 pandemic.

INTRODUCTION

The coronavirus disease 2019 (COVID-19) is an ongoing global crisis with far-reaching social consequences. First reported in Wuhan, China, in December 2019, COVID-19 quickly spread across that country, despite a government-mandated lockdown of Wuhan on January 23, 2020.¹⁻⁴ By the time the World Health Organization (WHO) officially recognized the pandemic status of COVID-19 on March 11, 2020, there were over 118,000 confirmed cases globally and over 4,200 deaths.⁵ As of July 27, 2020, there were more than 4.2 million cases in the United States (US), with 146,546 related deaths.⁶

The large-scale social impact of COVID-19 has not been seen since the influenza pandemic of 1918 when non pharmaceutical interventions – banning large public gatherings, school closures, and voluntary quarantine of diseased households – were most notably implemented on a large scale to decrease disease transmission.⁷⁻⁸ The disproportionately high mortality rate due to COVID-19 in Spain and Italy is partly attributed to those countries' healthcare systems becoming quickly overwhelmed by the volume of critical patients. Specifically, these countries experienced severe shortages of intensive care unit beds and ventilators.⁹⁻¹³ The impact of the virus was projected to also overwhelm the US healthcare system, which resulted in widespread implementation of shelter in-place (SIP) restrictions.¹⁴ As early as March 19, 2020, state governments within the US began issuing SIP directives with the goal to "flatten the curve," a term used by the Centers for Disease Control and Prevention (CDC) referring to strategies to slow the rate of disease progression to avoid overwhelming the healthcare system.¹⁵⁻¹⁶

Since the implementation of SIP directives, there have been reports of a significant drop in emergency department (ED) volumes by 40-50%.¹⁷ News media have reported alarming reductions in ED visits related to acute coronary syndrome and cerebral vascular accidents.¹⁷⁻²⁰ Recent studies have corroborated these reports from the media regarding reductions in non-COVID-19 related ED visits.²¹⁻²⁵ Similar findings in Europe and China have also been reported, with the hypothesis

that fear of coming to the hospital may be preventing patients from seeking care, especially those experiencing less severe symptoms.²⁶⁻²⁹ A recent poll from the American College of Emergency Physicians (ACEP) aligns with these suspicions, reporting that nearly a third of American adults have deferred medical care to avoid contracting COVID-19.³⁰ A high proportion of those polled (73%) were concerned about burdening the healthcare system or not receiving adequate care during pandemic conditions.³¹ This may be contributing to “excess deaths without COVID-19,” which the CDC defines as the rise in non-COVID-19 related deaths beyond what would be expected.³² In fact, a recent, single-center US study showed that 0% of stroke patients who arrived to the ED following SIP orders were within the window for tissue plasminogen activator, which is much lower than the national average of 3.71%.^{33,34} Consequently, ACEP is urging providers to reach out to the public to avoid further delays in care.³⁵

To date, there is limited literature assessing the impact of the current COVID-19 pandemic on ED volumes across various encounter types in the US. An accurate assessment of the collateral effects beyond COVID-19 infection is crucial to guiding current and future public health management. We sought to determine whether there was a

significant change in overall volume and proportion of various types of encounters in the ED since COVID-19 containment measures began. This study was an epidemiological analysis using retrospective billing data across 141 EDs comparing numbers before and after the first SIP orders in the US on March 16, 2020.³⁶ We subdivided ED encounters into four categories (non-emergent; emergent-primary care treatable; emergent-preventable; and emergent). Our analysis also included a separate categorization of mental health, alcohol, substance abuse, and acute injury related encounters, in hopes of shedding light on possible behavior-driven emergencies during pandemic circumstances.

METHODS

Study Design and Data Source

This study was approved by the Arrowhead Regional Medical Center Institutional Review Board. Using a retrospective, observational, cross-sectional design, we analyzed ED log and billing data associated with a physician services billing company. Select demographic information provided by hospital medical record data was used to supplement the ED log data, in addition to coded billing data on primary diagnoses and procedures. Each patient billing record could hold up to four diagnosis

Table 1. Emergency department encounter distribution before and after shelter-in-place orders by patient characteristics.

