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Happy New Year!!

Congratulations! If we are reading this editorial, then you survived and hopefully thrived in 2020. It is now 2021, a brand-new year. It is a time to reflect on the past year and plan for a new year. (I am writing this editorial in October 2020.) So much has changed since I have written my last editorial. In case you were wanting a recap of 2020, here are some (not all) of the events: Australian bushfires, the Kansas City Chiefs won the Super Bowl, Harry and Meghan quit the Royal Family, the Boy Scouts filed for bankruptcy, Kobe Bryant and eight others died in a helicopter crash, Covid 19 hit (I would like to take a moment to celebrate the life of Dr. Robert “Ray” Hull, the father of a good friend and fellow dermatologist Dr. Cheryl Hull and the first physician in Arkansas I know who died from Covid), President Donald Trump was impeached and then acquitted by the Senate, “Parasite” swept the Oscars, the Hong Kong protests, Ebola resurfaced in the Congo, Harvey Weinstein was convicted (starting the #metoo movement), the stock market suffered its biggest one-day loss ever on March 9, there were some police-involved killings, the #blacklivesmatter movement, the #policelivesmatter movement, the #all-livesmatter movement, Colorado abolished the death penalty, the Kim Jong Un death rumors, the big #twitter hack, murder hornets arrive, the explosion in Beirut, the west coast wildfires, Ruth Bader Ginsburg dies (RIP RBG, thank you for all you have done), flash floods, numerous hurricanes, numerous wildfires, earthquakes, the whale in the Amazon, the

Oakland Raiders relocated to Las Vegas, the Olympics and many other events have been postponed or cancelled, and the Pope (today as I write this) announces support for civil unions of same-sex couples.

Since I am writing this in October 2020, I do not know who will be President of the U.S. in 2021. I do know that Dr. Chad Rogers is the president of the Arkansas Medical Society, and he is doing a phenomenal job. I am forever indebted to Chad. Dr. Rogers is a skintastic human who, along with my sister-in-law Dr. Jennifer Johnson, and the entire team at UAMS saved both my life and the life of our son who will be turning 20 years old on January 4, 2021. Dr. Rogers is a kind and generous human who epitomizes what is good about the practice of medicine. I am thankful that he is representing and serving as president of our AMS. I would vote for Dr. Rogers again to serve as president.

This year, I am going to try to become more active in our local community, state, and specialty (Dermatology) society. I may never reach the heights of Dr. Rogers as AMS president or my brother in law, Dr. Lee Johnson as Arkansas representative and officer for Envision, but I can try daily in every little way to make the world a little better. I plan to start by being kinder to every person I meet. I love Mother Teresa’s quote to “do small things with great love.”

As physicians, we are granted a special privilege with people. When people become our patients, there is a special and protected bond. They trust us to “first do no harm.” They come to us either to maintain good health or to strive for better health. They come to us in sickness and in health. It is our duty and privilege to partner with them, help them, and respect them. I am going to try better this year to do the best I can to provide even more effective, efficient, empathic, and empowering care to my patients.

2020 has been very difficult for our world and for many people as individuals. Health care has changed forever. As physicians, we need to empower each other. I am going to try to “do small things with great love” to help support fellow physicians. It surprises me how many physicians have stopped practicing medicine or have chosen to stop practicing the discipline of medicine they studied. This has been a trend in recent years; but 2020 really tipped the scales for many physicians. This really has hurt my heart. As physicians, we should be the leaders in medicine. As physicians, we should lead the team and partner with non-physicians to work together to provide the highest level of care. As physicians, we should be integrally involved with the delivery of health care. After all, if there is an issue or complication, we as the physicians are medicolegally responsible for the care that is delivered.

One of my favorite songs that I learned as a child has a line that reads, “Let there be peace on earth and let it begin with me.” During 2020, I found myself praying for peace—peace of mind, peace of soul, peace in our world.

As a child, I also remember my dad saying, “Pray as if it all depends on God but act as if it all depends on you.” Well, it is time to not only pray for peace but to act for peace. My wish for all of us and for our world is for peace—peace of mind, peace of soul, and peace in our world. If you have any suggestions for how I can accomplish this for me personally or for our world, please contact me. Thank you so much if you read this editorial—please hold me accountable to work for peace. In closing, I will paraphrase the Dalai Lama and say, “We cannot have world peace until we have inner peace.” May we all have inner peace. Namaste.

This year, I am going to try to become more active in our local community, state, and specialty (Dermatology) society.

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Help AMS Represent You at the Capitol in 2021

Member Engagement Crucial During the 93rd Arkansas General Assembly

We'll be relying on your presence and your fighting spirit. This has never been as true as it will be during the upcoming Arkansas Legislative Session," said AMS Governmental Affairs Director Scott Smith. "At the very least, we need to hear from you, so we can speak for you."

The Arkansas Legislature will convene on January 11, 2021. From start to finish (as much as permitted during the pandemic), Smith and his team will be at the Capitol advancing in the best way possible the efforts of physicians who work every day to care for patients.

Every legislative session comes with its challenges. As Rep. Steve Magie, MD (Conway) said after a particularly harrowing (but successful) session in 2015, "If you're a surgeon, this is like the worst operation you ever had. It never ends. You put out one fire, and two more pop up. From my perspective, Scott and his staff are invaluable to us at the Capitol."

This year, the challenges seem tenfold. Aside from what has been the normal "hard," there is the extraordinary circumstance of meeting to legislate during an ongoing pandemic.

What does this mean for physicians and the Medical Society?

Smith answered, "The entire process will be impacted. Due to COVID-19, there will be limited access and limited testimony. You hear that every session, but this time it's more serious because they realize every day they're in session has potential for spreading something. I expect discussion and overall in-person presence at the Capitol to be brief this year, which means we'll have to be on our toes and ready to work fast and hard to be heard."

AMS Executive Vice President David Wroten touched on another potentially game-changing difference in the Society's approach this year.

"In previous sessions, we could have a White Coat Alert and fill a committee room up with physicians in their white coats," he said. "Due to COVID-19 risks, that is not going to be possible."

With these circumstances in mind, the Society is asking for member engagement more than ever before. Wroten warned, "The challenges that medicine faces during this particular session are going to require a concerted effort by physicians across the state and at the grassroots level.

