FORT WAYNE
MEDICINE QUARTERLY

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THE MENTAL HEALTH EDITION

faces of despair

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Editor's Note | Elizabeth J. Canavati, M.S.

Think Spring!

After such a brutal winter, it is so nice to transition into Spring with warmer days and longer daylight. Just thinking about the possibilities of getting outside more, lifts my spirits.

This issue of your *Quarterly* is a special edition. It was suggested to me almost a year ago by Deb McMahan. In her words, "The purpose of the special edition is not only to highlight all that is being done in this region. It gives you cutting edge information about these medical issues from local experts that you can utilize in your every day life. I invite you to become part of this regional force that is developing the knowledge that will shape the policies to allocate the resources that you can utilize on the front lines."

I hope that you will find this edition informative and helpful! Please contact Alice DiNovo if you would like extra copies.

My inbox is always available. Please feel free to email me your opinions or information you would like to share at lizjcan612@gmail.com.

WRITE • SUBMIT • GET PUBLISHED

Write it Down:

- A case study of a patient with an 'unusual presentation'.
- A touching or upsetting patient encounter and how you or your staff handled it.
- Something new that you learned at your specialty meeting or journal.
- A Letter to the Editor on an article written in the *Quarterly*, local or national news.

Submit it to the Editor:

lizjcan612@gmail.com

- 500-2000 words, typewritten in standard fonts, and sent as an attachment.
- Visuals, such as charts, graphs, photos, may enhance your article.
- Citations of references not required, but may be helpful for readers wanting further information.
- "Headshot" picture of you-the author is desirable. If you are a FWMS member, we have you.
- **Deadline dates are second Thursday of February, May, August, and November**. Sooner is better.

Get Published:

- Congratulations, you made the cut. You are now a *Fort Wayne Medicine Quarterly* published author.
- Thanks for your willingness to share your experience and expertise.

Our Summer issue deadline is May 10th.

About the Cover:

As I thought about what to put on the cover, I asked several of the authors what they envisioned with key words being: mental health, addiction and despair.

Several sent me photos that they thought would be appropriate. We liked all the words but it didn't quite capture the despair adequately.

Although much busier than most of the covers, it really encompasses all the ideas included in this edition.

President's Message | Ryan Singerman, D.O.

Maybe it's the overcast skies and frigid temperatures that have turned my thoughts introspective as I considered what to write for this edition. Through the past months of revision of Fort Wayne Medical Society doctrines, bylaws, and updating policies, I began to gain a deeper appreciation for the medical society founders and the journey they began 180 years ago. That's right, our Fort Wayne Medical Society began in 1839. I'd like to lend some context to those years as we consider what our colleagues were facing all those decades ago.

The level of scientific advancement and cultural change that occurred could not have been predicted, nor the impact on how the individual physician practiced. Through that, our society thrived. I believe the key to that success is written in the very emblem of our society "consulto opus est". For those whose Latin may be a bit rusty (mine sure was), it translates to "The Debate". Our founding colleagues wanted a society where they could champion and discuss new thoughts and ideas, to have open discourse and to challenge the status quo, to promote health in each other and in the greater community. They would come together and debate, learn, encourage, and grow.

Our bylaws state in the first paragraph, "The **purpose of this Society** shall be to bring into one organization the physicians of Allen County so that by frequent meetings and full and frank interchange of views, they may secure intelligent unity and harmony in every phase of their labor as well as elevate and make effective the opinions of the profession in all scientific, legislative, public health, physician peer review activities, material and social affairs, to the end that the profession may receive that respect and support within its own ranks and from the community to which its honorable history and great achievements entitle it".

We are called to 1) be unified in our voice, 2) harmonious in our interactions, and 3) elevate the expertise of physicians in all aspects of our society and town – and in so doing we may maintain the respect of our peers, our lay community, and other medical societies.

As we look towards 2019 and 2020 after it, I am calling on our colleagues to be engaged in our community and our society. We must stand united for the health and safety of Allen County, regardless of lines of business or employers. We are all that stands in the way of seductive marketing, political agendas, for profit insurance, and a troubled health care system. We must champion research and scientific fact, denounce junk data and pseudoscience, and put forth effort to build this body of physicians. Our colleagues in the 1800s could not have anticipated the tidal wave of social and scientific changes they faced, and neither can we. But by remaining active, open minded, and making decisions based on fact and for the health of all living in Allen County, we will see many, many more years of growth and advancement for the Fort Wayne Medical Society!

1842	American surgeon Crawford Long started using general anesthetic during surgery.
1847	American Medical Association is founded.
1849	Elizabeth Blackwell is first woman to receive a medical degree.
1867	Joseph Lister publishes study on Antiseptic Principle, deaths from hospital infections decreases from 60% to 4%.
1870s	Louis Pasteur and Robert Koch establish the germ theory.
1879-1896	Vaccines for cholera, anthrax, rabies, tetanus, diphtheria, and cause of malaria discovered.
1899	Felix Hoffman develops aspirin.
1913	Dr. Paul Dudley White invents the electrocardiograph.
1920-1921	Women's Suffrage was ratified and vitamin D discovered, cure for rickets.
1922	Insulin is first used to treat diabetes
1928	Sir Alexander Fleming discovers penicillin.
1964	End of United States segregation and first vaccine for measles.

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In Memory

Evelyn May Pauly, M.D., 1924-2018

Evelyn was born in Cincinnati. She attended the University of Michigan Medical School and graduated in 1948. She completed her dermatology residency in Cincinnati and passed her boards in 1952. Evelyn met her husband, Leonard, while in Cincinnati.

After Leonard returned from Japan, where he served as an Army doctor during the Korean War, they decided to settle in Fort Wayne in 1957. Leonard worked at St. Joseph Hospital until his unexpected death in 1967.

Evelyn was working at the Fort Wayne State Hospital and Training Center full time, while struggling to raise four children. She retired in 1987 and spent many happy years traveling, volunteering , tutoring, and teaching English as a second language. She earned a CPA certificate during her retirement and used that knowledge to assist a local non-profit.

Evelyn moved to the Towne House Retirement Center in 2007, where she kept active in book and investment clubs, played bridge, and attended Fort Wayne Philharmonic concerts. She truly led a full life.

John L. Hamer, M.D., 1923-2019

John was born in Waterloo, Iowa but the family moved to North Manchester, IN when he was in elementary school. He attended North Manchester College and graduated with a degree in Chemistry/ Premed. John attended Case Western Reserve University, where he received his M.D. degree.

John met his wife, Esther, who was in the nursing program at Case Western and they married in June, 1952. John and Esther moved to Nigeria, where they worked for 16 years. John was also an ordained minister and elder in the Church of the Brethren. While he was there, he identified a new type of virus, which was later named Lassa Fever.

Upon their return in 1969, John joined a family practice group in LaGrange, IN and later established his own practice in Fort Wayne for 18 years. He was the first hospice physician with Parkview's Hospice Program. He also spent 10 years at the Fort Wayne State Development Center. John was recognized by the ISMA for 50 years of medical service.

The FWMS wishes to extend our condolences to Esther and the rest of John's family.

Upcoming Events

SAVE THE DATE

Spring Luncheon

May 9, 2019 • 10 am - 1:30 pm

Guest Speaker: Janet Katz

"Building Community by What We Eat"

Host: Betty Canavati
6630 Amber Road, Fort Wayne 46814

Fort Wayne Medical Society ALLIANCE
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The Parkview Mirro Center
10622 Parkview Plaza Dr, Fort Wayne, IN

To purchase tickets, please visit:
healthiermomsandbabies.org/hats-and-heels or
email Madison Lyon at mlyon@hmbindiana.org by May 3rd.

SAVE THE DATE

The Fort Wayne Medical Society and Alliance invite you to the

Annual Dinner

May 30, 2019
Fort Wayne Country Club

Cocktails: 6:00 – 6:30 pm
Dinner: 6:45 pm

Fort Wayne Medical Society | New Members

CHRISTOPHER CARREL MD
Specialty: Diagnostic Radiology
Group: FW Radiology
3707 New Vision Dr
Fort Wayne, IN 46845
Phone: 469-4763 Fax: 484-5919
Medical School: Indiana University School of Medicine 2000
Residency: William Bequmont Hospital 2001-2005

KEITH CLANCY MD
Specialty: Trauma Surgery and Surgical Critical Care
Group: Lutheran Health Physicians
7900 W Jefferson Blvd Ste 306
Fort Wayne, IN 46804
Phone: 458-3610 Fax: 458-3611
Medical School: Creighton University School of Medicine 1992
Residency: Loyola University Medical Center 1992-1998

ANTHONY COLLINS DO
Specialty: Emergency Medicine
Group: Emergency Medicine of Indiana
10343 Dawson's Creek Blvd Ste A
Fort Wayne, IN 46825
Phone: 203-9600 Fax: 739-6167
Medical School: Pikeville College School of Osteopathic Medicine 2004
Residency: Akron General Medical Center 2005-2008

JAMES DANIAS DO
Specialty: Trauma Ortho Surgery
Group: Ortho Northeast "ONE"
5050 N Clinton St
Fort Wayne, IN 46825
Phone: 484-8551 Fax: 482-5060
Medical School: Michigan State University College of Osteopathic Medicine 2012
Residency: McLaren Macomb Hospital 2012-2017

LINDSAY HARDLEY DO
Specialty: Surgical Oncology and General Surgery
Group: PPG - Oncology
11050 Parkview Circle Dr
Fort Wayne, IN 46845
Phone: 833-PCI-TEAM Fax: 266-7885
Medical School: Lake Erie College of Osteopathic Medicine 2008
Residency: Doctors Hospital 2008-2013

ROBERT HILL HARRIS MD
Specialty: Gastroenterology
Group: PPG-Gastroenterology
11104 Parkview Circle Dr Ste 310
Fort Wayne, IN 46845
Phone: 266-5230 Fax: 266-5238
Medical School: University of Alabama School of Medicine 1995
Residency: University of Colorado Health Sciences Center 1995-1998

JAYAKRISHNAN KRISHNAKURUP MD
Specialty: Gastroenterology
Group: PPG - Oncology
11050 Parkview Circle Dr
Fort Wayne, IN 46845
Phone: 833-PCI-TEAM Fax:
Medical School: Government Medical College Kottayam 2002
Residency: Easton Hospital/Drexel University 2006-2009

TAI WAI (DAVID) LI MD
Specialty: Family Medicine
Group: PPG – Walk-In Clinic
3909 New Vision Dr
Fort Wayne, IN 46845
Phone: 469-6610 Fax: 969-3065
Medical School: JINAN University School of Medicine 1990
Residency: Shenzhen People's Hospital 1989-1990
FWMEP 2008-2011

ZACHARY MADSON DO
Specialty: Pediatric Hospitalist
Group: Lutheran Health Physicians
7950 W Jefferson Blvd Ste 210
Fort Wayne, IN 46804
Phone: 435-7355 Fax: 435-7637
Medical School: Kansas City University of Medicine and Biosciences 2013
Residency: Driscoll Children's Hospital 2013-2016

ANDREW NORTON MD
Specialty: Diagnostic Radiology
Group: FW Radiology
3707 New Vision Dr
Fort Wayne, IN 46845
Phone: 471-9466 Fax: 484-5919
Medical School: Indiana University School of Medicine 2007
Residency: Radiology, University of Michigan 2007-2012

KAREN O'BOSKY MD
Specialty: Trauma Surgery
Group: Lutheran Health Physicians
7900 W Jefferson Blvd Ste 306
Fort Wayne, IN 46804
Phone: 458-3610 Fax: 458-3611
Medical School: Loma Linda University School of Medicine 2007
Residency: Loma Linda University Medical Center 2008-2012

SOMASUNDERAM PADMALINGAM MD
Specialty: Family Medicine
Group: The Center for Behavior Health
3910 Lima Rd
Fort Wayne, IN 46805
Phone: 420-6010 Fax: 420-9020
Medical School: University of Sri Lanka 1968
Residency: General Hospital, Negombo, Sri Lanka 1968-1969

ERASMO RUGGIERO DO
Specialty: Trauma Surgery
Group: Lutheran Health Physicians
7950 W Jefferson Blvd
Fort Wayne, IN 46804
Phone: 432-2297 Fax: 479-2950
Medical School: Chicago College of Osteopathic Medicine 2006
Residency: St Vincent Mercy Medical Center 2007-2010

ASHISH SHARMA MD
Specialty: Gastroenterology
Group: Lutheran Health Physicians
7900 W Jefferson Blvd Ste 201
Fort Wayne, IN 46804
Phone: 432-2297 Fax: 969-7266
Medical School: Osmania Medical College 1990
Residency: St Vincent Mercy Medical Center 1996-1999

NIKKI WYNN MD
Specialty: Pulmonology/Critical Care and Internal Medicine
Group: Lutheran Health Physicians
7916 W Jefferson Blvd
Fort Wayne, IN 46804
Phone: 432-2297 Fax: 434-6481
Medical School: University of Medicine, Mandalay 2008
Residency: Southern Illinois University 2012-2015

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Thursday, May 16, 2019
"Signs of Substance Use Disorder in Children and Family Members"

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Please call (260) 435-3261 to RSVP.

Visiting Nurse

Message from Mayor Tom Henry

Clearly, drug addiction is a challenge we continue to battle in Fort Wayne and Allen County. Through enforcement, education, and treatment, we're partnering with local organizations and other governmental entities to make sure residents get the help they need.

In addition, our participation in a lawsuit against opioid distributors sends a powerful message that we're doing all we can to reduce the negative impact drugs have on our residents, families, and community.

Public health and public safety are critical components to ensuring Fort Wayne and northeast Indiana are viable, sustainable, and healthy to keep and attract employers, companies, and employees. Our commitment to providing outstanding quality of life amenities positions us as a point of destination city and region that are at the forefront of meeting the needs, wants, and desires of individuals and families seeking a safe and growing community to live, work, and play.

CITY OF FORT WAYNE

THOMAS C. HENRY, MAYOR

Epidemic of Despair: An Overview

Deborah McMahan, M.D., Commissioner

As many of you know, and are probably tired of hearing, I have been discussing the Despair Epidemic for the last few years. Ironically, I first became aware of the disturbing decrease in life expectancy for middle-aged, predominantly white, high school educated men as a result of a study completed by two professors of economics at Princeton University. Not only did they identify that the life expectancy for this population, as opposed to every other developed country, was steadily decreasing for the past 20 years, but the decrease was exclusively the result of three conditions:

- Suicide
- Accidental drug and/or alcohol overdose
- Liver disease from chronic alcohol or use of injectable drugs

The authors dubbed this phenomenon "Deaths of Despair" and received much publicity about their findings, which interestingly were quite accidental. I think that what was most disturbing to me was that this occurred during my tenure as Health Commissioner and as a physician.