	Pre-SIP encounters (n)	Pre-SIP encounters (%)	Post-SIP encounters (n)	Post-SIP encounters (%)
Gender				
Female	14,091,085	54.4	172,307	50.8
Male	11,793,299	45.6	166,747	49.9
Disposition				
Admit	4,455,299	17.2	68,775	20.3
Discharge	20,629,288	79.7	259,090	76.4
Transfer	799,797	3.1	11,189	3.3
ESI Level*				
1	159,801	0.8	2,822	1.2
2	2,697,452	14.0	38,238	16.0
3	10,164,404	52.7	129,558	54.2
4	5,614,369	29.1	60,251	25.2
5	658,951	3.4	8,131	3.4
Provider type				
Physician	18,639,401	72.0	250,972	74.0
Advanced practice provider	7,227,121	27.9	87,865	25.9
Age Group				
Age < 1	485,097	1.9	3,291	1.0
1 ≤ Age < 18	3,697,234	14.3	25,103	7.4
18 ≤ Age < 35	5,793,875	22.4	77,276	22.8
35 ≤ Age < 65	6,357,256	24.5	89,196	26.3
Age > 65	9,548,938	36.9	144,113	42.5
Total	25,884,384	98.7	339,054	1.3

*ESI level is coded from 1 to 5, where 1 represents most urgent and 5 represents least urgent. Note: Within each characteristic, total percentages may not sum up to 100 due to null values. All differences in pre- and post-SIP categories significant at p<.001 due to high sample size. *SIP*, shelter in place; *ESI*, Emergency Severity Index.

Table 2. Encounter distribution by hospital characteristics.

	Pre-SIP encounters (n)	Pre-SIP encounters (%)	Post-SIP encounters (n)	Post-SIP encounters (%)
CMS region - regional office				
Region 3 - Philadelphia	709,649	2.7	5,866	1.7
Region 4 - Atlanta	425,961	1.7	2,772	0.8
Region 5 - Chicago	2,590,841	10.0	41,731	12.3
Region 6 - Dallas	1,577	0.0	396	0.1
Region 7 - Kansas City	705,385	2.7	4,459	1.3
Region 9 - San Francisco	19,874,290	76.8	263,555	77.7
Region 10- Seattle	1,576,681	6.1	20,275	6.0
AHA teaching status				
Major (2)	556,472	2.2	6,078	1.9
Minor (31)	12,714,363	49.1	170,158	50.2
Non-teaching (51)	4,900,455	18.9	68,991	20.4
AHA location				
Rural (4)	281,445	1.1	4,452	1.3
Urban (88)	17,889,845	69.1	240,775	71.0
Ownership				
Non-profit (42)	8,777,429	33.9	118,962	35.1
For-profit (12)	2,247,155	8.7	30,213	8.9
Religious (26)	4,044,370	15.6	53,300	15.7
Hospital district (6)	1,277,315	4.9	18,655	5.5
County (6)	1,825,021	7.1	24,097	7.1
Total (141)	25,884,384	98.7	339,054	1.3

*Within each characteristic, total percentages may not sum up to 100 due to null values. All differences in pre- and post-SIP categories significant at $p < .001$ due to high sample size. SIP, shelter in place; AHA, American Hospital Association.

codes and four procedure codes. Charges encompassed the physician services billing portion of the patient ED encounter, not the hospital billing charges. Dates where SIP orders were instituted make up the pre- and post- SIP periods (see Appendix A).¹⁵ For the purposes of this study, pre- and post- SIP periods were determined by state-specific dates in the state in which the hospital was located.

The study data set consisted of billing data from January 1, 2017–April 20, 2020, which encompassed 26,223,438 encounters across 141 EDs in 16 states within the US. Hospitals represented seven of the 10 Centers for Medicare and Medicaid Services (CMS) regions. Because the study data set is at the encounter level, patients could be represented multiple times within the data set if they returned to the ED for care. Patient characteristics, such as gender, age, hospital disposition, type of provider seen during encounter (physician or advanced practice provider), and Emergency Severity Index (ESI) level for the encounter are presented in Table 1. The ESI is a five-level ED triage algorithm that provides clinical stratification on the basis of acuity and resource needs, with level one being the most urgent and level five the least urgent.

Table 2 shows hospital characteristics of the 141 EDs included in the analysis. Hospital characteristics, including state, ownership, urban/rural, and teaching status, were taken from the 2018 American Hospital Association Annual Survey. Hospital characteristics were null





if survey data was not submitted. Hospital ownership typology was standardized from 14 to nine categories for ease of computations (see Appendix B). Hospitals were allowed to self-select the subcategory type of organization (eg, non-federal government; non-government, not-for-profit; investor-owned, for-profit; federal government) that best described their hospital's policies and operations.