"If physicians want to be successful at the Capitol, at protecting the health of Arkansans, then they're going to have to step up. That means getting to know their legislators, helping those legislators be successful, serving as a resource for them on health-related issues, and responding immediately when the Medical Society puts out a call-to-action or a legislative alert. If you've not already done this, we ask you to get involved now with a phone call to your legislator."

Smith added, "If you've given that legislator your cell number, ask them how they prefer to be contacted and then keep in touch with them. We will be sharing all the contact information that we can."

To the Work

The Society expects to fight many of the same battles again this year. "The same groups will be back – particularly, certain APRNs, CRNAs, and others who believe that it's easier to pass legislation than to go to medical school," said Smith.

The argument from these groups, according to Smith and Wroten, is always "access to care," yet they (Smith and Wroten) see no evidence that the changes that these groups want to make will do anything to improve access to care. "The states that have allowed independent practice cannot show any meaningful change in

where APRNs are practicing now," Smith elaborated. "In other words, giving them increased scope of practice isn't going to cause them to move further out into rural areas."

In addition to scope-of-practice issues, the Society expects to be looking again at issues such as telemedicine, insurance, surprise billing, and prior authorization.

As much as possible, AMS will work closely with medically informed legislators to help educate the Legislature at large on medical issues that arise. "Legislators who are also physicians or are related to a physician are always a blessing to us in our work because they understand the practice of medicine," said Smith, referring to, among others who have served past and present, Senators Cecile Bledsoe (Rogers), Missy Irvin (Mountain View), and Jonathan Dismang (Beebe); Representatives Dr. Steven Magie (Conway), Lee Johnson, MD (Greenwood), Denise Garner (Fayetteville), Joe Cloud, MD (Russellville), Deborah Ferguson, DDS (West Memphis), and Rep. Les Warren (Hot Springs).

Smith is hoping that some of these key members end up on Senate and House public health committees, as some have in the past. "Their presence itself is such an encouragement to us," he said. "The fact that they are knowledgeable when it comes to medical-related issues is of terrific value to the other legislators. And hopefully, because of what we've all been through now in the last several months, 'public health' will mean much more to people now."

Wroten added, "Public health issues will take a higher profile in this session than in past sessions because of COVID-19, particularly because of the executive orders that the governor has done and the continuation of those executive orders. We believe there will be efforts to overturn some of the governor's current orders and to restrict his ability to issue new or con-

tinuing executive orders. The Medical Society will support public health measures that are designed to curb the pandemic. And those issues should not become part of the political football.”

As in past sessions, Smith and his team will again rely heavily on help from AMS counsel, the firm Mitchell, Blackstock, Ivers, & Sneddon, PLLC. “Mike Mitchell and his firm have done a terrific job working with AMS for more than 40 years at the Legislature, and we are grateful for their expertise once again,” said Smith.

Doctor of the Day

Particularly this year, life’s daily challenges will not suddenly stop for the convening of the Arkansas Legislature. Lawmakers from across the state, while dedicated to the tasks at hand, will contend with the daily hassles we all face – including the threat of COVID-19 or other illness and injury. Fortunately, they can enter the Capitol with the assurance that, during the legislative session, there is bound to be a doctor somewhere in the House ... or the Senate.

The Arkansas Medical Society’s “Doctor of the Day” program, formally established in 1979, ensures that a physician is almost always present to provide care and consultation. Wroten credits Dr. Elvin Shuffield with inspiring the idea. A long-time leader of the Medical Society, Dr. Shuffield spent years serving as a volunteer physician to the General Assembly. “The Infirmary, located on the third floor of our Capitol, was dedicated in memory of Dr. Shuffield,” said Wroten. “For each session for more than four decades, 50 or more AMS physician volunteers have donated their time and expertise to provide medical care to those at our Capitol every day.”

The service has proved valuable to staff members and the public also and for a variety of reasons. “We see them all,” said AMS Special Projects Coordinator Laura Hawkins. “We have seen everything from a sick child from a tour group to broken bones and other serious medical issues.”

This year, doctors may need to expect a new scenario. “In this unprecedented time, the program may be a little different than in the past,” warned Hawkins. “Previously, the Doctor of the Day attended legislative committee meetings and had floor privileges in the House and Senate, but those activities may be restricted for the 2021 session.”



ANDREW MONFEE, MD

Andrew Monfee, MD, practices family medicine in Russellville and has enjoyed serving as Doctor of the Day. His past service enhanced his knowledge of the legislative process and gave him the chance to get acquainted with the legislators. “I have been able to exchange ideas and viewpoints on health care issues that have come before our legislative body,” said Dr. Monfee.

In relation to COVID-19 concerns, he assured, “While serving during the pandemic, AMS physicians will use standard precautions and PPE that we have had in place in our offices and hospitals since the beginning of this health care crisis. I look forward to serving once again in the 2021 legislative session.”



SHANNON SWIFT, MD, FACP, FAAP

Shannon Swift, MD, FACP, FAAP has served as Doctor of the Day during the last three sessions. She has enjoyed seeing legislators – and the AMS team – in action. “I have learned more about how bills are developed and passed,” said Dr. Swift. “I am most impressed with how hard our AMS team works to better medicine in Arkansas, whether that is bringing new legislation to improve care or fighting legislation that would potentially decrease the quality of care for Arkansans.

“In the past, I have sat in many a crowded meeting room as committees discuss various bills with those for and [against] giving their sides. I see this part of the process being very different this year due to COVID-19. We will need to use our voices to carry our message. We will need all doctors in Arkansas to be ready to contact their legislators regarding the bills that are important to our ability to provide the best care.”

To learn more about what you can do, how to reach your local representatives, or for obtaining information on upcoming issues, call Scott Smith at AMS (501- 224-8967).

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Operation Compassion: COVID-19 Pandemic & Homelessness in Arkansas

Abstract

Three thousand Arkansas residents face homelessness on any given day. As the COVID-19 pandemic began to unravel, a third of Arkansas homeless shelters closed, placing this vulnerable population in a dire situation. In this article, we describe Arkansas Department of Health's concerted efforts in COVID-19 testing, case investigation, contact tracing, and mitigation strategies that were put in place to address the needs of homeless populations in Arkansas through the Operation Compassion program. Additionally, we describe how the quarantine and isolation needs of this population were met and how alliances were formed with community partners to address the non-COVID needs of homeless shelters in Arkansas.