Sadly, our data reflect that we have experienced this same phenomenon here in our region. In 2017, we experienced a 40% increase in both fatal accidental overdoses and suicides. (Our data from 2018 are still pending due to outstanding toxicology reports as of the writing of this article.)

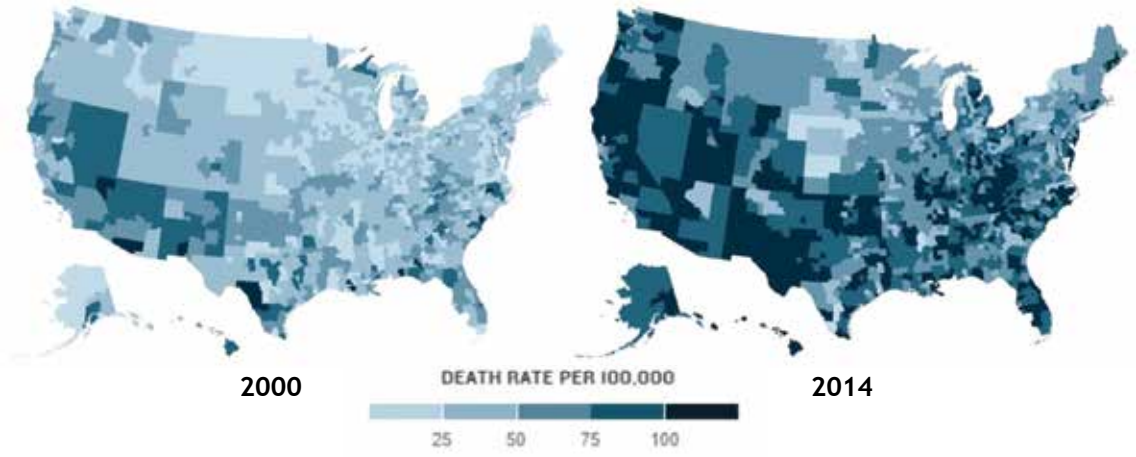
The authors of the study attributed the increase in deaths of despair to a decline of the white working class. The relatively high paying manufacturing jobs with great health benefits of the last decade have slowly faded away and many more men are finding themselves in a much more hostile labor market with lower wages, lower quality, and less permanent jobs. They further believe there's a sense that these people have lost this sense of status and belonging. Another belief is that the economic fragility then leads to familial and social dysfunction and isolation, which in turn leads to depression, anxiety, suicide, addiction and potentially, drug overdoses. I think this makes a certain amount of sense.

However, as a physician, I can't help but believe that this same population, who chose a job/profession with a 20-year old body did not realize how hard that same job would be with a 50-year old body. Especially in the rust belt/corn belt/XXL belt that is the Midwest. I think a significant number of people found that not only was it much more difficult to do a manual job, but they were much more likely to injure their "out of shape manual job body".

That also starts a whole cascade of injury, disability, introduction to pain medicine, less pay, and then the same rabbit hole of less income, mental illness and addiction. It is important to remind you that this is just my opinion.

But regardless of how we ended up in a Crisis of Despair, this is where we find ourselves and it is not going to turn around any time soon. In fact, the crisis has now widened such that for the entire population of

Midlife 'Deaths of Despair' in the U.S., 2000 and 2014
Deaths by drugs, alcohol and suicide among non-Hispanic whites, ages 45-54



the United States, our life expectancy for the first time in 100 years is declining – due to the same three issues. Just think, despite all of the policy changes your legislators do (e.g. seatbelts), all the nagging your providers do in the exam room (vaccines, exercise, eat right) and all the great wellness programs your employers offer your staff, the life expectancy is decreasing on our watch!

Now you may be asking: ***why does she keep saying crisis and not epidemic?*** An epidemic is when you see more cases of anything than you would normally expect to see. So yes, this is an epidemic. But, we see epidemics all the time. You just don't know about it, unless you are treating it or you have it! However, this is both an epidemic and a crisis because every important sector of life has been negatively and economically affected

Consider: Indiana has sustained $43.3 billion in economic damages to date arising from opioid misuse, comprised of three distinct areas of loss

- Damages accruing from Gross State Product (GSP) opportunity costs driven by reductions in labor supply.
- Damages accruing from direct products and services expended to combat the crisis each year for each misuser.
- Damages accruing from economic contributions lost through opioid-related deaths.

Indiana has more children in its child welfare system than any surrounding state, including those with nearly twice Indiana's overall population. Since fiscal year 2012, the number of Indiana children who entered **foster care** because of parental drug abuse has increased **230.6 percent**, as compared to Ohio's which moved up 21.8 percent and Kentucky's which increased 22.7 percent.

According to the Suicide Prevention Resource Center, the **average cost of one suicide was $1,329,553**. More than 97 percent of this cost was due to lost productivity.

The remaining 3 percent were costs associated with medical treatment. Given the average age of death by suicide in Allen County was 44 years (as was accidental overdose death) that is a lot of children left with at most one parent and that has an unmeasurable generational affect.

All of this and the many fractured families and overutilization of the criminal justice and public safety system makes this a **CRISIS** and not just another epidemic.

"All right, enough with the bad news!"

I hope by now you realize that if you are reading this article, you are affected either personally, professionally or at a minimum, you are helping to foot the bill through your taxes.

The exciting news is that so much is going on in our area to combat all these issues that we decided to share all this activity with you in this Spring special edition of the *Fort Wayne Medicine Quarterly*.

Research

You can't solve a problem you don't understand. Mental illness and addiction have long been relatively ignored in terms of allocating funding towards research. However, the Substance Abuse and Mental Health Services Administration (SAMHSA) has been working to identify a number of evidence-based approaches to treating mental illness and addiction. This is the leading national organization addressing all things mental illness and addiction. Our very own Mirro Center was recently awarded a large grant to develop and implement regional access to medication-assisted treatment.

This is just one of the many mental illness-related research projects in our area. From IU School of Medicine FW summer research projects to Robert Wood Johnson Grants – the Mirro Center and the Lutheran

Continued on page 14

Continued from page 13

Foundation are leaders in ensuring that those of us on the front lines have access to interventions that have been tested and proven to important outcomes. Your community is and is becoming even stronger at defining the interventions that local, state, and even national policy leaders should consider when allocating resources.

Treatment

When the addiction crisis first emerged, patients had very limited access to treatment. Five years later, we have seen major organizational collaborations designed to enhance capacity for treatment and many new partners in our area to serve our patients. Clean Slate, Fort Wayne Recovery, Bowen Center, Park Center and Parkview Behavioral Health are all now major players in our region in providing evidence-based mental illness and addiction treatment. We are continuing to grow our services, always looking for opportunities to improve access to care, while keeping folks employed and families intact.

Policy

We continue to work to foster stronger collaboration with our local and state public officials. It is so very important to our community that policy and allocation of limited resources are based, whenever possible, on science and evidence. We are fortunate to have an engaged city and county government, who are listening to the folks on the front lines, and state legislative leaders that are willing to develop model legislation with funds coming back to the locals to address this issue.

Workforce

Finally, our business leaders are also engaged and listening! They are feeling the effects of the Crisis and are looking to us to help them identify workforce policies and new, innovative ways to provide treatment for those that are afflicted, while keeping them employed and the workplace safe. This is a tall order, but our employers are engaged and waiting for us to assist them in creating a 21st century workforce that treats mental illness like any other chronic disease. Employee Assistance Programs will continue to play an important role in keeping people employed while working on an important health issue.

Resources

We are very fortunate in this region that The Lutheran Foundation has taken on the issue of mental health and addiction. A significant portion of their resources are directed toward a variety of projects that address the stigma of mental illness, providing resources for those afflicted, and fostering collaboration among diverse professional groups. With the limited state and local funding available for this issue, their influx of resources locally has been a key driver of many different initiatives that are improving the lives of people of all ages who struggle with mental illness.

You

I have discussed the fact that we are in the midst of a long term Crisis of Despair and what some of the key sectors in our region are doing, and now my question to you is: ***"What are you doing differently now than you were before this crisis started?"***

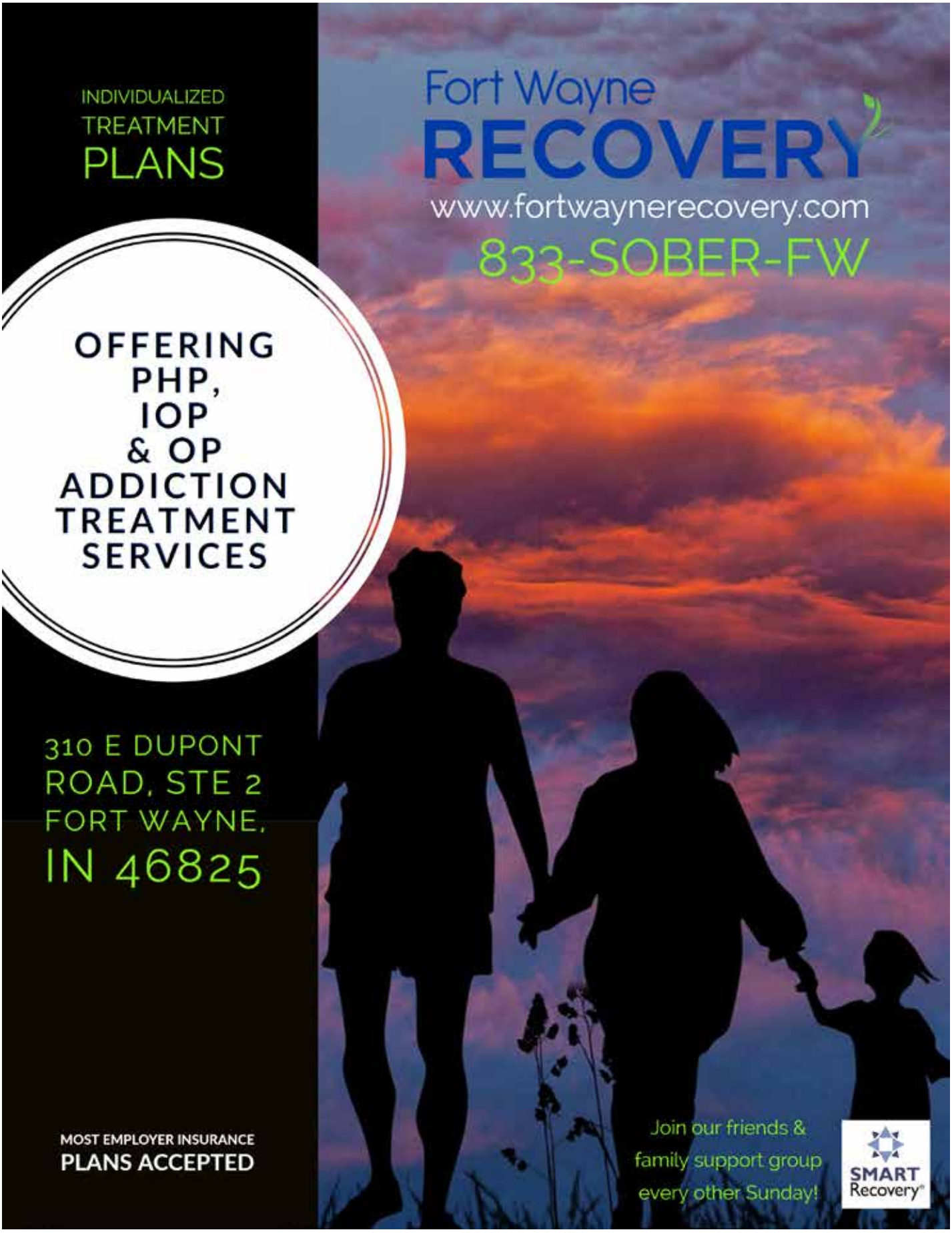
Statement by the Allen County Commissioners

The mental health and addiction crisis we are facing in Allen County wears many faces and does not discriminate. It can affect a successful CEO as much as it can a mother, a father, a high school student or even a stranger you pass on the street. Access to mental health and addiction care has become an issue of paramount importance.

Every $1 spent combatting **mental illness and addiction saves $4 in health care costs and $7 in criminal justice costs**. Since all taxpayers fall into funding those initiatives, a community approach means ultimate savings of money for the entire community. And combatting these issues means a more productive, healthy and sustainable society.

Fortunately in Allen County, we are rising to address this challenge through collaboration with community leaders and mental and behavioral health experts. Through innovative mental health and addiction research and treatment models, individuals in crisis in both rural and urban areas are being connected with the appropriate services.

The mental health and addiction crisis is an issue that is highly personal and demands a localized, community response. We greatly appreciate the work of Allen County's most invested community leaders and encourage the continued implementation of these best practices.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Am I Having a Bad Day or Would I Benefit from an Antidepressant?

Jay Fawver, M.D., Medical Director, Parkview Physicians Group Mind-Body Medicine

In my service in the role as a psychiatrist, I am frequently asked, "How can I tell if I have normal sadness or a clinical depression?" Based upon our life circumstances, we should experience various degrees of sadness, anxiety, joy, anger and apathy as normal ebbs and flows of our daily emotional experiences. How do we determine the presence of a psychiatric condition that warrants medication treatment for depression? Similar to any medical condition, a diagnosis typically directs the appropriate treatment.

At Parkview Physicians Group Mind-Body Medicine, our clinicians consider the following factors to determine the need for treatment of symptoms described by a patient or loved one:

- Symptom clusters defining psychiatric diagnoses
- Duration and persistence of symptoms
- Functional impairment caused by the symptoms

SYMPTOM CLUSTERS:

Symptom clusters have been defined by the Diagnostic and Statistical Manual, version 5 (DSM-5) for several psychiatric conditions, including clinically significant depression, known as "major depression." As with any diagnostic assessment, treatment is directed to address these symptoms. Similar to assessing an individual's diabetes control with a hemoglobin A1C, symptom clusters for various conditions can be screened, measured and tracked by patient-rated outcome metrics (PROMs), including the following conditions often associated with depression:

- **Patient Health Questionaire-9 (measuring the severity and individual symptoms of depression)**
- **Generalized Anxiety Disorder-7 (measuring the severity and individual symptoms of anxiety conditions)**
- **Mood Disorder Questionnaire (screening for bipolar spectrum conditions)**

Is determining a diagnosis for depression really necessary? Many people are reluctant to be "labeled" with such a condition. Imagine if a patient sees a primary care clinician complaining of a "nagging cough." Obviously, treatment would be entirely different based upon the diagnosis of either lung cancer, seasonal allergies, asthma, pneumonia, gastric reflux, heart failure or a side effect to lisinopril, all of which can cause the symptom of a "nagging cough." In a similar manner, if an individual experiences "poor motivation, fatigue and impaired concentration," we need to determine the precise diagnosis prior to choosing treatment options, as these "psychiatric" symptoms may be actually due to other medical conditions, such as: sleep apnea, diabetes mellitus, anemia, cardiac or renal failure and/or hypothyroidism.