Categorization of emergent and non-emergent ED encounters was done using the New York University (NYU) ED visit algorithm (EDA).³⁷ ³⁹ Per the NYU EDA methodology, we used the diagnosis weights to calculate the number of emergent, emergent-preventable, emergent-primary care treatable, and non-emergent encounters per day per site, in addition to the "alcohol," "drug," "injury," "psychiatric," and "unclassified" diagnostic categories.

The NYU EDA sets specific criteria for each category of ED encounter regarding how emergent the encounter is. **Emergent** care represents care for an acute condition where ED care was required. **Emergent-preventable** care represents care where ED care was required for an acute exacerbation but could have been treated or prevented with ready access to primary care. **Emergent-primary care treatable** is care that should be administered within 12 hours of presentation, but care could have been safely and effectively delivered within a primary care setting. **Non-emergent** care represents an encounter where care was not needed for at least 12 hours. For the NYU EDA diagnostic categories, **Alcohol** represents care for alcohol intoxication-related care. **Substance Abuse** represents care for non-alcohol substance use (eg, opioid, cannabis, sedatives) intoxication or complications. **Injury** represents care for trauma, such as accidents and lacerations. **Mental Health** represents care for various psychiatric disorders (eg, schizophrenia, bipolar, major depressive, and intentional self-harm). **Unclassified** represents care for diagnoses that could not otherwise be categorized per above.

We used hospital discharge dispositions from billing data to ascertain admission status. ED encounters with admit or transfer discharge disposition were counted as a hospital admission. Hospital admission was limited to patients who presented through the ED and did not include directly admitted patients.

Table 3. Regression results.

Dependent variable	% Change compared to pre-SIP	Standard error (SE)	95% confidence interval (CI)
All encounters	-39.6	0.006	-40.8, -38.5
Admission encounters	-37.4	0.005	-38.4, -36.5
Emergent	-35.8	0.005	-36.9, -34.6
Emergent-preventable	-43.0	0.005	-43.9, -42.0
Emergent-primary care treatable	-47.5	0.003	-48.1, -46.9
Non-emergent encounters	-52.1	0.004	-52.8, -51.4
Alcohol	-27.5	0.017	-30.4, -24.6
Substance abuse	-9.3	0.020	-13.2, -5.4
Injury	-56.1	0.004	-56.9, -55.2
Psychiatric	-30.2	0.011	-32.3, -28.1
Unclassified	-31.4	0.005	-32.4, -30.5

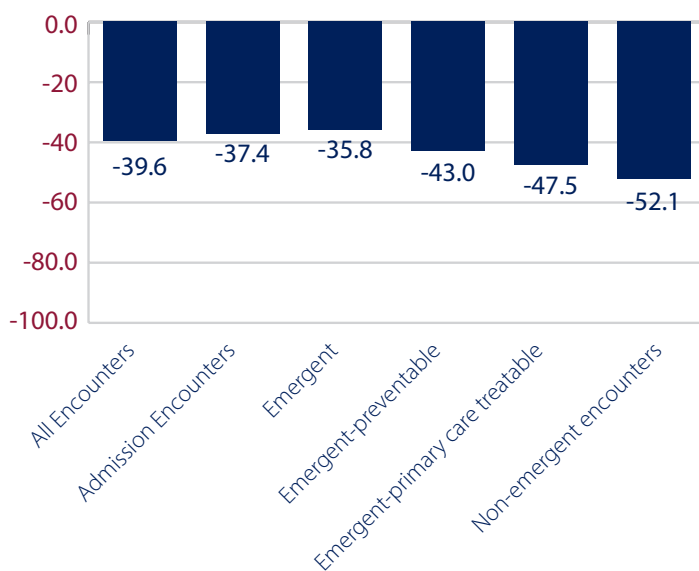


Figure 1. Percent change from pre-shelter in place.