Introduction

Even during the best of the times, the needs of marginalized populations tend to be overlooked. The COVID-19 (SARS-CoV-2) pandemic disproportionately impacts vulnerable populations such as those experiencing homelessness or incarceration and those struggling with substance-use disorders. In the U.S., 1.5 million people experience homelessness in a year. They are not only at a higher risk of contracting communicable diseases, but also typically suffer more severe symptoms from their current chronic medical conditions.¹⁻³ Indeed, living in crowded shelters or on the streets for extended periods of time increases the chance of being exposed to communicable diseases, namely SARS-CoV-2.³ The lack of stable storage of medications, routine health care, and chronic stress can worsen ongoing conditions as well.¹

Since the beginning of the pandemic, several clusters were reported in homeless shelters across the nation.^{4,5} Multiple factors contributed to these clusters including the mobile nature



OPERATION COMPASSION TEAM MEMBERS JARROD RITCHIE AND AMANDA WHITE WAITING AT A HOMELESS SHELTER BEFORE COVID-19 TESTING.

of the population, uses of multiple homeless shelters, and crowding and use of congregate sleeping arrangements. These factors, combined with enforcing public health efforts of physical distancing and face coverings, presented unique challenges.⁶ In this article, we describe ADH's efforts in addressing the needs of homeless populations in the state as it relates to the COVID-19 pandemic.

Context

Arkansas, home to 3.02 million Americans, based on 2019 U.S. Census estimates, has 3,000 individuals who face homelessness on any given day. As the ADH saw cases rising in our nursing homes, correctional facilities, and other congregate settings, we developed an approach called Operation Compassion to address the needs of the homeless population in Arkansas – especially COVID-19 testing, case investigation, and contact tracing. We also want-

ed to serve this population that otherwise often gets overlooked during a crisis.

The ADH disseminated guidance to homeless shelters and services as the pandemic began to unravel in the state back in March of 2020, essentially to implement the Centers for Disease Control and Prevention (CDC) recommended infection control practices. These included applying social distancing measures, ensuring residents' heads are at least six feet apart while sleeping, and promoting use of cloth face coverings among all residents. An ADH team visited several of the homeless shelters to provide on-site guidance and measures to prevent an outbreak.

ADH developed the Operation Compassion team comprising of a medical director, emergency medical services providers, and support staff to plan and implement a COVID-19 polymerase chain reaction (PCR) testing, case

investigation, contact tracing, and mitigation strategies for homeless shelters. The Operation Compassion team reached out to homeless shelter directors and partners across the state, especially the Arkansas Homeless Coalition, to schedule testing dates and identify the needs of the shelter and its clients in advance of the visit. A two-pronged approach for testing was developed and implemented as the pandemic began to unfold. The approach consists of proactive, scheduled COVID-19 testing of the homeless shelters and a reactive approach of testing shelter residents and its staff if there was a suspected cluster or an outbreak. Given the evidence for presymptomatic and asymptomatic transmission of SARS-CoV-2, testing of all residents and staff members, regardless of symptoms, was performed.⁶ The testing was started in homeless shelters in Central Arkansas Counties (Pulaski, Faulkner, and Saline) and was then expanded to other regions of the state. The Operation Compassion team worked with ADH's case investigation team to follow up on those who tested positive and offer them mitigation strategies. The team also assisted with contact tracing, which was a challenge given the unique challenges faced by this population. Because of this, we forged alliances with shelter directors who assisted in some of the contact tracing processes. We used a snowball method of tracing individuals, as many of these individuals do not have a phone and tend to move to various places on different days of the week – or even within a day – to seek food and shelter. Also, we had a weekly call with homeless shelters across the state that was facilitated by the Arkansas Department of Human Services and the U.S. Housing and Urban Development offices in Little Rock, Arkansas. This helped address several of the questions and concerns from the shelter directors.



DR. BALU, MEDICAL DIRECTOR AND TEAM LEADER FOR OPERATION COMPASSION.



OPERATION COMPASSION TEAM MEMBER BEFORE COVID-19 TESTING.

The team worked with different types of shelters (Family, Women and Children, LGBTQ, substance use recovery centers, street ministry, shower ministry, Catholic health initiatives, etc.). The team also partnered with UAMS College of Public Health faculty and graduate students to assess needs of these homeless shelters through a survey of the shelter directors and assisted them with personal protective equipment (PPE) and non-PPE needs. The team also worked with local non-profit organizations (Arkansas Chapter of American Association of Physicians of Indian Origin, Friends of India) to offer food and masks to the shelters in need. Plans are in place to offer the seasonal flu vaccine and potentially the COVID-19 vaccine to homeless populations in Arkansas through Operation Compassion. Operation Compassion continues to be a key public health outreach strategy in COVID-19 mitigation by ADH that strives towards its mission to protect and improve the health of all Arkansans.

Results

Since the beginning of the pandemic, a third of the 96 Arkansas homeless shelters closed due to lack of volunteers, supplies, funding, or staff (who were out due to high-risk conditions themselves). Operation Compassion staff reached out to those shelters that were open and operational to provide them with guidance on COVID-19 precautions and worked with shelter directors to schedule COVID-19

test dates. As of October 29, 2020, a total of 1,053 homeless individuals have been tested through the Operation Compassion program, with a 3.5% positivity rate. Among those who tested positive, 46% were females and 54% were males. Sixty-eight percent were White, 24% African American, and 8% were from other racial and ethnic groups. Among those who tested positive, 11% were under 18 years of age; 76% were between 18 and 64; and 13% were 65 years of age or older. Those who tested positive were offered placement and transportation to a Quarantine and Isolation Facility (QF1) operated by the ADH to meet their isolation and quarantine requirements. QF1 is a 29-bed facility that offers eligible individuals and families a place to isolate or quarantine if they test positive for COVID-19 or are in close contact with someone who tests positive. The facility offers individual rooms, along with meals and snacks during their stay, at no cost to them.