If other medical conditions are determined to not be present, a psychiatric condition such as major depression may be considered. In all cases, the diagnosis directs proper treatment.

DURATION AND PERSISTENCE OF SYMPTOMS

Not only do symptom clusters for depression need to be simultaneously present, they need to persist for defined durations to meet diagnostic criteria to warrant treatment for a psychiatric condition. For major depression, a duration of symptoms is necessary for at least 2 weeks. Experiencing shorter durations of depression would possibly warrant a "watchful waiting" approach or more conservative management.

FUNCTIONAL IMPAIRMENT

A psychiatric "vital sign" is the ability to work, attend school or proceed with your usual daily activities. Functional activities include social, marital, and work or school functioning. They can be measured by such outcome metrics as the Work and Social Adjustment Scale (WSAS), which is a 5-item patient-rated scale addressing these activities that can predict future likelihood of relapse with conditions such as major depression, especially for a WSAS score > 20.

The four pillars of cognition are executive functioning, memory, attention span and speed of processing. Functional impairment is significantly impacted by an individual's cognition. For instance, if you can't think, you can't work. If you can't think, it's difficult to interact with others. Difficulty with cognition can be assessed using a 20-item patient-rated Perceived Deficit Questionnaire (PDQ-20) or more formalized and extensive neuropsychological testing.

CHOOSING AN ANTIDEPRESSANT MEDICATION

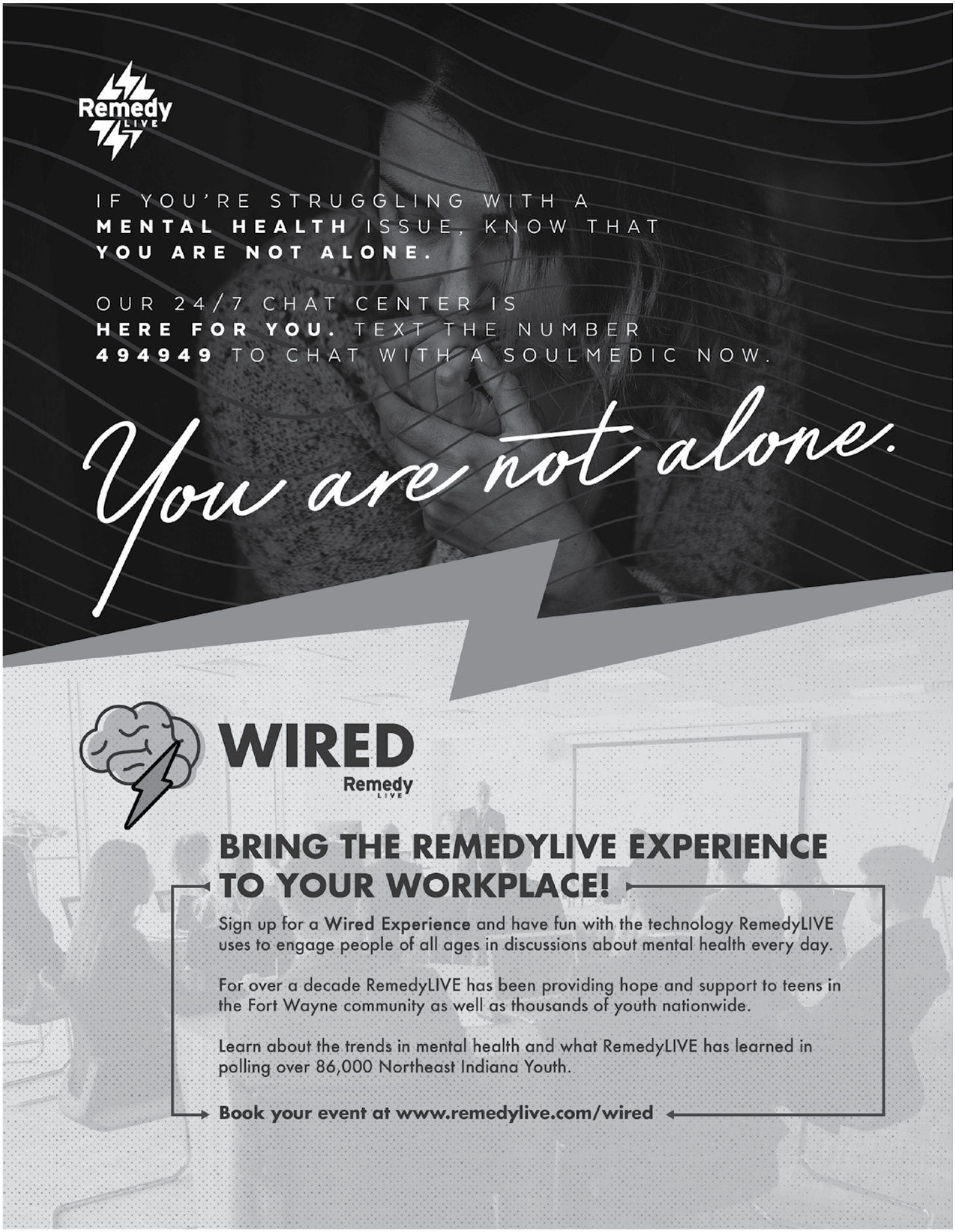
The treatment of depression is often addressed with options, such as antidepressant medication, counseling, exercise and lifestyle changes. Over the past 30 years, sixteen antidepressant medications with varying mechanisms of actions have been approved for the treatment of major depression by the Food and Drug Administration. Traditional phenotyping for antidepressant choice (i.e. sedating antidepressants for agitated symptoms, activating antidepressants for fatigued presentations, etc.) have resulted in disappointing and inconsistent outcomes. How does a clinician determine the best antidepressant to use for a specific patient? At Mind-Body Medicine, a 10-point Personalized Algorithm for Treatment (P.A.T.) guides antidepressant selection for individual patients.

The P.A.T. includes the following:

- A systematic assessment of symptoms to phenotype the depressive condition
- The patient's past antidepressant treatment responses categorized by mechanism of action
- A review of the family history of medication treatment responses for similar conditions
- The patient's current medical conditions that may affect treatment for depression
- Assessing the patient's current medications that may interact with antidepressant treatment
- The patient's individual goals for treatment
- Specific side effects that the patient wishes to avoid
- Current alcohol, cannabis, CBD or other substance use that may affect treatment
- Addiction potential for any treatment
- Genetic testing results (if available) to further direct the antidepressant choice and dosage

SUMMARY

Similar to any medical condition, the assessment for major depression and its treatment can be systematically determined to provide favorable outcomes to allow an individual to "return to normal" and pursue a meaningful quality of life. The ultimate goal of treatment for depression is "complete recovery," which alludes to functional restoration by enhancing an individual's full potential and satisfaction with relationships, physical health and productive activity while establishing meaning to life. Similar to cancer treatment, we should not be satisfied by any outcome that does not achieve remission and recovery in the pharmacological treatment of depression.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The Despair Crisis and the Workplace

Deborah McMahan, M.D., Commissioner

What makes the mental illness and addiction epidemic a crisis is the vast economic and social impact it has on almost every sector of our community. The impact extends beyond the family, the mental health system and the criminal justice system to permeate the warehouse, the fast food chain and even the board room. Contrary to popular belief, most folks struggling with addiction continue to work. In fact, more than 75 percent of people with addiction issues continue to work. According to one survey performed by the cocaine hotline, 75 percent of the callers to the hotline had used drugs on the job. And nearly 70 percent of those who called for help stated they worked regularly under the influence of cocaine.

The cost of alcohol and drug addiction in industry is estimated at over one hundred billion dollars a year. Three quarters of this cost is due to lost employment and reduced productivity and only 25 percent is due to medical costs and the cost of treatment for addiction. Depression, another treatable medical issue, is equally expensive for employers. It is estimated that **6-7% of full-time U.S. workers experienced major depression** (**MDD**) within the past year with a total economic impact estimated to be $210.5 billion annually, with half of these costs absorbed by the employer. And finally the current estimate for the total cost of death by suicide and suicide attempts is $93.5 billion per year.

Untreated mental illness and addiction impact not only the raw number of heathy potential applicants for each job, but also workplace safety. Consider the following **alcohol-related** facts:

- Workers with alcohol problems were 2.7 times more likely than workers without them to have injury-related absences.
- A hospital emergency department study showed that 35 percent of patients with an occupational injury were at-risk drinkers.
- Breathalyzer tests detected alcohol in 16 percent of emergency room patients injured at work.
- Analyses of workplace fatalities showed that at least 11 percent of the victims had been drinking.
- Major federal surveys show that 24 percent of workers report drinking during the workday at least once in the past year.

According to Stephen Heidel, M.D., MBA, an occupational psychiatrist in San Diego, depressed workers may be more prone to accidents due to a lack of concentration, fatigue, failing memory, and slow reaction time.

The subtle but significant impact of addiction and depression on productivity can be economically devastating, especially for small businesses.

According to The National Drug Intelligence Center (NDIC):

- Drug abuse costs more than $120 billion per year in lost productivity
- Depression results in more than 200 million lost workdays and costs U.S. businesses $23.8 billion in absenteeism and lost productivity
- One suicide was estimated to cost $1,329,553, with >97% of this due to lost productivity.

And sadly, if you think Indiana is somehow immune from the economic impact of this crisis, you must read the study conducted by Ryan Brewer, associate professor of finance at Indiana University-Purdue University Columbus, and Kayla Freeman, a doctoral candidate in finance at the IU Kelley School of Business in Bloomington, which concluded among other things:

• Indiana's lost gross state product has increased from $0 in 2003 to $1.72 billion in 2016 — the latter figure almost double the $926 million lost in 2015

• Potential wages lost due to opioid misuse totaled $752 million for the state in 2016

The good news is that addiction and mental illness are brain diseases that are treatable, just like heart disease and asthma. Allen County and neighboring counties are expanding our capacity for both diagnosis and treatment and are on the forefront of research in these critical areas. Public officials are partnering with the private sector to identify innovative ways to address this crisis. Resources are available through private healthcare, mental health system, and employee assistance programs. Finally, The Lutheran Foundation and the Regional Mental Health Coalition are partnering with area professionals to create educational programs for you and your employees.

Working together, we can further improve the more timely identification and treatment of these treatable medical issues and improve the lives of our citizens and increase the productivity and prosperity for all.

Addiction | Carolyn Greer, M.D., M.S., FACOG, Medical Director of the Bowen Recovery Center

When scientists began to study addictive behavior in the 1930s, people addicted to drugs were thought to be morally flawed and lacking in willpower. Those views shaped society's response to drug use; we treated it as a moral failing rather than a health problem, which led to an emphasis on punishment rather than prevention and treatment.

Today, thanks to science, our views and our response to addiction in the broader spectrum of substance use disorders have changed dramatically. Groundbreaking discoveries about the brain have revolutionized our understanding about compulsive drug use, enabling us to respond effectively to the problem.

As a result of scientific research, we know that addiction is a medical disorder that affects the brain and changes behavior. We have identified many biological and environmental risk factors and are beginning to search for genetic variations that contribute to the development and progression of this disorder. We need to use this knowledge to develop effective preventive and treatment approaches that reduce the toll drug use takes on individuals, families and communities.

Why is this important?

We know the use and misuse of alcohol, nicotine, illicit drugs, and prescription drug costs Americans more than $700 billion a year in increased health care costs, crime and lost productivity. Every year, illicit and prescription drugs and alcohol contribute to the death of more than 90,000 Americans, while tobacco is linked to another 480,000 deaths per year.

Addiction is equivalent to the medical term **substance use disorder**. It is defined as a **chronic, relapsing disorder characterized by compulsive drug seeking and use despite adverse consequences**. It is considered a brain disorder as changes are identified in the brain circuitry involved in how someone perceives reward, stress, and self-control; these changes often persist even after the person has stopped using drugs.

Addiction is a lot like other chronic illnesses, such as diabetes:

- both disrupt the normal, healthy function of one (or many) organs
- both have serious harmful effects
- both are, in many cases, preventable and treatable
- both can last a lifetime and may lead to death, if left untreated.

So why would people take drugs?

Drugs have to produce a positive reaction. Alcohol reduces inhibitions, nicotine increases energy, opioids such as prescription pain medications or heroin cause euphoria. Some drugs remove negative emotions, such as anxiety or depression. Drugs also can help improve performance or allow a "break" from reality. Others use drugs due to peer pressure or curiosity.

However, repetitive drug use causes changes in how the brain functions, and how it's cells (neurons) communicate with each other via transmitters (neurotransmitters). Drugs interfere with the way neurons send, receive, and process signals via neurotransmitters. Some drugs, such as marijuana or heroin, can activate neurons because their chemical structure mimics that of a natural neurotransmitter. This allows the drug to attach and activate the neuron. And while these drugs mimic the brain's chemicals, they lead to abnormal messages being sent. Other drugs, such as cocaine or methamphetamine, cause neurons to release abnormally large amounts of natural neurotransmitters or prevent the natural recycling of these brain chemicals. This too amplifies or disrupts the normal communication between neurons.

The parts of the brain that are typically affected by drug use include the basal ganglia, the amygdala, and the prefrontal cortex. The basal ganglia plays an important role in positive forms of motivation, including the pleasurable responses to healthy activities such as eating, socializing and sex. It is sometimes referred to as the "reward center." Drugs over-activate this circuit, producing euphoria at first, but after repeated exposure, diminish its sensitivity and make it difficult to feel pleasure from anything except the drug. The amygdala plays a role in stressful feelings, such as anxiety and irritability. This circuit also becomes very sensitive with drug use and perpetuates continued use to avoid this discomfort rather than to seek euphoria. The prefrontal cortex gives us the power to think, plan, solve problems, make decisions and exercise self-control over impulses. This is also the last part of the brain to mature, not being complete until the mid-20's. When this part of the brain is underdeveloped, drug use is compulsive with little ability to resist impulses.