Data Analysis

Descriptive statistics of patient and hospital characteristics are presented in Table 1 and Table 2, respectively. Percentages represent the proportion of ED encounters that fell within each respective pre-SIP or post-SIP category. Using a random effects generalized least squares (GLS) modeling approach, we ran regression analyses using Stata, version 16.1 (StataCorp, College Station, TX). A GLS approach was used to control for correlations in utilization patterns within hospitals and across time, ie, seasonality. In addition, to correct for known utilization patterns in ED encounters, we averaged encounters by site per month and per day of week to create an “expected” number of encounters. The dependent variable was then calculated as percent variance from the expected encounter volume per site, calculated as $[(\text{Observed} - \text{Expected}) / \text{Expected}]$. The GLS regression included the intercept and coefficient for SIP. In the GLS results, we interpreted positive coefficients as the percent increase compared to pre-SIP expected levels, whereas we interpreted negative coefficients as the percent decrease compared to pre-SIP expected levels (Table 3).

RESULTS

Characteristics of Study Subjects

The data shows that there was a shift in the types of patients who used the ED in the pre- and post-SIP periods. Women and patients in the 35-64 and 65+ age groups made up the majority of patient encounters overall. The percentage of pediatric encounters (birth-18 years old) decreased from 16.2% to 8.4% in the post-SIP period. The distribution of patients across ESI levels demonstrated a bell-shaped distribution both pre- and post-SIP periods, where the majority of cases had ESI levels between 2-4. However, ED encounters with ESI levels 1-3 were proportionally higher in the post-SIP period. There was an increase in the proportion of patients who had an admit or transfer disposition

following an initial ED encounter in the post-SIP period, 23.6%, vs 20.3% in the pre-SIP period.

Of the seven CMS regions represented in our study data, the largest proportion of ED encounters came from Region 9 (San Francisco) with 76.8% of total patient encounters for the study period. The majority of patient encounters occurred in hospitals that were minor teaching (49.1%) or non-teaching (19.0%) hospitals in urban locations. Hospitals that were non-profit, either religious-affiliated (15.6%) or other non-profit (33.9%), represented the plurality of patient encounters with the remaining encounters spread relatively evenly across county (7.1%), for-profit (8.7%), and hospital district (4.9%) hospitals. The remaining 29.8% of patient encounters occurred in hospitals that did not report hospital organization type.

ED Encounters and Shelter-in-Place

There was a significant reduction in the number of ED encounters in the post-SIP period. Overall, there was a 39.6% decrease (95% confidence interval (CI). -40.8%, -38.5%) in all ED encounters compared to what would have been expected in the study period. The greatest decrease was seen in the nonemergent encounters (-52.1%), followed by emergent-primary care treatable encounters (-47.5%), emergent-preventable encounters (-43.0%), and then emergent encounters (-35.8%) (Table 3, Figure 1). Hospital admissions saw an overall decrease of 37.4% (95% CI, -38.4%, -36.5%) compared to pre-SIP period. The group of diagnoses that saw the biggest decrease in the post-SIP period was injury with a 56.1% decrease compared to the pre-SIP period (Figure 2). Encounters for substance abuse and alcohol-related treatment saw the smallest reduction, at 9.3% and 27.5%, respectively (Figure 2).

DISCUSSION

Our analysis demonstrates that, after SIP orders were implemented, there was a 39.6% reduction in overall ED utilization. There are several,

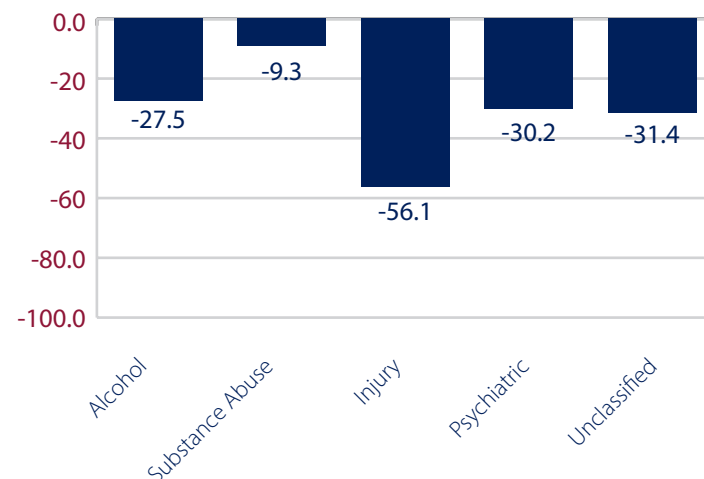


Figure 2. Percent change from pre-shelter in place.