Discussion

The relatively low positivity rate among Arkansas homeless shelters (3.5%) compared to other congregate settings such as nursing homes could be attributed to Operation Compassion; this proactive outreach provided guidance, testing, case investigation, contact tracing, and early isolation and quarantine measures among the homeless in Arkansas.⁷

As the pandemic looms, the plight of Arkansas homeless residents continues, and



OPERATION COMPASSION TEAM MEMBER BEFORE COVID-19 TESTING.

while the CDC's moratorium on evictions till the end of the year may temporarily help those at risk of homelessness, this may not be sufficient to avert current and impending crises.⁸ The Arkansas Department of Human Services received an Emergency Solutions Grant, as part of the CARES Act, to be utilized for homelessness prevention, rapid rehousing, street outreach, and emergency shelter such as hotel and motel vouchers or sub-shelters to communities for housing individuals who do not have a place to self-isolate or quarantine.^{9,10} Homelessness prevention, through residential rental-assistance programs, is as critical at this juncture than in any time in our recent past, as physicians and public health professionals work diligently to contain the spread of COVID-19 and protect their patients.⁹

ADH, through its Operation Compassion program, is working with its partners to mit-

igate the impact of the COVID-19 pandemic among the Arkansas homeless population. It is also a moral obligation of physicians to be social champions of the communities in which they reside and serve, not just to their patients but also in protecting and promoting the health and welfare of the homeless population in their communities.

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Medication-Assisted Treatment in Arkansas

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Arkansas Act 964 of 2019 allows for access to medications for Arkansas Medicaid eligible beneficiaries diagnosed with opioid use disorder (OUD). The act requires all health insurers and Arkansas Medicaid to remove prior authorizations to FDA-approved medications that support recovery. The act states there shall be no other requirement other than a valid prescription and compliance with the medication-assisted treatment (MAT) guidelines issued by the Substance Abuse and Mental Health Services Administration (SAMHSA).

SAMHSA defines MAT as the use of medications, in combination with counseling and behavioral therapies, for the treatment of substance use disorders.¹ Not only is this combination of therapies effective in the treatment, they can help sustain recovery. Primarily, MAT is used to treat opioid addiction which includes pain medications containing opiates. The Centers for Disease Control and Prevention defines opioid addiction, or OUD, when an attempt to control the use is unsuccessful or when use results in social problems and

failure to fulfill obligations at work, school and home.² This disorder usually occurs after the person has developed opioid tolerance and dependence. According to SAMHSA, these medications (buprenorphine, methadone and naltrexone) normalize the body without the negative effects of the substance. They operate to normalize brain chemistry and block the euphoric effects of opioids while relieving the physiological cravings.

The latest data from the National Institute on Drug Abuse shows that in 2018, Arkansas deaths related to opioids grew to over 46,000, which is nearly 70% of all overdose deaths, and those deaths involving synthetic opioids (other than methadone) continued to rise with more than 28,000 overdose deaths.³ The Arkansas Department of Human Services and the Division of Medicaid Services adopted the state plan amendment to meet the requirements of Act 964 and to help in the fight of opioid addiction.

Effective September 1, 2020, many of the barriers that once prevented beneficiaries from seeking treatment and providers

providing treatment have been removed. Arkansas Medicaid began supporting beneficiaries with OUD when provided by an X-DEA waived provider. Physicians, nurse practitioners and physician assistants are eligible to receive an X-DEA identification number as long as they have a current Arkansas medical license and a current DEA identification number. To bill for these services with Medicaid, they must also be an Arkansas Medicaid provider and update their MAT designation with Medicaid Provider Enrollment. These designated MAT providers can prescribe medications required for the treatment of OUD for Arkansas Medicaid beneficiaries.

MAT training courses for providers to receive the X-DEA identification number are provided through the Providers Clinical Support System website - www.pcassnow.org. The one-time course is free of charge and will provide the necessary MAT waiver training, as well as explain how to submit the notification of intent and certificates upon completion to SAMHSA.

The Arkansas Medicaid MAT program will assist those with OUD

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by eliminating barriers and treating the “whole person.” The updates to the Medicaid program ensure comprehensive services are being offered. Some of the updates when providing MAT services include:

- Primary Care Physician referral is not required as long as the services are rendered by an X-DEA waived provider
- The Medicaid service limit of 12 physician visits per year is waived
- The \$500 lab/x-ray limit is waived
- Related medications will not be subject to a co-pay and will not count towards the beneficiaries' prescription limit

The FDA approved prescriptions are now listed on the preferred drug list. This program applies only to prescribers of FDA-approved drugs for the treatment of OUD and will not be reimbursed for the practice of pain management. Please refer to the Medicaid physician manual for more details regarding the billing of services.

By providing MAT for opioid use disorder in a primary care setting, it allows the primary care provider

a better opportunity to help the beneficiary manage their overall healthcare. Referring to a specialist and depending on feedback from the specialist is eliminated. It also allows the patient more comfort and privacy as to the reason for their clinic visit than if they received treatment from another provider in a substance abuse treatment facility.

The overall goal of MAT is recovery. Providers who are interested in becoming a MAT provider or need additional information about integrating services into their offices, please contact your AFMC provider relations outreach specialist by visiting afmc.org/providerrelations or emailing providerrelations@afmc.org. ▲

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Pediatric Sepsis: Prompt and Effective Management Strategies

Abstract

Sepsis continues to be a leading cause of mortality in children and is challenging to diagnose early, even for the most experienced physicians. It is important to bring a critical eye and an anticipatory attitude to the assessment of a pediatric patient. Bacteria remain the primary culprits in triggering the cascade of events leading to severe sepsis and shock. Once identified, prompt action should be taken to deliver rapid therapy for shock, including 1) aggressive fluid resuscitation, 2) frequent reassessment targeting restoration of adequate perfusion, and 3) broad-spectrum antibiotics.