Our brains are wired to increase the odds that we will repeat pleasurable activities. The neurotransmitter dopamine is central to this. When the reward center is activated by a healthy pleasurable experience, a burst of dopamine signals that something important is happening and needs to be remembered. It changes the neural connectivity and creates a habit. Drugs of abuse produce much larger surges of dopamine and "teach" the brain to seek repeated exposure at the expense of other, healthier goals and activities. The part of the brain that helps with weighing the consequences, controlling impulses, or constructing a plan to seek help is either underdeveloped due to illicit drug use in adolescence and/or the connections are significantly impaired.

With continued drug use, the brain is unable to experience reward from the normal experiences and therefore, is in a constant state of "dysphoria;" feeling flat, depressed, without motivation and unable to enjoy things that used to be pleasurable. This balance takes an extensive time to be restored.

From the outside, this can be very frustrating to others who cannot understand why one would continue to use drugs despite the obvious negative consequences. In fact, this is how a substance use disorder is diagnosed as not everyone who simply uses a drug is "addicted." The criteria to diagnose someone with a substance use disorder takes into consideration how their use negatively impacts their life and stratifies into degrees of severity. However, as we would not expect a person with depression to "stop being depressed" without implementing medical and clinical interventions, those with substance use disorder too benefit from appropriate interventions.

Like other chronic diseases, such as asthma, heart disease, and diabetes, treatment for substance use disorders usually don't result in a cure. It can be managed successfully, allowing people to counteract addiction's disruptive effects on their brain and regain control of their lives. Often, recovery from substance use will include relapse or return to use after an attempt to stop. This doesn't mean that treatment has failed, but rather that it may need to be adjusted. All people with chronic disease have deeply rooted behaviors that may take time to change; the relapse rate for substance use disorders is found to be less than that of hypertension and asthma.

Treatment

The principles of treatment include medical, cognitive, and social supports. Currently, we have FDA-approved medications to address opioid, nicotine and alcohol use disorders, while a great deal of research is ongoing to find medications to address stimulant and cannabis use. Medications are also regularly used to address co-occurring mental health disorders that are prevalent in those with addictions.

Medications that treat addiction serve to accomplish many tasks, they:

- treat withdrawal symptoms which often are the primary catalyst to continuing drug use
- reduce cravings for continued drug use
- mimic the action of a drug to a lesser degree as well as block the effects of drugs of abuse. (Some medications have been trialed and while they don't have a clear-cut mechanism to prevent use, they have demonstrated reductions in trials.)

Some common medications used to **treat opioid use disorders,** include: methadone, buprenorphine and naltrexone. Methadone is an agonist at the same receptor opioids act in the brain. It treats withdrawal symptoms from opioids, and blocks the receptor from other opioids such as heroin, preventing overdoses. Due to methadone's very slow onset of action, it does not produce the euphoria or dopamine surge as short acting opioids do. Buprenorphine (Suboxone, Zubsolv) is a partial agonist and act similarly to methadone. Naltrexone is an antagonist that cannot address withdrawal symptoms but does block the actions of opioids at the opioid receptor, preventing overdose. It may reduce cravings for opioids in some patients.

Medications to **treat nicotine use,** include: nicotine replacement products, varenicline, and bupropion. Nicotine replacement products include gum, lozenges, inhalers, transdermal patches, and nasal sprays. Varenicline (Chantix) is a partial agonist/antagonist at the nicotine receptor in the brain, thus blocking the effects of nicotine and partially activating it. Bupropion (Wellbutrin) also has agonist activity at the nicotine receptor in the brain.

Medications to **treat alcohol use** are a little less defined. Alcohol doesn't have one receptor in the brain but it is clear it affects the opioid system in some way. While evaluating naltrexone for its utility in reducing cravings for opioids, it was incidentally found that it significantly reduced cravings for alcohol, reduced heavy drinking days, and increased abstinence. Disulfiram (Antabuse) impairs an enzyme important in breaking down alcohol; a toxic metabolite builds up, causing a painful reaction for those who drink alcohol while taking this medication. Acamprosate (Campral) also targets a neurotransmitter thought to play a role in alcohol consumption.

There are **many "off label" medications** used to treat stimulants (cocaine and methamphetamine) and alcohol use disorders and many published reports showing some significant benefits. Most of these include the use of anticonvulsant medications, such as carbamazepine (Tegretol), valporic acid (Depakote), and topiramate (Topamax) as well as muscle relaxant, Baclofen. Naltrexone is gaining traction with data showing it is helpful in addressing stimulant use.

While medications alone are effective in achieving recovery for many, some will benefit from **behavioral or cognitive interventions** as well. These are specifically tailored for those with substance use disorders, seeking to develop skills that are critical for staying in recovery. Identifying and addressing co-occurring mental health disorders, as well as psychosocial trauma, is also critical for recovery. Cognitive behavioral therapy is the cornerstone of most evidence-based practices, helping patients to recognize, avoid and cope with situations that may negatively impact their recovery.

The National Institute on Drug Abuse, the National Institute of Health, as well as many universities continue to support and lead many investigations in the search for new modalities to treat substance use disorders as well as to evaluate existing treatments to stratify which ones are most effective or appropriate.


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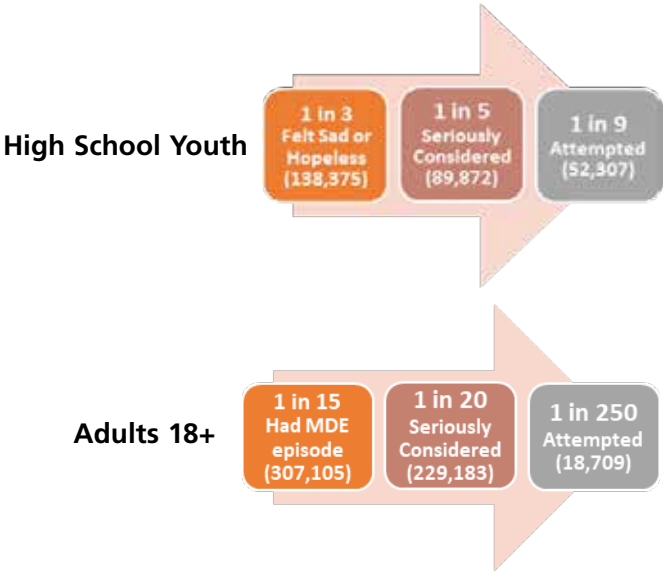
Health Care Providers are a Critical Piece of the Suicide Prevention Puzzle

Colleen Carpenter, MA, MPH

Did you know that nearly half of people who die by suicide have contact with primary care providers in the month before their death? Among older adults, that number jumps to 78%. Survey data shows that nearly 2 in 5 patients who attempted suicide sought services from their primary care doctor the week before their attempt. Health care providers see patients who face acute or chronic illness and injury. Often patients' health problems create great suffering and affect and/or are compounded by other life stressors. Health care providers play a critical role of identifying patients who are suffering from suicide thoughts and taking the necessary steps to prevent acting on them.

Does your practice universally screen for suicide risk? Given the increase in suicide risk, and the prevalence of mental, behavioral, and substance use disorders (often hidden and untreated), **every provider should be screening for suicide.** Last year, the Centers for Disease Control and Prevention (CDC [cdc.gov]) National Center for Health Statistics released a data brief on suicide mortality in the U.S. from 1999 to 2017. It found that the age-adjusted suicide rate increased 33%, from 10.5 to 14.0 per 100,000, in that period.



Sources: Centers for Disease Control & Prevention (CDC), Youth Risk Behavior Survey, 2015;
Substance Abuse & Mental Health Services Administration's National Drug Use & Health Survey 2015.

The state of Indiana and Allen County have both experienced increases over the last five years. **In Allen County we've seen a 43% increase in suicide between 2014 and 2017.** Youths are especially vulnerable to suicide ideation and attempts. The CDC's Youth Risk Behavior Survey indicates that 1 in 5 high school youths in Indiana experienced serious thoughts of suicide in the past year (ranking us 3rd in the nation) and 1 in 9 high school youth had experienced suicide attempts (10th highest in the nation). Given that a previous suicide attempt can be predictive of a future suicide death, all suicidal thoughts and suicide attempts should be taken seriously.

For a variety of reasons, people are more likely to discuss mental health issues with primary care providers than they are to seek out mental health providers. In fact, primary care is the #1 source of treatment for mental health issues. Often primary care providers are their patients only source for mental health treatment. This is especially true in rural areas. Research has shown that most (59%) mental health prescriptions are written by family doctors. Research has also shown that many primary care visits are related to psychological problems, such as depression, anxiety, and panic.

Despite the fact that more patients receive their mental health care from primary care providers than from mental health providers, often patients do not convey to primary care providers (or to emergency medical providers or mental health providers) that they are having thoughts of suicide or have made a previous suicide attempt. **Ninety to ninety five percent of suicidal people experience anxiety, depression, fear-of shame, and impaired cognitive function, which all contribute to "full disclosure" problems.** So, that is why it is important to ask patients about their risk for suicide, including previous suicide behavior.

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Stop Suicide Northeast Indiana, an alliance of stakeholders seeking to raise awareness and take action to stop suicide, has been working on developing a common language around suicide risk in our community so we can better identify those at risk and work together, more efficiently and effectively, to prevent suicide. We are training service providers and schools in our community how to use the **Columbia Suicide Severity Rating Scale Screener,** an empirically supported suicide screener that is used all over the world. This tool (and the training to use it) is free, available in 160+ languages and for various developmental levels, and 3- 6 questions provides clear triage points, based on research, to help users distinguish between low, medium or high risk for suicide.

Importantly, question 6 (which is mandatory) asks about ALL suicide behavior (preparatory behavior, interrupted, abandoned, and actual attempts) given their correlation to higher suicide risk.

The Columbia Suicide Severity Rating Scale (C-SSRS) is also part of an innovative and exciting national best practice for health care -- the Zero Suicide Initiative, which has been adopted by Bowen Health Center and is being considered by the larger health systems in town. The goal of Zero Suicide is to transform health and mental health systems to treat suicidality as they would other serious medical issues – with an emphasis on evidence-based practices and continuity of care.

Those who have adopted the C-SSRS

Allen County Community Corrections
Bowen Center
Fort Wayne Community Schools
Parkview Behavioral Health
Parkview Health System (in process)
Southwest Allen County Schools

Soon to adopt:
Park Center, Amani Family Services, Woodburn Christian Children's Home, Brickhouse Family Ministries, Trinity English Lutheran Church, Meridian Health Services

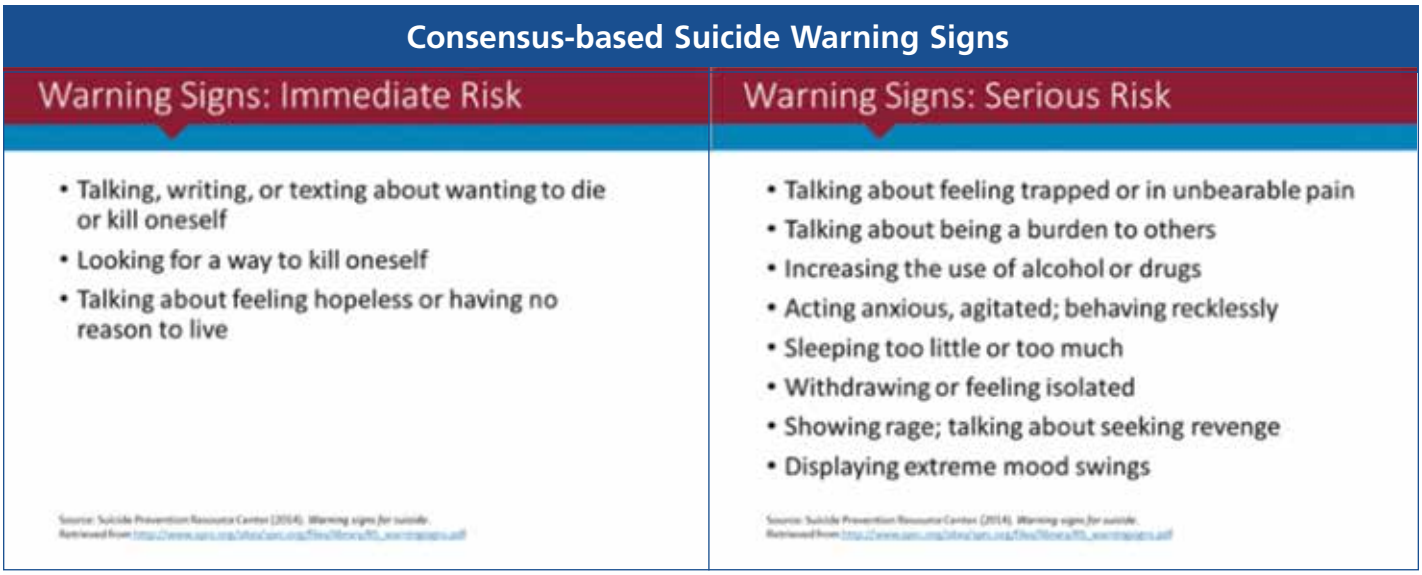
Adopted from James Reason's "Swiss Cheese" Model of Accidents

The **Zero Suicide Initiative** is driven by key assumptions:
1) Suicide prevention is a core responsibility of health care.
2) We need to be applying new knowledge about suicide and treating it directly.
3) Suicide needs to be addressed by a systematic clinical approach in health systems, not "the heroic efforts of crisis staff and individual clinicians".
4) System-wide approaches have worked to prevent suicide (the United States Air Force Suicide Prevention Program effectively reduced its suicide rate).

In order to prevent suicide, health care providers have to ask directly about suicide and be willing to talk to their patients openly about it. Many times, misconceptions about suicide prevent us from discovering suicide risk. For instance, many people falsely assume that if someone is thinking of suicide:
a) they will bring it up.
b) they will "look" suicidal (tears, despondency).
c) that "productive" and "successful" people don't think about suicide.

And the **biggest myth** about suicide – ***that if we ask directly about suicide, we'll somehow cause suicide thoughts to start*** – means that most of us hold back from having frank discussions that would lower risk. **Talking about suicide does not increase risk, NOT talking about it does.**

Suicide prevention depends upon a health care workforce that is more comfortable and competent to talk openly about suicide, accurately measure suicide risk, and help patients at risk to connect to appropriate care. We are blessed with wonderful training and mental health resources in our community – take advantage of them.