well-publicized theories as to why such a pronounced drop in volume occurred. One reason might be a true reduction in disease burden, especially a decline in traumatic injuries, due to the SIP order. However, other factors certainly contributed. An April 2020 ACEP poll suggested that public fear of potentially contracting COVID-19 from a hospital visit deterred patients from visiting EDs for conditions that they would have sought ED treatment under non-pandemic circumstances.³⁰ Additionally, the public health campaign to discourage “overburdening the healthcare system” may have also contributed to the overall decrease in the frequency of ED visits.³¹

The proportion of patients admitted or transferred from the ED was higher post-SIP (23.6%) compared to pre-SIP (20.3%). Additionally, there was an increase in the proportion of patients with higher acuity

ESI levels presenting to the ED post-SIP. The proportion of ESI levels 1, 2, and 3 increased with respect to ESI levels 4 and 5 post-SIP. This would suggest that the patients presenting to the ED post-SIP generally had self-selected for more serious conditions as compared to pre-SIP, and more of the “missing” visits were associated with lower acuity complaints.

There were also differences in regard to the age of patients presenting to the ED before and after the SIP. The proportion of pediatric patients (birth–18 years old) presenting to the ED declined from 16.2% pre-SIP to 8.4% post-SIP. Conversely, the proportion of older patients (>35 years old) presenting to the ED increased from 61.5 % pre-SIP to 68.8% post-SIP. It would be difficult to determine exactly why such trends were noted. One possibility is that a parent’s weighing of the risk exposure to COVID-19 in the ED vs the benefit of being evaluated, as it relates to the decision to bring their child to the ED, is different than that of an independent adult deciding on their own care. Also, despite recent literature suggesting a potential rise in non-accidental trauma due to increased stressors at home during the pandemic, non-accidental trauma remains difficult to identify and often is under-reported.⁴⁰ Another possibility is that older patients tend to present more often with higher acuity medical conditions, who may be less likely to forego ED visits.^{41–42}

Our study found that all categories of ED encounters set forth by the NYU EDA experienced a significant reduction post-SIP compared to pre-SIP. The reduction seen in the most emergent group (emergent-ED care needed-not preventable) was smaller when compared to all other categories. Furthermore, we found that as the acuity levels increased, there was less of a reduction of ED utilization in the post-SIP period. Despite this, the observation of a 35.8% drop in emergent encounters is a concerning finding. The long-term consequences of this large drop in emergent ED encounters is difficult to quantify, but clearly could have the potential to be far-reaching. This significant



reduction in volume indicates that the most emergent patients are foregoing necessary treatments, raising concerns for an increase in overall morbidity and mortality.³²⁻³⁴

Interestingly, ED encounters related to substance and alcohol abuse experienced the lowest reduction in the post-SIP period. For example, substance abuse-related ED encounters dropped by only 9.3% in the post-SIP period, while alcohol-related encounters dropped by 27.5%. This effect may be explained by the previously well-documented relationship between large-scale disasters and increased drug and alcohol abuse. Studies that looked at previous large-scale disasters such as Hurricane Katrina, the 2004 Southeast Asia tsunami, and the 2001 September 11 attacks, all reported an increase in either drug or alcohol abuse.⁴³⁻⁴⁵ This raises the question as to whether we will see an increase in ED encounters related to drug and alcohol abuse as the COVID-19 pandemic continues to unfold.

Similarly, the 30.2% decline in visits with psychiatric diagnoses was smaller than the decline in emergent (-35.8%) and non-emergent (-52.1%) visits. Several studies suggest that depressive disorders and post-traumatic stress disorder have increased as a result of COVID-19.⁴⁶⁻⁴⁷ Perhaps any decline in baseline psychiatric visits was mitigated by an upward trend in mental health issues provoked by pandemic.

On the contrary, injury-related ED encounters experienced the greatest reduction (-56.1%) between pre- and post-SIP. We suspect this may in part be explained by the fact that injury is heavily dependent on individual behavior, and that behaviors promoted by pandemic measures have made people more cautious and less prone

to experiencing injury. There may have been fewer motor vehicle accidents because people generally drove less due to SIP measures. Similarly, there may have been fewer work-related injuries due to more people working from home.⁴⁸ Traffic and community activity reports in the US show a correlation with a drop of 48% in personal traffic and transit stations compared to baseline.⁴⁹ A recent study in New Hampshire supports these findings, reporting a 57% decrease in trauma admissions and 80% decrease in motor vehicle accidents.⁵⁰ Another possible explanation is that cancellations of high-risk sports may have contributed to a reduction in blunt trauma.⁵¹ Other studies postulated that reductions in orthopedic trauma may also be partly due to social distancing measures limiting social interactions.⁵²⁻⁵³ We suspect that reductions in injury-related ED encounters is likely a multifactorial phenomenon.