Introduction

Sepsis is an overwhelming and life-threatening response to an infection; it can cause dysfunction of multiple organ systems. In pediatrics, diagnosing sepsis is especially challenging, as children can compensate for severe illness for prolonged periods, painting a relatively reassuring picture: subtle fluctuations in vital signs, normotension, and seemingly normal mentation. Because of this compensation, children can look “well,” yet be septic. It is not until the child reaches the most severe end of the spectrum that the patient decompensates, sometimes to a degree that is irrecoverable. Due to the differences in children as compared to adults, it is essential to appreciate these characteristics and treat sepsis early in pediatric patients.

Epidemiology

Sepsis is a leading cause of morbidity and mortality. As of 2015, the global prevalence of pediatric severe sepsis was 8.2%.¹ Sepsis can occur in all ages but is more common in toddlers with a median age of three years old.¹ The respiratory tract is the primary site of infection that most commonly leads to sepsis, followed by the bloodstream.^{1,2} In children admitted to the pediatric intensive care unit (PICU), the mortality

rate for sepsis is 5.6% and as high as 17-24% for pediatric septic shock.^{1,3}

Diagnosis

Sepsis is currently defined in pediatric patients by the presence of systemic inflammatory response syndrome (SIRS) and a known or possible infection. SIRS has numerous etiologies, but overall, it describes the complex pathophysiological response to an insult. To meet SIRS criteria, you must have abnormalities in two or more of the following: temperature, white blood count, respiratory rate, and heart rate (one of which must be abnormal temperature or leukocyte count).⁴ Severe sepsis is defined as sepsis with signs and symptoms of organ hypoperfusion or dysfunction. Lastly, septic shock is sepsis with cardiovascular organ dysfunction (such as poor peripheral pulses, alteration in central-peripheral temperature gradient, altered mental status, abnormal capillary refill, mottled or cool extremities, diminished urine output).^{4,5} Hypotension is not needed to meet the criteria of septic shock (as it is indicative of late, decompensated shock); however, it can confirm the diagnosis in the setting of a suspected or proven infection.⁴

Etiology

Sepsis, in all of its forms, necessitates a known or suspected infectious source. That source of sepsis can be bacterial, fungal, or viral. The respiratory tract is most commonly identified as the originating site of sepsis and historically has had the highest mortality rates.¹ The second most common is the bloodstream. Rates of sepsis from *Streptococcus pneumoniae* and *Neisseria meningitidis* are decreasing due to vaccinations, while methicillin-resistant *Staphylococcus aureus* (MRSA) sepsis rates are rising.² Many known risk factors increase the likelihood of developing sepsis and septic shock (Table 1).

Pathophysiology

Sepsis involves a complex interaction between the host's immune system and the pathogen. When an infection develops within the body, there is a normal physiological response, mediated by the release of chemokines, cytokines, and interleukins from neutrophils and macrophages. This can lead to local vasodilation, increased endothelial permeability, and activation of coagulation pathways. In sepsis, this normally localized response can escalate and become unregulated, resulting in end-organ damage.

Table 1. Risk Factors Associated With Pediatric Sepsis

Pediatric Sepsis Risk Factors
Age < 1 month
Asplenia
Serious injury (e.g. major trauma, burns, or wounds)
Chronic debilitating medical condition
Sickle cell disease
Immunosuppression
Transplant recipient
Indwelling medical device
Urinary tract abnormalities
Recent steroid use

Table 2. Physical Findings in Children With Sepsis

Physical Exam Findings in Pediatric Severe Sepsis and Shock

Agitation
Apnea
Tachycardia
Cold/pale extremities
Delayed capillary refill time (CRT) (> 3 seconds) - "cold" shock
Flash CRT - "warm" shock
Bounding or weak pulses
Mottled skin
Decreased urine output
Dry mucous membranes
Tachypnea
Grunting
Nasal flaring
Hypotension (late symptom)
Hypoxia
Lethargy

Clinical Presentation

The insidious presentation of sepsis varies with the age of the patient. In neonates, any change from the patient's baseline behavior raises suspicion for sepsis, whether a fever is present or not. In older children, tachycardia may be the only presenting sign. Children with intact cardiovascular systems can misleadingly maintain a normal blood pressure for a relatively long period despite having sepsis or severe sepsis.⁵ If compensated shock remains unrecognized and untreated, the child will deteriorate quickly.

It is crucial to assess the state and activity of the child, whether a fever is present or not, and understand the features that vary with age. It is essential to ask about the patient's vaccination status, current medical conditions, and any recent illnesses or procedures that may increase the likelihood of sepsis. Any risk factor, if present, that can increase the likelihood of infection or decrease the body's ability to fight an infection should raise the suspicion for sepsis.

A child may present with signs ranging from slightly elevated heart rate to overt signs such as respiratory failure or altered mental status. Always consider sepsis in children with persistently abnormal vital signs and be aware that persistent tachycardia often is missed. Common physical exam findings for severe sepsis and shock include: tachycardia, cold/pale extrem-

ities, delayed capillary refill time (CRT) > 3 seconds or flash CRT, bounding or weak pulses, mottled skin, decreased urine output, dry mucous membranes, tachypnea, apnea, grunting, nasal flaring, hypoxia, lethargy, agitation, and hypotension as a late symptom (Table 2).⁶

Diagnosis

First and foremost, sepsis is a clinical diagnosis. Labs are not necessary for the diagnosis, and there should be no delay in treatment, as early recognition of sepsis and septic shock is crucial to improving outcomes. However, numerous labs and studies can assist in diagnosing abnormalities found in sepsis. A one-hour delay in the initiation of appropriate resuscitation measures has been associated with increased mortality.⁷ Blood cultures should be obtained before initiating antibiotic therapy but should not delay antibiotics in a critically ill child. Electrolyte abnormalities, including hypoglycemia and hypocalcemia, should be corrected.⁸ A two-fold increase in creatinine can reflect kidney injury. A blood gas can assist in the evaluation of oxygenation, ventilation, and acid-base disturbances; especially when noninvasive methods become unreliable due to cold extremities, weak pulses, or other factors. If there are concerns for disseminated, intravascular coagulation, complete the workup to confirm its presence with a decrease in fibrinogen and/or an elevation in prothrombin time, partial thromboplastin time, INR, and/or D-dimer.