Consider these action steps:

- Have suicide prevention materials available for your patients:
  - **Stop Suicide** has toolkits for those worried about someone, recovering from an attempt, or facing a suicide death. **https://www.stopsuicide-now.org/toolkits now-available/.**
  - **LookUpIndiana.org** is a free resource for mental and behavioral health needs, including suicide.
  - The **National Suicide Prevention Lifeline** has free materials, such as wallet cards with the warning signs and the national hotline on them. **https://suicidepreventionlifeline.org/**
- Co-locate mental health providers in your practice. Alternatively, have a signed agreement with mental health providers to quickly triage patients at risk of suicide.
- Have clear policy and procedures related to suicide risk and ensure your staff know them.
- Train your staff to gain comfort and skills to inquire about and measure suicide risk and triage those at risk. Mental Health America of Northeast Indiana has a grant to offer free suicide prevention as well as mental health training. See side bar for training resources.
- Adopt the Columbia Suicide Severity Rating Scale screener (C-SSRS). **http://cssrs.columbia.edu/wp-content/uploads/C-SSRS-Screener-with-Triage-Points-for-Primary-Care-2018.docx. Request free local training from Stop Suicide: https://www.stopsuicidenow.org/stop-suicide-speakers-bureau-request-form/**

At the end of the day, it's better to err on the side of caution and ask someone about suicide and get a "no" response than to not ask and have something catastrophic happen. Patients are counting on their providers to show they care especially when they are suffering. Let's all step up our game and ensure those who may be suffering get the attention and care they deserve.

TRAINING RESOURCES

Mental Health America of Northeast Indiana – Applied Skills Intervention Skills Training (ASIST), Question, Persuade, Refer (QPR), safeTALK, & Youth Mental Health First Aid

Purdue Fort Wayne's Behavioral Health & Family Studies Institute – Question, Persuade, Refer (QPR), and Youth & Adult Mental Health First Aid

Stop Suicide Northeast Indiana – Speakers Bureau & C-SSRS training

The Lutheran Foundation – Question, Persuade, Refer (QPR)

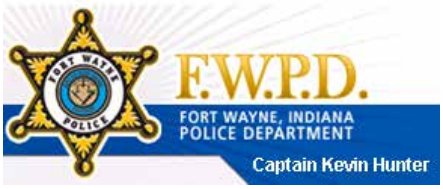
McMillen Health – Question, Persuade, Refer (QPR)

Parkview Hospitals – Question, Persuade, Refer (QPR)

NAMI Fort Wayne – (Family-to-Family program)

Colleen Carpenter is the facilitator of STOP Suicide Northeast IN and is helping to implement Sources of Strength in schools throughout the region with a grant from The Lutheran Foundation & IN Division of Mental Health & Addiction.

Drugs in Today's Society | Captain Kevin Hunter



I've had the privilege of being a police officer with the Fort Wayne Police Department for the last 30 years. When I started, crack cocaine was prevalent and a horrible problem for our community. During my field training period, I remember that all of my field training officers said that they had never seen the drug problem as bad as it was then (in 1989). Crack cocaine in the late 80's and early 90's fueled an increase in crime and violence in Fort Wayne and around the nation. My interactions with people addicted to crack cocaine was very sad, as most of these people suffering from addiction just couldn't help themselves. Crack cocaine was too powerful and took over their lives. Their addictions forced them to do terrible things, including stealing from family and friends. Law enforcement's response was to create new laws to address crack cocaine and try to "arrest our way out" of this problem.

In 2012 I took over as Captain of the Fort Wayne Police Department's Vice and Narcotics Unit. I had to quickly learn what the new drug trends were and how these drug trends were affecting our community. Methamphetamines and heroin were on the rise. Prescription opioids were also on the rise, and "pain as the fifth vital sign" didn't help alleviate the prevalence of those drugs being diverted to the street. "Pill mills" were becoming a problem around the country and Fort Wayne was not immune from these issues. One large pain clinic was targeted due to adverse prescribing practices in 2013. When this clinic was forced to close, some of these patients ended up turning to the streets to replace those lost opioids. Some of those patients turned to heroin.

The Fort Wayne Police Department is lucky that we have local offices of our federal law enforcement partners, which are the Federal Bureau of Investigation, the Drug Enforcement Administration, Bureau of Alcohol, Tobacco and Firearms and US Marshals Service. We work with them closely as they have resources that we don't. One of those resources is working a case involving phone wire taps. In 2014, heroin quickly turned into the drug of choice for many people here in Fort Wayne and around the country. We saw an increase in heroin use in our area, which led us to open Operation Hoosier Ice. This was a joint operation with several local agencies and the local office of the Drug Enforcement Administration (DEA). During this operation law enforcement received information that a large shipment of heroin was coming to Fort Wayne. It was eventually intercepted. All told we seized over eight kilos of heroin, three firearms and arrested six people related. This case was an indication of things to come. While stopping eight kilos of heroin from coming into the Fort Wayne area is an awesome feat for any law enforcement agency, we were going to see something far worse in the coming years – fentanyl.

In the summer of 2015, we saw our first fentanyl overdose deaths. In a 72-hour period over a weekend, we saw five overdose deaths related to fentanyl-laced heroin (three of those from the same dealer). Here's the story: three people visited the same dealer at the same time and bought what they all thought was heroin. The three people left and went to another location with one person using what they had just purchased. That person died instantly from an overdose of fentanyl. The two friends that had not used their drugs yet left their dead friend behind and went their separate ways. Both remaining people used the same drugs that they saw their friend die from. They ended up dying from a fentanyl overdose as well. This situation shows how powerful opioid addiction is: you see your friend die from an overdose, yet you inject the same drugs thinking it won't happen to you… We seized 15.3 grams of fentanyl in 2015, which contributed to our rise in drug overdoses. (**Note-2 milligrams of fentanyl is enough to cause an overdose.**)

I've seen many broken people in the last few years. Sons that steal prized possessions from their mothers and sell those things to get their next fix, while also breaking their mother's heart. Women who have suffered unimaginable trauma that it's no wonder they have substance use disorder. When asked, one particular woman arrested in a heroin raid told me her life story, which I'll never forget. She was introduced to meth by her mother in her early teenage years, molested by her step-father, and on a roller coaster of substance abuse to the day of that raid. I'll never forget the level of brokenness that she had. She had no spark in her eyes, a very flat affect and for all purposes had no life. These broken people show me that there is no way that we can arrest our way out of this crisis.

During this same time period, we also saw an increase in the use of a substance called "Spice". "Spice" is a nick-

name for a synthetic cannabinoid, which is a chemical substance that when used is supposed to mimic the effects of marijuana. The problem with this drug is that while it's called a synthetic cannabinoid, it is nothing like marijuana. We saw many people overdose on this synthetic cannabinoid in 2017, with many users having seizures, blacking out, vomiting, freezing like statues or becoming extremely violent. One version of this synthetic cannabinoid, 5-Fluoro-ADB, caused severe overdoses with some users ending up on respirators. We even heard a story of one patient who had to be physically restrained as they wanted to rip their nose from their face. Some of the people we've spoken with who use this drug say that they use it to "not experience their life for a while…"

Next, let's talk about marijuana. Some states have legalized this drug for recreational purposes, while others have legalized it for medical reasons. Marijuana is the most prevalent illicit drug used in the United States right now and current popular culture has glamorized this drug. The Fort Wayne Police Department seized the most marijuana in recent memory last year (over 300 pounds recovered) which tells me that there is a significant amount of marijuana out in the community. The other issue with marijuana is the potency. The marijuana commonly smoked in the 1970's had an average THC content of around 4%. Today's average THC content is around 12-13%. THC with stronger strains have as much as 30%.

We are also seeing other forms of marijuana-based drugs, such as Butane Honey Oil and THC Edibles. Butane Honey Oil is a very potent form of THC, which is produced when a person grinds up all of the plant material of marijuana, puts it in a tube with a filter on one end and empties a can of butane gas into the tube. The butane gas chemically extracts all of the THC from the plant material, and the substance that comes out of the tube resembles honey. The THC potency in Butane Honey Oil is around 80-90% THC. It only takes a very small amount of Butane Honey Oil to get a user extremely high. A person who ingests Butane Honey Oil can also have hallucinations. THC Edibles have also been found in this area with high THC contents and most could be mistaken for regular candy.

Another concern about marijuana comes from a recent study that involves teens who smoke marijuana and schizophrenia. "Comparing the age of onset of those who used cannabis before they were eighteen to the age of onset for those who didn't, they found significantly earlier onset for the former group. The more often marijuana was used, the earlier the age of onset." (Fields, 2017) Anyone who has seen the devastating effects of schizophrenia would suggest that teens refrain from smoking marijuana to prevent the premature possible development of this disease.

In 2016, drug overdoses became so prevalent that we started tracking fatal and non-fatal overdoses on a regular basis. We saw a 42% increase in non-fatal overdoses from 2015 to 2016, which is related to the continued rise in heroin/fentanyl mixtures that were available on the street. **2017 was the worst year yet for fatal and non-fatal drug overdoses. The Fort Wayne area had 1,200 non-fatal overdoses and 127 fatal overdoses.** This was due to the large amount of heroin and fentanyl that was available on the street. The Fort Wayne Police Department Vice and Narcotics Division seized 711 grams of heroin in 2017, up 65% from 2016 and a 970% increase in fentanyl seizures in 2017 (1,504 grams) versus 2016 (10 grams).

Methamphetamine use has also been a problem over the last few years. From 2012 to 2016, we saw an increase in one-pot meth labs in this area. In 2013, we had a high of 64 one-pot meth labs to our lowest year ever in 2017 with 7 one-pot meth labs. One-pot meth labs are dangerous as they contain hazardous chemicals that can quickly explode without warning, causing a fatal fireball to envelope the maker. There have been legislative efforts that have been successful to curb the sales of pseudoephedrine, which have helped decrease the number of one-pot meth labs.

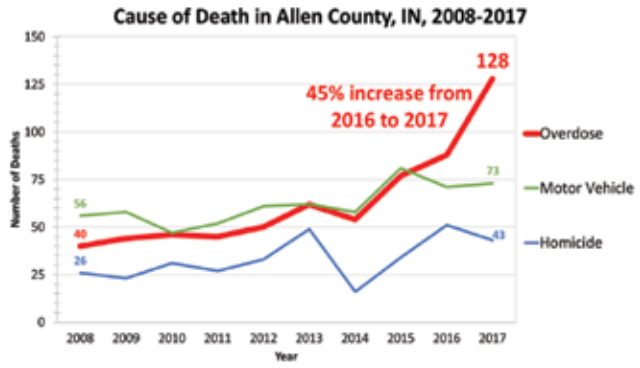
We've also seen a huge increase in crystal meth from Mexico being imported into our area. Mexican drug cartels have started to create 98% pure meth and have flooded the United States and the Fort Wayne area with this product. Not only is it 98% pure, but the price has dramatically dropped in the last year, going from $1,200 an ounce to $550 an ounce. While there is medical-assisted treatment for opioid use disorder, there are no such drugs to help with methamphetamine addiction. The only thing that can help methamphetamine addiction is Cognitive Behavioral Therapy.

While all of law enforcement around the country is doing everything they can to stop the spread of this current drug epidemic, there is no way that we can arrest our way out of this issue. There are far too many people with substance use disorder and far too many people involved with dealing these poisons to our brothers and sisters. We need new education programs to keep our children from using drugs in the first place. We also need new treatment programs to address those who are currently suffering from substance use disorder. I'm hoping that we find the answers to these issues before it's too late.

For more information on these substances, please visit **LookUpIndiana.org/topics**

The Opioid Crisis: An *Evolving* Issue
FACT SHEET

As a result of the consequences of the opioid crisis affecting our nation, on October 26, 2017 the Department of Health and Human Services declared a public health emergency [1]. From 1999 to 2016, more than 630,000 people have died from a drug overdose and on average 115 Americans die every day from an opioid overdose [2]. The Centers for Disease Control and Prevention (CDC) has identified three distinct waves of types of drugs involved in this evolving issue.



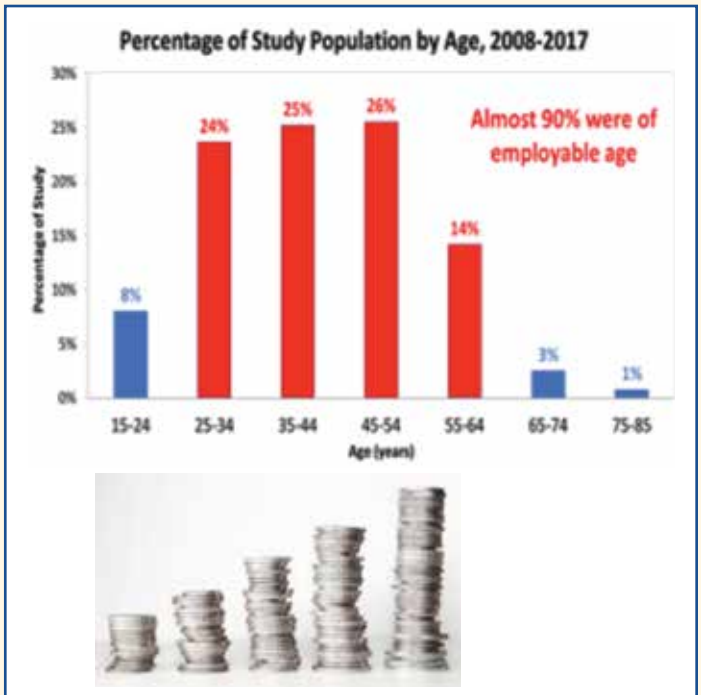
Deaths from drug overdoses continue to increase and occur more frequently than deaths from homicides or motor vehicle accidents.