While the focus of this and several other recent studies has been on the alarming reduction of emergent cases presenting at hospitals during the post-SIP period, the other side of the coin is a reduction in non-emergent and emergent-primary care treatable encounters that are best treated outside of high-cost hospital EDs. It is likely that a large proportion of patients who would have presented to the ED as non-emergent and emergent-primary care treatable encounters chose to forego care entirely. Another research question is to what extent did those patients choose to receive care in non-acute settings, such as urgent care or primary care clinics.

While the study results have high external validity given the breadth of patient encounter data from 16 different states in the US, wider generalizability to international health systems may be limited by the particular insurance-based/ fee-for-service payment system that is characteristic of the US healthcare system. Furthermore, the study data had a large proportion of encounters from the CMS Region 9, which may impact generalizability to other regions of the US.

There are several follow-up research questions that could be asked from these findings. Future studies could investigate whether inadequate access to primary care offices due to SIP-related closures affected ED utilization. Findings would have far-reaching implications on primary care preparations in anticipation of a possible “second wave” of SIP closures or future pandemic planning. Another interesting topic to explore is whether rates of substance and alcohol abuse, and any complications thereof, will increase as the COVID-19 pandemic unfolds. A future study might explore whether ED utilization was absorbed by telehealth encounters, and to what extent. Future survey studies could explore perceptions of ED care during the post-SIP period and whether there were substantial changes in behaviors, such as engagement in hazardous activities, to reduce exposure to injury and hospitalization. Additionally, the long-term impact of the pandemic on the public’s utilization of the ED for low-acuity visits should be assessed. Lastly, another important topic to explore is whether the delays in care due to not presenting to the ED correlated with an increase in morbidity and/or mortality, not directly related to COVID-19.





CONCLUSION

There was a 39.6% reduction in all ED encounters in the post-SIP period across all ED sites. The largest proportional reduction in ED encounters came from preventable and non-emergent ED encounters that could most likely have been treated at primary care offices. However, the large reduction in emergent ED encounters may potentially have delayed treatment and increased mortality seen outside of the ED. Of the five diagnostic categories in the NYU ED algorithm, injury-related ED encounters had the greatest reduction (-56.1%). This is may be a result of less motor vehicle travel and fewer hazardous work activities that contributed to the prevention of injuries. Substance and alcohol abuse-related encounters had the lowest reduction in the post-SIP period (-9.3% and -27.5%, respectively), describing the relatively unchanging nature of these disorders in needing emergent interventions, or possibly related to increased substance use associated with the pandemic. ■

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MEMBER Accomplishments

David Martin, MD and his team at Ondas de Latinoamérica performed the first transesophageal echocardiogram in the emergency department at Hospital Nacional Dosde Mayo in Peru.

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Kara Toles, MD, presented on racial equity at the National Overdose Prevention Summit, representing CA Bridge.

.....

Dan Imler, MD, received the ACEP Now Rookie Speaker of the Year award.

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Angela Lumba-Brown, MD, published her article "A Review of Implementation Concepts and Strategies Surrounding Traumatic Brain Injury Clinical Care Guidelines" in the Journal of Neurotrauma.

Naomi Marks, MD, FACEP; Neal Aaron, DO, FACEP; David Vinson, MD, FACEP; Scott Yu, MD, FACEP; Jason An, MD, FACEP; Andrew Eads, MD, FACEP; Kamara Graham, MD, FACEP; Sage Wexner, MD, FACEP; Adam Michael Sadowski, DO, FACEP; Katherine Staats, MD, FACEP; Courtney Clamp, MD, FACEP; Keith Wilson, MD, FACEP; Catherine Weaver, MD, FACEP; and Kristen Hornbeak, MD, FACEP are all now Fellows of the American College of Emergency Physicians.