Treatment

Once severe sepsis or septic shock is identified, there should be a rapid assessment of the child followed by the initiation of time-sensitive, goal-directed management and support.⁸

In the first five minutes, the goal is to initiate intravenous (IV) access with two large-bore IV catheters, depending on the age and size of the child. If IV access is unable to be acquired, then intraosseous (IO) access should be obtained. Supplemental oxygen should be provided. If the child is in respiratory distress, consider high-flow nasal cannula or noninvasive, positive-pressure ventilation.⁹

Treatment goals in the first 15 minutes should include obtaining laboratory tests, preparing IV antibiotics, and fluid resuscitation. An initial volume of 20 mL/kg of an isotonic solution should be administered. Crystalloid fluids, such as normal saline and Ringer's lactate, are equally effective as colloids. These fluids should be rapidly pushed via 60 mL syringes or a rapid

infuser should be used. IV infusion pumps may be too slow. It is crucial to frequently reassess the patient's response to IV fluids to monitor for fluid overload. Signs of fluid overload include crackles in the lungs, hepatomegaly, and/or deleterious heart rate response. The total goal for fluid resuscitation is 60 mL/kg within the first 60 minutes. When a child remains in a state of shock after 60 mL/kg of rapid fluid resuscitation, the patient is diagnosed with fluid-refractory shock (i.e., septic shock). Neonates and children with renal or cardiac disease with septic shock should receive less aggressive fluid therapy. These children require closer attention and evaluation after boluses to assess for fluid overload.

The Surviving Sepsis Guidelines emphasize the importance of antibiotic administration within one hour of sepsis recognition [9]. Mortality increases with every one-hour delay in the administration of antibiotics; this reaches statistical significance once a three-hour delay in the initial dose occurs.¹⁰ If obtaining IV access is difficult, many antibiotics can be given intramuscularly. Start with broad-spectrum antibiotics. Empiric treatment with ceftriaxone and vancomycin provides considerable gram-negative and gram-positive coverage. Additionally, these antibiotics are

>>CONTINUED ON PAGE 160.

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Table 3. Goals of Therapy for Pediatric Severe Sepsis and Shock**Therapeutic Goals in Pediatric Severe Sepsis and Shock**

<ul style="list-style-type: none"> • Support oxygenation and ventilation. Goal SpO₂ > 94% 	
<ul style="list-style-type: none"> • Restore circulatory perfusion. 60 mL/kg in the first hour with frequent reassessment 	
<ul style="list-style-type: none"> • Administer broad spectrum antibiotics in the first hour 	
Target SpO ₂ > 94% Capillary refill ≤ 2 seconds Normal blood pressure for age Normal pulses (centrally and peripherally) Warm extremities	Normal mental status Urine output of 1 mL/kg/hour Normal serum glucose Normal serum calcium

SpO₂, peripheral arterial oxygen saturation

widely available and easy to administer. Consider the child's age and history when determining antibiotic choices, as certain situations may necessitate the use of an alternative (e.g., infants under one month of age, history of previously positive cultures, and immunosuppression). The overall treatment goals are to 1) restore peripheral and end-organ perfusion, 2) achieve a normal heart rate for age, 3) attain a normal blood pressure for age, and 4) establish adequate oxygenation, ventilation, and circulation within the first hour of shock recognition.⁸ The child should be reassessed after each intervention while targeting specific therapeutic goals (Table 3).⁹

Disposition

All children with proven or suspected severe sepsis or septic shock should be hospitalized. If hemodynamically stable, a child may be admitted to the inpatient floor, but all children with septic shock should be admitted to a PICU.

Conclusion

Children are not just small adults, and due to their different pathophysiology, pediatric sepsis remains difficult to diagnose with potentially serious consequences. It is important to remember that sepsis is a clinical diagnosis. Pediatric sepsis may present with only persistent tachycardia; hypotension will not occur until they are in uncompensated shock. Septic children can look well and still be septic; they often show subtle signs of stress as compared with adults. It is essential to keep pediatric sepsis on a physician's differential and, when recognized, to act quickly. Obtaining IV access, giving a fluid bolus, administering broad-spectrum antibiotics and starting a patient on supplemental oxygen while transferring to a higher level of care are prompt and effective actions to take to improve the care of children in almost any location.

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Opioid Use Reduction in a Sickle Cell Disease Patient: A Case Report

Background

Sickle cell anemia or sickle cell disease (SCD) is a group of genetic blood disorders characterized by abnormal hemoglobin. The hemoglobin molecules are misshapen, or “sickled,” and tend to aggregate after releasing oxygen. This results in unhealthy hemoglobin (sickle cell anemia). It can block blood flow and lead to pain (acute pain episodes). Because pain is the hallmark symptom of SCD, pain control is, in turn, one of the leading clinical foci. Opioids are the frontline therapy for SCD pain control. Indeed, patients with SCD often experience lifelong complications that may include debilitating and painful symptoms and complex treatment needs resulting in an impaired quality of life (QoL) (ASH 2016). Moreover, SCD is an orphan disease that is often burdened with stigmatization, including beliefs that patients are drug-seeking, which contributes to suffering (Maxwell, Streetly, and Bevan 2014). The current opioid epidemic further complicates opioid use among SCD patients as they may be branded as addicts and/or opioid abusers.

Case Report

We present a case study of a 40-year-old, African American, female patient who presented at the Adult Sickle Cell Clinic at UAMS to establish care. She was previously seen by a community physician. On the first clinic visit, the patient’s clinical presentation was daily SCD-related pain that varied in location, duration, and quality. The patient reported low back pain and described it as diffuse, dull, achy, and constant with aggravating/exacerbating factors denied. She also reported adequate pain management with current pain regimen. The patient was able to complete her own activities of daily living (ADLs) and had no recent emergency department visits or hospitalizations. The current pain regimen was categorized as high morphine equivalents/day (MMEs/

Drug	Dose	Quantity/month	MME/day
Hydromorphone	4 mg	160/month	~80 mg/day
Morphine Sulfate ER	100 mg Q6H	160/month	~500 mg/day
Oxycodone-acetaminophen	10/325 mg	160/month	~75mg/day
Prescribed MME/day			~655 MME/day
Patient reported daily use			~679 to 772 MME/day

day) at ~655 MME/day (CDC 2017). (See Table 1.) Per the patient, this was due to rapid escalation of opioids to manage cramps related to menses and tooth pain (patient was unable to afford extraction). However, patient reported daily use of ~679 – 772 MME/day (See Table 2 below). Cholecystectomy was the only SCD-related complication reported in patient’s history. Her social history included: lives independently, unemployed, social security disability recipient, enrollment in Medicare/Medicaid, unmarried, no children. Physical examination was unremarkable. The patient was slightly somnolent on exam, but otherwise participated well and answered questions appropriately.