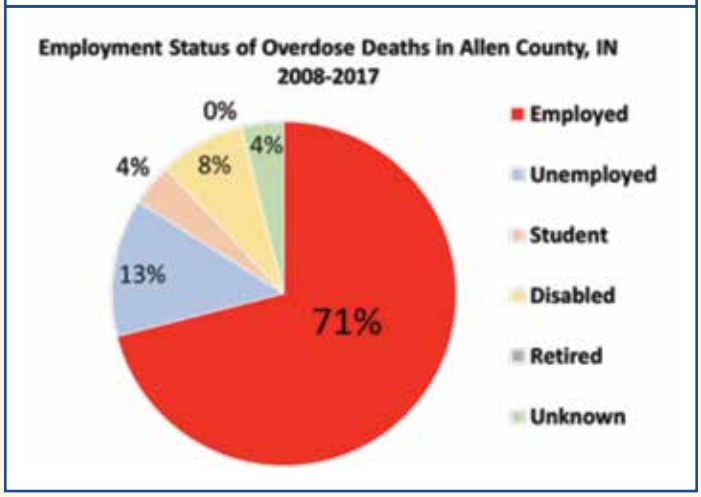
The first wave began with increased prescribing of opioids in the 1990s and with overdose deaths involving prescriptions increasing since at least 1999. The second wave began in 2010, with rapid increases in overdose deaths involving heroin. The third wave began in 2013, with significant increases in overdose deaths involving synthetic opioids – particularly those involving illicitly-manufactured fentanyl (IMF). The IMF market continues to change, and IMF can be found in combination with heroin, counterfeit pills, and cocaine.

Sadly, Allen County has also been significantly affected by this **crisis**. In 2014, the Allen County Department of Health, the Allen County Coroner's Office and the

1 https://www.phe.gov/emergency/news/healthactions/phe/Pages/opioids.aspx
2 https://www.cdc.gov/drugoverdose/epidemic/index.html

Fort Wayne Medical Education Program started an ongoing analysis of accidental drug overdoses that occurred in Allen County. Below you will find the highlights of our retrospective study from 2008 through 2017.

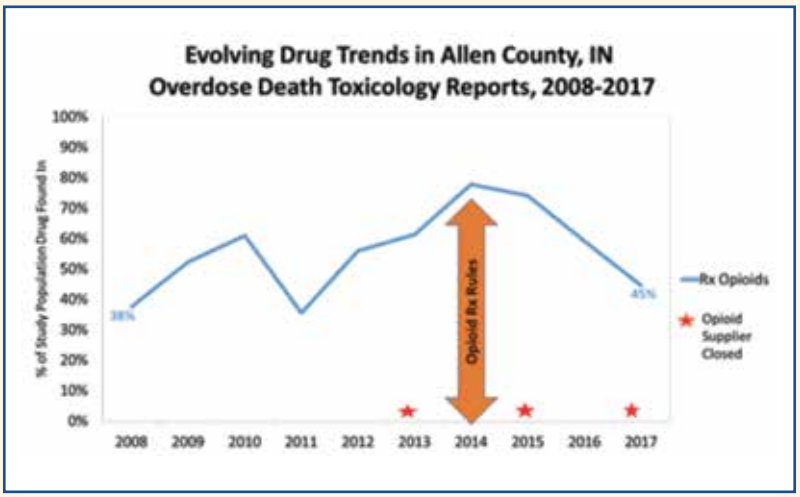


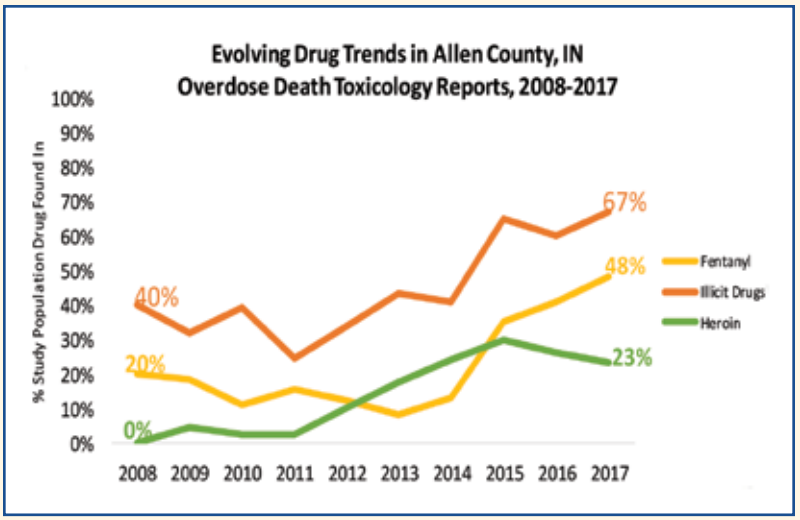


Our data consistently revealed that drug overdose deaths occur in primarily **working age** people who were **employed** at the time of their death.

Our results suggest that the chronic pain prescribing rules, implemented in 2014, along with the closure of "pill mills" located in Allen County aided in decreasing the number of physician-prescribed opioid medications. Unfortunately, our data also shows a subsequent **increase** in illegally obtained prescription opioids and use of heroin and illicit fentanyl.

As a result of the prescribing rules, not only did physicians prescribe fewer medications, they also prescribed less of the medication.





When looking at prescriptions, none of the individuals with fentanyl in their system at the time of death had a prescription for fentanyl. In 2017, almost 50% of the people who died from an overdose had fentanyl in their system.

Fort Wayne Police Department Vice & Narcotics Squad drug seizures

DRUG SEIZED	2016	2017	2018
HEROIN	248 GRAMS	711 GRAMS	1,590 GRAMS
FENTANYL	10 GRAMS	1,504 GRAMS	832 GRAMS
METH	1,400 GRAMS	2,156 GRAMS	2,984 GRAMS

According to the Drug Enforcement Administration (DEA), as little as 2 mg of fentanyl (pictured) can be lethal to an average sized adult!

Key Takeaway Points:

1. The Opioid Crisis is **evolving** into a Drug Crisis
2. Doctors are providing **fewer** opioid **prescriptions** and at **lower** doses
3. The majority of opioids involved in overdose deaths were obtained **illegally**
4. **Methamphetamine** is becoming the dominant drug
5. We do not have effective medication **treatment** for meth, as of yet

Alcohol Abuse Among Women

Carolyn Greer, M.D., M.S., FACOG

More Americans are drinking high amounts of alcohol, and the greatest increases are seen among women. In a new report, researchers at the National Institute on Alcohol Abuse and Alcoholism (NIAAA) compared large groups of people who self-reported their drinking habits. The first group consisted of over 43,000 adults from 2001-2002 and the second included more than 36,000 adults from 2012-2013.

The number of people who said they consumed alcohol in the last year increased 11%. High risk drinking (defined as having four or more drinks per day at least once a week, every week, for a year) by women, increased almost 60% and the diagnosis of an alcohol use disorder increased by nearly 85%.

Since World War II, the percentage of women whom abstain from alcohol has steadily fallen. At the same time, women have reported larger increases in both the level of drinking and binge drinking compared to men.

The following are some examples of these reports:

- From 2002-2012, the proportion of women who drank rose from 45% to 49%, while the proportion of male drinkers fell from 57% to 56%.
- The CDC conducted a survey from 2011-2013 which indicated that 55% of women ages 18-44 were drinking and 20% were binge drinking.
- In 2013, more than a million women of all races ended up in emergency departments as a result of heavy drinking. The majority of the middle-aged women suffered from severe intoxication.
- The rate of alcohol-related deaths for white women aged 35-54 has more than doubled since 1999, accounting for 8% of the deaths in 2015.

Despite the increasing evidence of serious health risks with any amount of alcohol consumption, American women are still receiving mixed messages as information continues to be reported. These mixed messages are advancing the idea that "moderate drinking" may be good for you. But what is the actual definition of "moderate drinking?"

All alcohol consumption potentially poses some risk to your health. This is because alcohol is toxic to the human body, and even short-term consumption of one standard drink per hour can have a harmful effect. The NIAAA has defined moderate drinking for women as:

> *Women who avoid consuming more than three standard alcohol servings on any given day and/or women who avoid consuming more than seven standard alcohol servings in one week.*

Consider this scenario described by Sarah Cottrell on Babble:

" **3:15 PM:** I'm standing at the edge of the driveway, waiting for my second-grader to get off the bus. I walk him inside, hand him a plate of cut-up veggie sticks and cheese slices and tell him he can watch 30 minutes of PBS before we have to start homework. Then I pour myself a small glass of wine.

5:30 PM: While cooking dinner, I start telling my husband stories about my day. As he listens, he casually pours me another glass of wine. That makes glass number 2.

7:00 PM: We're done with dinner. My husband takes all the kids outside to play and burn off some energy before we start their bedtime routines, and I'm confronted with a mountain of dishes. That's when the phone rings, and on the other end of the line, it's my best friend who's had a rough day. I pour a glass of wine and settle into conversation while I soak the pots and put away leftovers. That's glass number 3.

9:00 PM: My husband and I put the kids to bed. I tiptoe downstairs to curl up on the couch and stare at Facebook for a few quiet minutes, with glass number 4 sitting in my right hand.

10:00 PM-ish: My husband makes up a plate of grapes and cheese slices and joins me on the couch. He brings a glass for himself and tops me off.

This is the fifth glass of wine I've had in nearly eight hours. An entire bottle of wine — gone.

And at no point am I drunk."

How many memes, Vines, Facebook posts and Snapchat jokes revolve around "mommy juice" and "wine o'clock?" A simple search for "mom" and "wine" reveals graphics depicting:

- "It's strange how 8 glasses of water seems impossible but 8 glasses of wine can be done in one meal."
- "If you combine 'wine' and 'dinner' the new word is WINNER."
- "We should open a store called 'Forever 39'. We can sell wine and yoga pants."
- "When you want a glass of wine and then you remember that it's not even noon and you're at work."
- "I tried to log in to my iPad. Turns out it's an Etch-a-Sketch and I don't even own an iPad. Turns out I'm also out of wine."
- "How much do you spend on a bottle of wine? About a half hour."

I'm not going to lie, I laughed out loud while looking at most of these. I also wonder, does the popularity of these memes stem from their ability to make other women feel normal instead of taking a hard look at how they use alcohol to cope? "The message is 'kids stressing you out?', 'Work overwhelming? 'Have a drink. But this is not a healthy way to cope with stress. It's a dangerous message," states Ceclia Jayme, director of clinical services at Hazelden.

I watch a little too much Netflix and Hulu while drifting off to sleep. Some of my favorites over the past year have included ABC's "Scandal," staring Kerry Washington as Olivia Pope and "Body of Proof," starring Dana Delany as Megan Hunt. I am a sucker for strong female leads as are my three daughters, ages 20, 18 and 14.

I often find myself wondering how the lead actresses' drinking habits affect the development of societal norms in our adolescent daughters. Olivia and Megan consume 1-2 large glasses of wine in every scene from their respective homes. Olivia approaches every serious meeting with one-triple serving of hard liquor. Neither Olivia nor Megan ever appear to have any intoxication or hangover!

Alcohol is unique from most other drugs in that it is not only socially acceptable, it's expected that women in our culture use it regularly. And it seems that people are more accepting of wine than any other alcohol. "It's not like I was drinking whiskey….wine is a healthy way of dealing with the stresses of being a wife, mom, and an employee. It's not like I am doing shots while doing homework with my son!" states one Midwestern woman.

The American Psychiatric Association uses specific criteria to separate **social alcohol use** from an **alcohol use disorder**. Some of the criteria include cravings for alcohol, failure to attend to social responsibilities, spending a lot of time recovering from drinking, being in danger while drinking alcohol ("buzzed driving" or caring for children while drinking), needing more alcohol for the same effect (tolerance), continuing to drink even if it causes problems in relationships, and wanting to cut back or stop drinking and not managing to do so. Even if only two criteria are met, a mild alcohol use disorder is diagnosed.

It is also important to note that while 55% of women ages 18-44 report drinking alcohol in the past year, *45% did not consume alcohol in the same time period*. While social media may portray a different message, there are many young people who do not drink at all.

So how can one reassess their drinking habits? The National Institute for Health has a webpage, "Rethinking Drinking", which has modules for self-assessment, identifying triggers, building refusal skills, strategies for cutting down, and how to plan for a change. If an alcohol use disorder is diagnosed, medications are often used to assist achieving abstinence from alcohol.

Kelly, a 45-year old mom and therapist, shares some thoughts about her decision to eliminate alcohol a few years ago. "I learned that I can wind down without wine, that I can enjoy a concert without a drink, and that I can sleep better and weigh less when I am not drinking.

Often, the decision to eliminate alcohol is met with reaction from peers. "It's not like you are an alcoholic?" Although, many meet the criteria for an alcohol use disorder. Or "You aren't going to be fun anymore!" ***People can be surprisingly reactive, often because it may force them to review their own drinking patterns.*** Refusal skills need to be developed, such as saving money, avoiding hangovers, improving physical conditions, etc.

Alcohol use is a spectrum with many shades of gray. Often where an individual falls depends less on how much they drink and more on why they drink and what happens when they drink. Examining this as an individual can often be a very rewarding experience.

Regional Mental Health Coalition
NORTHEAST INDIANA

For more information on alcohol use, including a self-screening to determine if your drinking may be problematic, visit **LookUpIndiana.org/Topics/Alcohol Use.**

Neonatal Abstinence Syndrome | T. Anthony GiaQuinta, MD, FAAP

As Indiana families continue to struggle with addiction, we know that our children are increasingly caught in the fray. In fact, **every 25 minutes in this country**, a baby is born suffering from opioid withdrawal.

Opioid withdrawal, known as neonatal abstinence syndrome (NAS), leads to the longest length of stay of any disease we pediatricians treat, and also one of the most expensive. NAS is devastating to the child. We know that these infants will be at risk of stunted cognitive and physical development, and more likely to be referred for a disability evaluation.

How can we best protect these babies, our children, our future? It starts with protecting our pregnant mothers that suffer from substance use disorder (SUD). Indiana's pediatricians recognize that substance use disorder is a disease, not a moral failing. Like any disease, a public health approach, centered around prevention, non-punitive early identification, and a system of care that links health systems with social services is critical to improving outcomes in both mothers and infants.

We aren't there yet, however, a recent survey of fifty Fort Wayne area pediatricians, OB/GYN, mental health providers, and child welfare found:

- Only 16% felt that pregnant women with substance use disorders are appropriately screened for their disease
- Only 15% of pediatricians felt parents were educated about what to expect after delivery and how to support the prenatal exposed infant in the hospital and at home
- Only 42% of pediatric providers felt that a follow up plan was in place to ensure the infant's safe discharge.
- Only 35% felt ongoing care was coordinated across health and social services

This is why area leaders from all area hospital systems in pediatrics, neonatology, obstetrics, mental health, and most importantly, our social services and judicial leaders, have teamed up as part of the Northeast Indiana Patient Safety Alliance. Our collaboration yielded area-wide recommendations for consistent care of both moms and babies, greatly improving our coordination of care.