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Alisa Wray, MD, FACEP; Shannon Toohey, MD, FACEP; Warren Wiechmann, MD; and Megan Osborn, MD, FACEP published "Frequency of Social Media and Digital Scholarship Keywords in U.S. Medical Schools' Promotion and Tenure Guidelines" in the *Academic Medicine Journal of the Association of American Medical Colleges*.

Did you get a new job? Get promoted? Get published? Achieve a goal?

Let California ACEP know and we will include it in this new section of Lifeline. Tweet your accomplishment or post it on Instagram and tag @californiaacep or submit your accomplishments at: <https://californiaacep.site-ym.comsurveys/?id=Accomplishments>.

CEMAF DONORS

The California Emergency Medicine Advocacy Fund (CEMAF) has transformed California ACEP's advocacy efforts from primarily legislative to robust efforts in the legislative, regulatory, legal, and through the Emergency Medical Political Action Committee, political arenas. Few, if any, organization of our size can boast of an advocacy program like California ACEP's; a program that has helped block Medi-Cal provider rate cuts, lock in \$500 million for the Maddy EMS Fund over the next 10 years, and fight for ED overcrowding solutions! The efforts could not be sustained without the generous support from the groups listed below, some of whom have donated as much as \$0.25 per chart to ensure that California ACEP can fight on your behalf. **Thank you to our 2019-20 contributors (in alphabetical order):**

- Antelope Valley Emergency Medical Associates
- Culver Emergency Medical Group
- Emergent Medical Associates
- Mills Peninsula Emergency Medical Associates
- Napa Valley Emergency Medical Group
- Pacific Emergency Providers, APC
- Riverside EP
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- Torrance Emergency Physicians
- US Acute Care Solutions
- Vituity

ANNOUNCEMENTS |



SUBMIT A LIFELINE ARTICLE

Looking for a way to share your emergency medicine experience? Want to share a story from your last shift? Or maybe career or life advice? We are looking for member and guest articles, including letters-to-the-editor. Please note that all articles and letters are reviewed and may be edited for grammar and content.

If you would like more information or would like to submit a guest article, email info@californiaacep.org.

UPCOMING LIFELINE TOPICS

Spring

Mental Health

Summer

Medical Education

Fall

Narrative Medicine

CALIFORNIA ACEP BOARD ELECTION

Interested in running for the CalACEP Board of Directors? Know someone whose perspectives and background would be great for the CalACEP Board? Submit a nomination by March 15, 2022:

https://www.surveymonkey.com/r/2022CalACEP_Nomination

The Board of Directors election will be held online from May 15-31, 2022. All eligible voters will be sent a personalized ballot by email on May 15, 2022. The link to the ballot will also be posted on www.californiaacep.org.

CALIFORNIA ACEP SPONSORED & CO-SPONSORED COURSES 2022 Legislative Leadership Conference

April 20, 2022

Sacramento, CA

AdvancED 2022 Annual Conference

September 1, 2022

The Westin San Diego Gaslamp



| CALIFORNIA ACEP UPCOMING MEETINGS & DEADLINES

For more information on upcoming meetings, please e-mail us at info@californiaacep.org; unless otherwise noted, all meetings are held via conference call.

MARCH 2022

3rd at 10am	Government Affairs Subcommittee #1 Conference Call
3rd at 12pm	Government Affairs Subcommittee #2 Conference Call
3rd at 2pm	Government Affairs Subcommittee #3 Conference Call
10th at 10am	Government Affairs Committee (GAC) Conference Call
15th	Board of Directors Nominations Close Online

APRIL 2022

1st	Councillor Interest Form Opens Online
20th at 9am	Legislative Leadership Conference (LLC) Sacramento
21st at 9am	Board of Directors Meeting Sacramento

MAY 2022

1st – 4th	ACEP Leadership and Advocacy Conference Washington, DC
12th at 10am	Government Affairs Committee (GAC) Conference Call
15th – 31st	Board of Directors Election Online
16th at 9am	Reimbursement Committee Conference Call

MARCH 2022

SUN	MON	TUES	WED	THURS	FRI	SAT
		1	2	3	4	5
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13	14	15	16	17	18	19
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APRIL 2022

SUN	MON	TUES	WED	THURS	FRI	SAT
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MAY 2022

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Phone: (707) 644-1761
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Web: www.medicambulance.net

Napa Valley Fire

Gregory Rose, EMS Co-Director
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Phone: (707) 256-4596
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