The multidisciplinary team created a plan to meet all the patient’s clinical needs. The first

Hydromorphone 4 mg PRN:
– 16 MME x 9 tablets = 144 MME/day
– 16 MME x 12 tablets = 192 MME/day
Morphine Sulfate ER 100 mg Q6H:
– 400 MME/day
Oxycodone-acetaminophen 10 mg PRN:
– 15 MME x 9 tablets = 135 MME/day
– 15 MME x 12 tablets = 180 MME/day
Patient reported MME/daily use ~679 – 772/day

priority was to simplify and rotate her opioids. After the first visit, the patient was advised to discontinue hydromorphone 4mg PRN (patient reported good symptom control with Percocet), discontinue Percocet 10mg/325mg due to the large amount of Tylenol, and decrease Morphine ER 100mg from q6h to TID (with goal of weaning off and rotating to methadone only). She was prescribed oxycodone IR 10mg every four hours PRN (MAX 2/day), along with methadone 5mg QHS. After the first visit in clinic, the patient was given one-week prescriptions and seen the following week to monitor her closely after such a large change. After frequent follow-up visits, the patient was prescribed adjuvants that included ibuprofen 800 mg PRN and duloxetine 60 mg QD. Her MS Contin was gradually weaned off while her methadone was gradually increased. She had close supervision and her pain became well-controlled on methadone 20mg daily, with oxycodone 10 mg every four hours PRN (MAX 2/day). This resulted in an MME/day reduction from ~679-772 to ~130. (See Table 3.)

While the patient’s opioids were being changed and closely monitored, the patient’s psychosocial needs were addressed and treated by the interdisciplinary team including the clinic’s social worker. She was started on an antidepressant and encouraged to participate in counseling. While some of the patient’s pain

was chronic sickle-cell related pain, much of the previous opioid use was directed toward acute pain issues such as menstrual cramps and dental complications. The clinic staff was able to coordinate care with an OB/GYN and a dentist to address those issues appropriately. Opioid rotation, attention to psychosocial pain, and treating acute reversible issues all contributed to the ability to decrease her daily opioids.

Discussion

Opioid use

Long-term opioid use to treat non-cancer pain is debated and does not have strong evidence for chronic pain management in SCD (Carroll et al. 2016) and its effectiveness is unproven in SCD. Yet, it remains the frontline treatment and standard of care for both chronic and acute SCD-related pain (U.S. Department of Health and Human Services 2014).

Barriers to adequate opioid prescribing practices include the innate difficulties that exist with the clinical management of acute and chronic pain, clinicians' limited knowledge of SCD, inadequate assessment of pain, and biases against opioid use. In addition, unnecessary concern for addiction among SCD patients and caregivers exists. Opioid addiction rates among SCD patients are comparable to national opioid addiction rates (Ruta and Ballas 2016). Due to the clinical uniqueness of SCD pain, biases about opioid tolerance and physical dependence may hinder efficacious use of opioids to offer pain relief and/or control.

Psychosocial needs and considerations

Despite the fact that SCD affects other ethnicities and regions, it has been viewed as a "Black disease" (Baskin et al. 1998). This places SCD patients at an increased risk for stigmatization. More, SCD patients have an increased risk for psychological distress and psychosocial impairments. Further increasing stigmatization, SCD patients are disproportionately lower socioeconomic status (SES) and, therefore, the majority of SCD patients rely on Medicare and other government-based programs for health care coverage (Steiner and Miller 2006). These may coalesce and lead to decreased medical adherence and compliance (Baskin et al. 1998).

UAMS Adult Sickle Cell Clinical Program

Specific to UAMS, the adult program began with a palliative care physician and a registered

Table 3: Pain Regimen After 10 Visits Over Five-Month Period		
Drug	Dose	MME/day
Ibuprofen	800 mg PRN	
Duloxetine	60 mg QD	
Oxycodone	10 mg X 2/day [20mg/day]	~30 MME/day
Methadone	20mg/day	~100 MME/day
Prescribed MME/day ~130 MME/day		

nurse. Since its inception, the adult program has grown into a multidisciplinary team that includes a registered nurse, advanced practice nurse, licensed certified social worker, pharmacist, and rotating hematology providers. In complex cases such as this one, palliative care physicians are often asked to serve as consultants. SCD patients face multiple barriers to appropriate health care and the multidisciplinary teams continuously work to ameliorate these issues and provide appropriate care to SCD patients across the state.

Conclusion

Patients with SCD face a multitude of barriers to health care. They experience stigmatization and mismanagement of care. The patient presented in this case study initially came to the UAMS Adult Sickle Cell Clinical Program with prescribed levels of MME/day characterized as high morphine equivalents. Much of her pain was determined to be unrelated to her SCD; yet, her SES prevented the patient from affording proper dental care to address one of the primary sources of pain. She was subsequently prescribed high levels of MME/day by her previous provider. Upon clinical transition to UAMS, the multidisciplinary SCD team and the patient were able to negotiate a clinical plan to greatly reduce her opioid consumption while improving safety and maintaining pain control. SCD is fraught with complications. Attuning care to both SCD-related complications as well as psychosocial needs and QoL provides comprehensive and effective care.