One success of this collaboration was the creation of a NAS discharge tool that links the pediatrician, social services, and pediatric specialists together. The goal is for every infant exposed to substance use to be identified, screened for NAS, and handed off to a follow up pediatric provider with the most up-to-date developmental screening tools. DCS has worked hand in hand with its creation, with the hopes of keeping more moms and babies together, and being the safety net along the way. This novel tool was recently chosen for state wide adoption as part of the Indiana Perinatal Quality Improvement Collaboration (IPQIC).

We are proud of our teamwork, and hope we are finally knocking over the silos that have prevented us from truly understanding, treating, and defeating this disease.

Screening Recommendations for Substance Exposed Children

PEDIATRIC PRIMARY CARE PROVIDER LETTER

Visit	Social Determinants Screening	Maternal Depression Screening	Developmental Surveillance	Developmental Screening Tool (ie. ASQ-SE)	Vision Surveillance Strabismus Screening [2]	Hep C Evaluation	Age-Specific Recommendations
Initial [1]	X						Weight, jaundice check
2 week	X						Growth monitoring
1 month	X	X	X				Growth monitoring
2 month	X	X	X				Growth monitoring
4 month	X	X	X			X	Hep C RNA PCR (if indicated)
6 month	X	X	X		X		Evaluate for hypertonicity[3]
9 month	X			X	X		Auditory evaluation [4]
12 month	X		X		X		
15 month	X		X		X		
18 month	X			X	X	X	Hep C Ab, RNA PCR (if indicated)
24 month	X			X	X		
4-6 year	X		X		X	X	School Readiness Screening [5]

[1] First visit should be within 72 hours of discharge from hospital. [2] For any vision concerns or strabismus on exam, refer to Pediatric Ophthalmology. [3] For any hypertonicity on exam after 6 months, refer to First Steps for physical therapy +/- occupational therapy. [4] For infants diagnosed with NAS or those admitted to the NICU. [5] For behavior/development concerns, refer to public school-based services and may refer to Developmental/Behavioral Pediatrics.

Upstream Efforts Aimed at Improving Youth Resilience

Connie Kerrigan, RN & Tammy Toscos, PhD

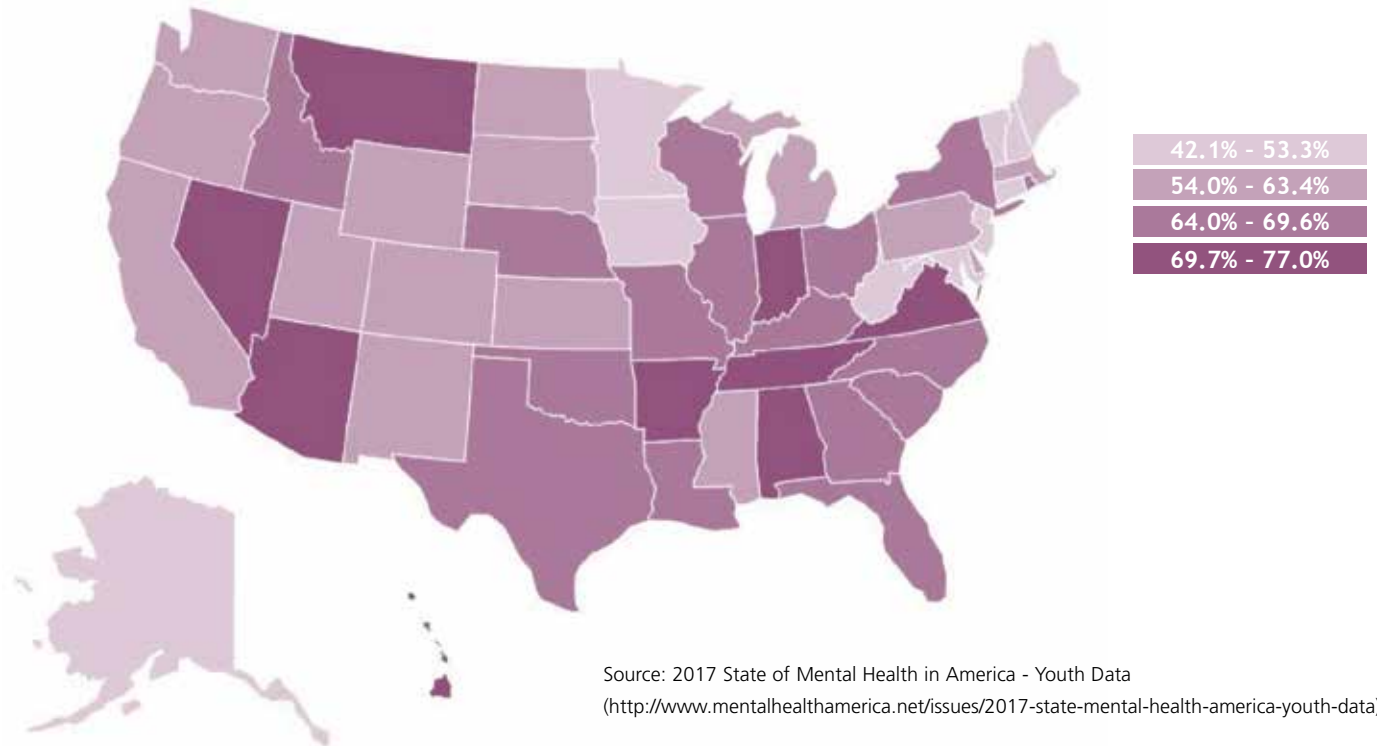
An important way to get ahead of increasing suicide rates and the opioid epidemic is early screening, treatment and prevention. Parkview has engaged community partners for several research and program implementation efforts targeting youth mental wellbeing. Parkview Behavioral Health (PBH), Parkview Research Center (PRC) and The Lutheran Foundation (TLF) began a collaboration in 2014 with an award from the Robert Wood Johnson foundation to determine how technology might be used to support youth mental health.

In our survey of over 3,000 young people in Northeastern Indiana, age 14 – 24, over half of the respondents routinely experience a high stress level of ≥7 (scale 0-10). More than 30% reported depressive symptoms and 15% had contemplated suicide in the past year. Furthermore, over one-third reported feeling so sad or hopeless almost every day for 2 weeks or more in a row that they stopped doing some usual activities. We found youths were willing to reach out for help using technology, but over half would rather talk to someone face-to-face.

When it comes to mental health, early intervention can save a life and the findings from our first study propelled the launch of several initiatives with youth in our area. TLF has a collection of programming being offered in local high schools and middle school that is aimed at increasing personal resilience. PBH and PRC have started two clinically oriented projects targeting screening and prevention, one aimed at identifying the impact of cyberbullying among youth admitted to PBH, and another looking at the impact of integrating a mental health care provider in primary care. To meet the urgent needs of those needing mental health and addiction services, Parkview's partner Park Center offers a Walk in Clinic at 2710 Lake Avenue and is seven days a week from 8:00 a.m. to 10:00 p.m.

To help reduce the incidence of suicide, PBH offers free Question, Persuade and Refer (QPR) suicide prevention training. QPR is an evidenced based technique used to

Figure 1. Percent of Youth with a Major Depressive Episode NOT Getting Mental Health Services



Source: 2017 State of Mental Health in America - Youth Data
(http://www.mentalhealthamerica.net/issues/2017-state-mental-health-america-youth-data)

recognize the signs of someone at risk of suicide, offer hope and get the person the care they need. QPR training is recommended for any one 16 years of age and older. Knowing how to help someone in an emergency has been shown how to reduce suicide and get people the help they need. Parkview has partnered with the community to train over 4,000 people AND more than 40 instructors across northeast Indiana to meet the needs of the community. If you are interested in learning more about how you can help prevent suicide, please visit **https://www.parkview.com/services-specialties/behavioral-health/suicide-prevention**

While all of these initiatives help, it will take the entire community doing all they can to ensure our young people learn skill to cope with stress, build resilience, and get mental health care when needed. Figure 1 demonstrates the gaps in mental health care for youth that exist around the country, where darker shades reveal a bigger gap. This data, collected by Mental Health America, reveals that 64% of youth with major depression in the United States are not getting mental health care. In Indiana, 71% are not getting care. So this means only 3 of every 10 young Hoosiers getting the care they need for a major depressive episode.

These statistics can be viewed a call to action. Everyone can take a stance against the despair of our youth. By taking a proactive approach to parenting, teaching, doctoring, coaching, and providing opportunities to help our children, teens and young adults build the strength and resilience they need to cope with anything from daily life stressors to serious mental illness.

Please join our fight today by taking the steps you can to help. You can start by taking a QPR class.


MEDICATION-ASSISTED
TREATMENT
PREVENTING OVERDOSE
SUSTAINING RECOVERY
Combating Opioid Use Disorder
with comprehensive care
using evidence-based practices
to lift symptoms and allow
patients to focus on
rebuilding their lives.
We Can Help
BowenCenter.org
800-342-5653
BOWEN
RECOVERY
CENTER

The Effective and Responsible Use of Medication-Assisted Treatment (MAT)

Shawn Fingerle, MS, MBA

Every 12 minutes a person in the United States dies from an opioid overdose. 11.4 million people aged 12 and older misused an opioid in 2017 and over 2 million met criteria for an opioid use disorder (OUD). Over 2 million people initiated use of opioids including heroin in 2017. The annual cost of the opioid epidemic was $78 billion in 2013; of that, only 3.6% was spent on treatment. Indiana has an opioid overdose death rate of 12.6 per 100,000 in 2016, an increase of 48.2% over the previous year. In 2017, Allen County, the largest and most populace county in Northeast Indiana, had 127 accidental drug overdose deaths, an increase of more than 70% from 2016. The exponential increase in mortality rates due to opioids and number of at-risk persons for OUD in our area has led to state and local officials proclaiming that Northeast Indiana has an "opioid epidemic".

The Regional Mental Health Coalition of Northeast Indiana (Regional Coalition), a multidisciplinary advocacy body serving 10 northeast Indiana counties, believes that substance use disorders (SUD), including opioid use disorders (OUD), are a chronic disease. Like other chronic diseases such as diabetes and heart disease, SUD can be treated medically and successfully managed. Additionally, the Regional Coalition believes that treatment with Food and Drug Administration (FDA) approved medications in combination with evidence-based psychosocial and behavioral therapies are the most effective form of treatment. Unfortunately, several barriers exist that limit the implementation and utilization of treatment. The National Institute on Drug Abuse (NIDA) reports only 11% of those who were diagnosed with a moderate to severe OUD were prescribed medication in 2017. Blue Cross reports that there was a 493% increase in members diagnosed with OUD but only a 65% increase in the use of medications to treat OUD. These barriers are very evident in Northeast Indiana. In Allen County, less than 3% of those diagnosed with an OUD are treated with medications and in the surrounding nine rural counties of Northeast IN the rate is only 1.1%.

In treating opioid use disorder, evidence shows that current FDA approved pharmacological therapies such as Methadone, Buprenorphine and Naltrexone are highly effective in helping people overcome opioid dependency. Medication-assisted treatment (MAT) can alleviate cravings, significantly decrease withdrawal symptoms and block and/or minimize the effects of opioids in the event of relapse. Several well-designed studies conclude that MAT lowers the risk of overdose death 50% to 79%. Other reputable studies showed engagement into treatment and duration of treatment were significantly increased when clients were on MAT. The data demonstrated that engagement into treatment was increased 40% to 60% for those on MAT and clients stayed in therapy up to 50% longer and were less likely to atypical discharge from treatment when on MAT than those untreated. MAT helps adjust the chemical imbalances in the brain created by the addiction by "calming the brain" from the cravings and withdrawal symptoms associated with the disease, thus allowing the person to more fully engage and benefit from treatment and reclaim their lives. MAT is best delivered by following evidence-based guidelines, such as those provided by the American Society of Addiction Medicine (ASAM) or the Substance Abuse and Mental Health Services Administration (SAMHSA).

Another important aspect to acknowledge is that evidence-based therapeutic programs, such as 12-Step Facilitation, by themselves are useful interventions for successfully treating OUD/SUD. However, the success rates of absence-based OUD programs are much lower than programs where evidence-based therapeutic interventions and MAT are combined. The best course of treatment should be individualized and always be an informed clinical-based decision between the treatment provider(s) and the client.

The Regional Coalition recognizes there is evidence to suggest that FDA-approved medications for OUD alone, without therapeutic interventions, will decrease fatal overdose death and can be an effective harm reduction strategy. The Regional Coalition also recognizes there are some

Continued on page 38

Regional Mental Health Coalition
NORTHEAST INDIANA

To request a copy of the entire MAT white paper, contact Kristina Johnson at **kristina@thelutheranfoundation.org**

Continued from page 37

published studies suggesting there are "no added benefits" to adding therapeutic interventions to MAT. However, after closer scrutiny, it is the opinion of the Regional Coalition that most of the studies that suggest therapeutic interventions are not effective have serious design flaws that potentially skewed the results. Many of the conflicting studies did not use evidence-based therapeutic interventions in the study design and most did not require persons to complete the full course of a therapeutic program as part of the study. Furthermore, most of the subjects in these studies were treated in a primary care setting and thus, had very low severity of illness and lacked co-morbidities. More often than not, the more complex and severe clients, who would most likely benefit from therapy, were excluded from these studies. There are several well-designed published studies that demonstrate long-term improved efficacy with MAT when it is combined with therapy. The best nationally recognized treatment programs view MAT as "assisting" other needed components of treatment and require evidence-based therapeutic interventions to be an essential component of treatment.

The Regional Coalition strongly recommends that MAT be used in combination with evidence-based therapeutic interventions and/or evidence-based curriculum. In conclusion, the Regional Coalition believes combining MAT with evidence-based therapies has proven to:

- significantly increase the possibility of long-term sobriety
- improve other health conditions
- enhance socioeconomic status
- lower overall community health care costs
- decrease crime
- restore relationships
- reduce the transmission of infectious diseases, such as HIV and hepatitis C.

There are several myths associated with MAT, that some treatment providers still believe, that potentially prevent the willingness to initiate MAT treatment. The Regional Coalition believes it is paramount to promote the understanding of SUD/OUD as a biologically based, chronic medical disease.

Viewing OUD/SUD as a chronic brain disease changes how treatment is delivered and allows for medical interventions to be first line therapies. Similarly, as with other chronic diseases like diabetes and heart disease, medication(s) are accepted and proven as first line options for the management of the disease. Likewise, MAT should be first line therapy for the treatment of OUD.