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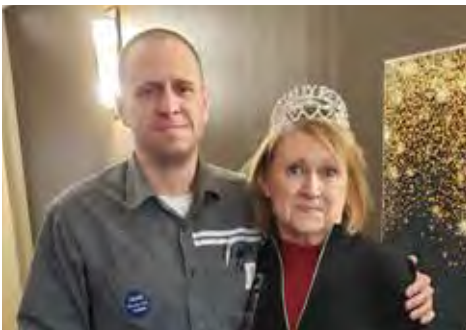
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KAY WITH CARLA COLEMAN



DAVID WROTEN, KAY WALDO, LYNN ZENO, LAURA HAWKINS AND SCOTT SMITH



KAY WITH HER SON, CORY

Friday, December 4, 2020, AMS said, “See ya soon” (never “Goodbye”) to **Kay Waldo**, retiring after 29 ½ years of service to the AMS and the physicians of Arkansas. To say she will be missed is certainly an understatement. As Director of Administrative Services, Kay wore many hats. Over the years, AMS physician leaders learned to depend on and trust Kay to handle the administrative responsibilities that made their time in leadership easier and more productive. For those of us who worked with her on a day-to-day basis, she was simultaneously a co-worker, mother, sister, aunt, and above all... a friend. We will miss her dearly and **wish her the best** as she embarks on a new journey.



AMS STAFF



DAVID WROTEN, EVP, WALKING KAY TO THE DOOR

DUE TO THE COVID PANDEMIC, THIS GATHERING WAS LIMITED TO 20 INVITEES. MASKS AND/OR SOCIAL DISTANCING REQUIREMENTS WERE FOLLOWED. MASKS WERE BRIEFLY REMOVED FOR PHOTOS.

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- Delegate study responsibilities as appropriate and ensure necessary training and qualifications of team members.
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If interested, contact Vassia Roulia,
Executive Director, vassia.roulia@brfla.org



▼  OBITUARIES

Joseph Carl Jensen, MD, passed away September 25, 2020. He is survived by his wife, Ashley Jensen; one son, Tyler (Kristen) Hill; one grandson, Hayden, and several extended family members. Dr. Jensen received his medical degree from the University of Tennessee College of Medicine in 1989. He interned and completed his general surgery residency at the University of Arkansas for Medical Sciences (UAMS) in 1995. Following his surgical residency, he continued his training and completed a clinical fellowship in Trauma and Surgical Critical Care in 1996 at R. Adams Cowley Shock Trauma Center in Baltimore, Maryland. Dr. Jensen practiced in the Division of Trauma and Critical Care Surgery at UAMS. He was a gifted surgeon who was part of a team that shaped trauma care in Arkansas while training hundreds of surgical residents during his 24 years as faculty. For 10 years, Dr. Jensen served as the general sur-

gery residency program director and five years as the student clerkship director in surgery at UAMS. He was highly respected for his teaching.

Dr. Richard Curtis Pillsbury, Sr. passed away November 21, 2020. He is survived by his wife of 50 years, Janey; three children, Kimberly Pillsbury Steele (Nelson), Richard C. Pillsbury Jr. (Sarah), and Megan Pillsbury Hollis (Ryan); four grandchildren; and three siblings. Following in his father's footsteps, Dr. Pillsbury served in the U.S. Army. Thereby earning his medical degree, he interned in El Paso and completed his residency at Walter Reed Army Medical Center in Washington, D.C. He then moved to Fort Campbell in Kentucky to serve as ENT for 150,000 troops. Fresh from the Army and board-certified in otolaryngology, Dr. Pillsbury opened his medical practice of 30 years in El Dorado, Ark. He was respected in the region as a master diagnostician and also served a stint as chief of surgery for The Medical Center of South Arkansas. Dr. Pillsbury was a member of several professional organizations and was a family man who enjoyed supporting the activities of his children.

Arlee Ervin Pollard, MD, passed away February 12, 2020. Dr. Pollard was raised on the family farm, and his early education began in a one-room schoolhouse. From there he progressed to Oil Trough High School, where he graduated as valedictorian of the class of 1946. Dr. Pollard graduated from the University of Arkansas, received his medical degree from UAMS in 1956, and completed his residency in anesthesiology there in 1959. He was board certified in anesthesiology and was a past president of the Arkansas Society of Anesthesiologists. A dedicated and caring physician, he practiced for 35 years before retiring from St. Vincent Infirmary in 1994. He loved the practice of medicine and welcomed the opportunity to resume patient care by working part-time at the St. Vincent Community Free Clinic and the Federal Occupational Health Care Unit. He also worked with a group of other retired physicians for 20 years at the Military Entrance Processing Station in Little Rock, retiring from that position in 2018. Dr.

Pollard is survived by his children Dr. Bill Pollard (Sharon) of Conway; Barbara Bonds (Steve) of North Little Rock; Joe Pollard of Little Rock, and Alan Pollard, MD (Liz) of Pine Bluff; and three grandchildren.

Nathan Leland Dodd, MD, passed away September 25, 2020. He graduated from Fort Smith North Side High School in 1962, attended Fort Smith Jr. College, and then graduated from Hendrix College in 1966. He obtained a Master of Science in agriculture at the University of Arkansas in Fayetteville, going on to earn a Doctor of Medicine degree from UAMS in 1972 and completed the residency program in pathology in 1976. Before going into private practice, he served as assistant medical examiner of Arkansas and assistant professor of pathology at UAMS. Dr. Dodd entered private practice in 1977 in De Queen; in 1980, he moved his practice to Hope, and served as medical director of pathology for the hospitals in Hope, Nashville, and Gurdon. In 1985 he moved to Texas and practiced at Wadley Regional Medical Center, where he remained until his retirement in 1998. He is survived by his wife of 33 years, Sherry; three children, Kate Tokar (Travis), Shannon McGough, and Greg McGough; and five granddaughters.

Thomas Moore Fletcher, Jr., MD, a distinguished Little Rock neurosurgeon, died on September 16, 2020. He is survived by his wife of thirty-three years, Barbara Dalrymple Fletcher. His first marriage was to Frances Bowman Fletcher, who died in 1984.

Five surviving children were born to his first marriage: Elizabeth Ann Fletcher; Susan Fletcher Smith, wife of David Smith; John Presley Fletcher, husband of Stacy Fletcher; William Steele Fletcher; and Jefferson Bowman Fletcher; all of Little Rock, AR. He was preceded in death by his daughter, Frances Ann Fletcher, and his son Thomas Moore Fletcher, III along with 11 grandchildren. He also embraced Barbara's children, Joseph C. (Doak) Walker, III; William (Duke) Walker, husband of Rebecca Leonard Walker; and Shea Walker Silar; all of Little Rock, Ark.



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