Reproductive age women are at highest risk for substance use disorder, and pregnancy may be one of the few times they may present for treatment. The American College of Obstetrics and Gynecology's (ACOG) current stance is that pregnant women who have opioid use disorder should be managed by an experienced provider. ACOG prefers MAT over medically-assisted withdrawal due to the higher risk of relapse (59-90%). There is emerging evidence to suggest that medically-assisted withdrawal may not increase the risk of fetal stress, preterm birth and pregnancy loss as previously thought; however, since studies have shown relapse rates as high as 90%, this is not currently preferred.

Medications which can be used, include methadone and buprenorphine. Methadone treatment during pregnancy continues to require daily dosing. In some instances, methadone dosing may need to be increased, especially during the third trimester, due to the potential for significantly increased metabolism. Minimizing the dose is not recommended as an association of dosage and the likelihood and severity of withdrawal symptoms has not been found in multiple studies. Buprenorphine offers less need for dose adjusting during pregnancy, and lower likelihood of symptomatic opioid withdrawal. A meta-analysis by Zeder, BK et al (2016) finds a lower risk of preterm delivery, improved birth weight and head size in women treated with buprenorphine. Based on distinct advantages and disadvantages of each medication, a treatment plan should be individualized to each patient's specific needs.

Infants born to women using medication assisted therapy are at risk of withdrawal. These infants should be managed by an experienced pediatric provider. Non-pharmacologic care should be initiated quickly after delivery. The American Academy of Pediatrics encourages a non-judgmental approach when addressing these families. Non-pharmacologic care is inexpensive. It should be initiated in the forms of skin to skin/kangaroo care with the mother, breast feeding when there is no concern of poly-substance or illegal substance use, a low stimulation environment (low noise, low lighting), frequent or on-demand feedings and holding, cuddling and swaddling. Methadone and buprenorphine are safe in breastfeeding. All of these non-pharmacologic therapies can decrease the need for pharmacologic treatments in infants, and thus shorten their hospital stay.

The following main points are best practice recommendations from the Regional Mental Health Coalition of Northeast IN for the treatment of Substance Use Disorder. Providers who treat patients for Opioid Use Disorders (OUD) should also screen for co-occurring mental health conditions as well as other SUD, including tobacco and alcohol. Effective care collaboration and care coordination within a community is essential for effective treatment and long-term support.

In conclusion, fatal overdose deaths along with the increasing numbers of individuals dependent upon opioids and other substances in Northeast Indiana have reached epidemic proportions. The societal, fiscal and human costs to our communities and families are devastating. There are effective FDA approved medications that have proven to reduce overdose rates and increase engagement and duration of treatment. Medication assisted treatment for OUD is most effective when delivered with evidence based therapeutic interventions. The greatest need to changing how care is delivered is to confront stigma and promote an understanding of addictions as a biologically based, chronic brain disease that can and should be treated with medical approaches.

Whereas

Addiction is a chronic, treatable disease requiring continuing care rather than episodic, acute care treatment.

We believe:

- Opioid Use Disorders should be viewed as a chronic brain disease that can be medically treated and medically managed.
- Stigma concerning addictions and myths related to MAT should be proactively confronted and ongoing education about OUD should occur with healthcare professionals, the criminal justice system, the Department of Child Services, OUD-affected families and the community at large.
- Public and private insurers should cover all FDA-approved MAT medications, doses and formulations.
- Public and private insurers should cover medically-necessary mental health evidence-based therapeutic interventions at all levels of the continuum (inpatient, outpatient, peer support and residential services) for OUD and SUD.
- Private insurers should design plans to include OUD and SUD screenings under preventive care benefits.
- Financial qualifications for Medicaid for pregnant moms should be increased to 200% of federal poverty to assure that lower income families who have private insurance have a second source of payment, to cover deductibles and other out-of-pocket expenses.
- MAT and addiction management should be integrated into medical school, advanced practice providers (APP) curriculum and master's level mental health and social work programs.
- Providers of OUD therapy should be licensed in a mental health field and/or have relevant ongoing certification and specific training in OUD.

Whereas

OUD medications reduce illicit opioid use, retain people in treatment, and reduce the risk of opioid overdose death better than treatment without medications.

We believe:

- All patients diagnosed with an OUD should be evaluated for medication management. Medications for OUD should be integrated into all treatment settings including forensic diversion, residential, inpatient and outpatient programs.
- Prescribers should be encouraged to become data waivered and incentivized to manage OUD like other chronic diseases.
- Pregnant women with OUD can be safely treated with either buprenorphine or methadone; neonatal opioid withdrawal syndrome is a treatable condition with no identified long-term sequelae for the child.

Whereas

MAT is most effective to lifelong sobriety for OUD when combined with evidence-based therapeutic interventions and on-going support.

We believe:

MAT is best delivered by following evidence-based guidelines such as those provided by ASAM or SAMHSA.

- MAT treatment should be individualized and should be based on a variety of factors, such as, drug abuse patterns, past treatment experiences, relapse history, family and peer support, level of care needed, recovery prognosis, financial feasibility, insurance coverage, living arrangements, employment factors, and client preferences, to support lifelong recovery and remission of the disease.
- OUD medications can be taken on a short- or long-term basis, including as part of medically supervised withdrawal and as maintenance treatment. The best results occur when the patient receives the medication as long as it provides a benefit.

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Bonn-Miller, M., et al. Labeling accuracy of cannabidiol extracts sold Online. JAMA. 2017; 318(17):1708-1709.

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Non-Opioid Pain Management Options

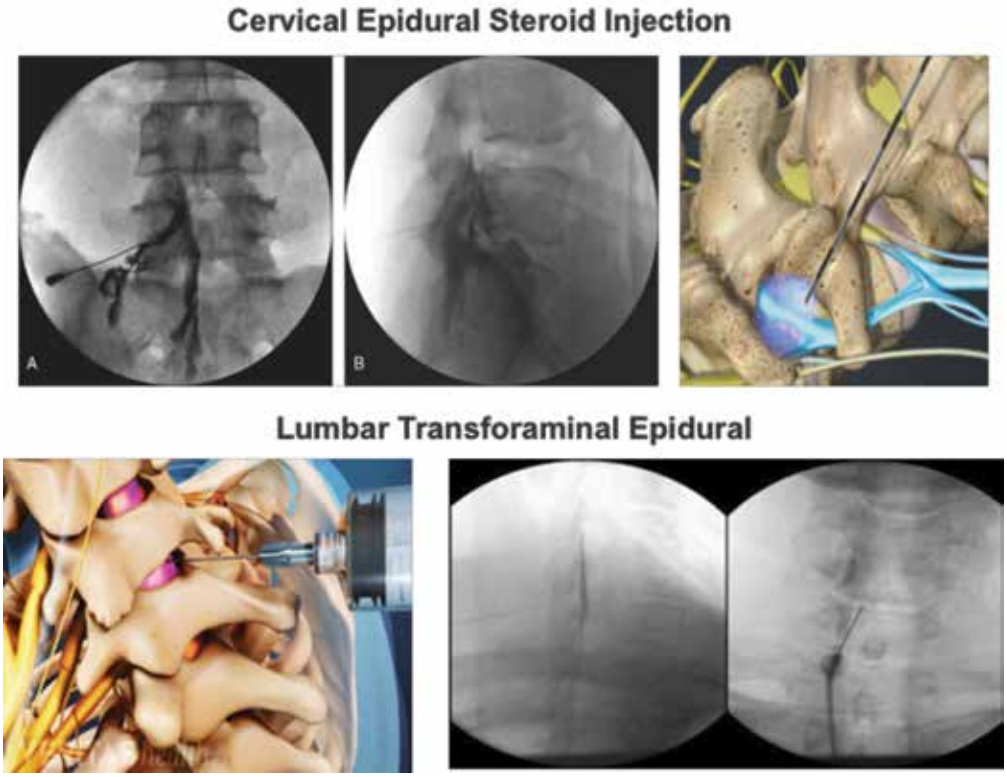
Daniel C. Roth, DO, MBA, MS, Medical Director, Summit Pain Management

The goal of this article will be a short synopsis of some potential pain management treatment options that may not readily come to mind. Most clinicians are familiar with things like lifestyle modifications, physical therapy, NSAIDS, anticonvulsants, antidepressants, and chiropractic care. However, treatment options like facet joint denervation, spinal cord stimulation, and regenerative medicine, may sound foreign. The following paragraphs will attempt to briefly and concisely outline some therapeutic options that may be beneficial for your chronic pain patients.

Cannabidiol (CBD Oil)

Since it's legalization in March 2018, hemp-derived CBD oil has grown in popularity. This is for a good reason. Cannabidiol, other endogenous cannabinoids, and terpenes contained in the hemp-derived oil can have significant clinical benefit in the areas of pain, insomnia, and anxiety.

Please refer to the fall edition of the Fort Wayne Medicine Quarterly *to learn more about CBD oil.*



Epidural Steroid Injections

The use of epidural steroid injections has been one of the mainstays in pain management for many years. However, it is very important to understand the application of this procedure. It is indicated for acute or acute on chronic radicular pain (extremity pain).

In most circumstances, epidural steroid injections are not a good option to alleviate low back pain, or pain in extremity that is secondary to chronic nerve damage. Consistent with the therapeutic agent, the issue must be inflammatory in nature.

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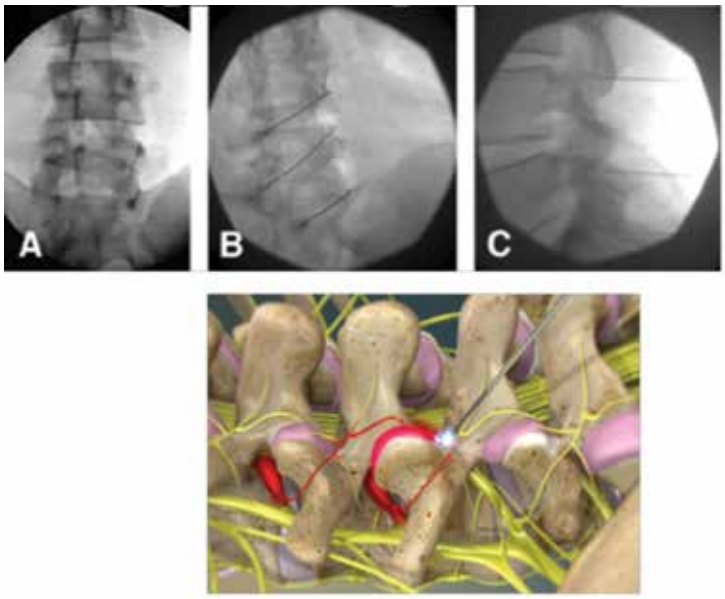
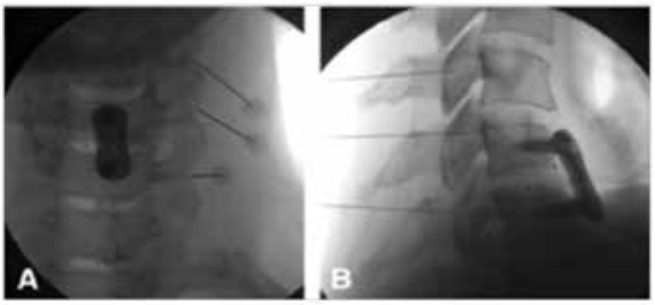
Lumbar Facet Joint Rhizotomy



Patients presenting with axial low back pain typically have discogenic or facetogenic mediated pain. Diagnostically, imaging and physical exam can clue you into the pain generator. In my clinical experience, a large proportion of chronic low back pain is facetogenic. To differentiate discogenic versus facetogenic pain, a diagnostic lumbar medial branch block is performed. This will temporarily denervate the lumbar facet joints for a period of 4 to 6 hours and if the patient experiences significant clinical relief the treating physician will proceed with the rhizotomy. After the rhizotomy is complete, and the pain has improved, a course of physical therapy would be appropriate to strengthen the deep spinal stabilizing muscles of the lumbar spine.

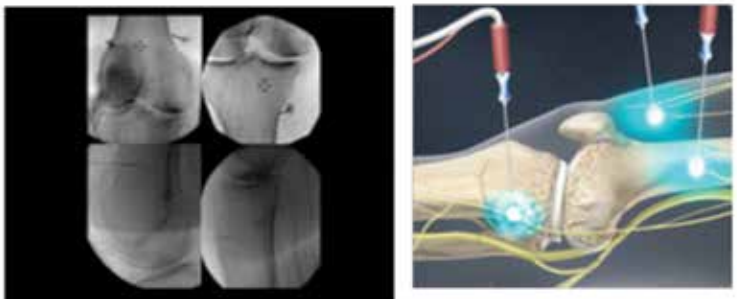
Cervical Facet Joint Rhizotomy



Perhaps one of the most underutilized treatments for chronic migraine headaches, which are cervicogenic in nature, is the use of cervical facet rhizotomy. Utilizing this therapeutic procedure the treating physician will first perform a cervical medial branch block. This will temporarily denervate the facet joints typically in the upper cervical spine to stop the pain signals being carried by the nerve. Cervical branches from the C2, C3, C4, and C5 ventral and dorsal rami are intimately connected to the third occipital nerve, greater and lesser occipital nerves, and greater auricular nerve.

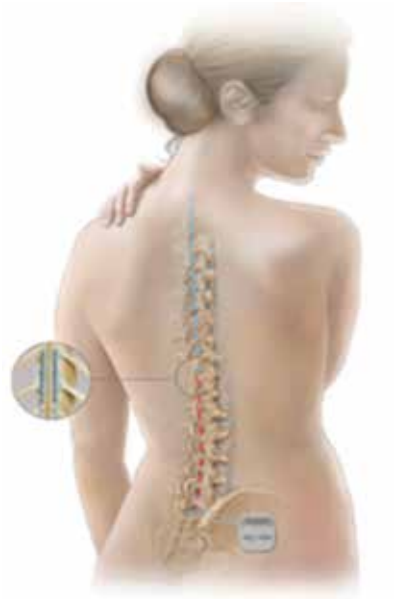
In my clinical experience, having performed thousands of these procedures, I can say that it has unequivocally had a significant positive impact on migraine headache management. This procedure usually yields results that last 6 to 12 months. At that point, the rhizotomy is then repeated.

Genicular Nerve Rhizotomy



Many patients with end-stage osteoarthritis of the knee, or patients who have contraindications to knee replacement surgery secondary to medical comorbidities, would be good candidates for genicular rhizotomy. Additionally, some patients with total knee arthroplasty have pain after the procedure that can be long-standing. This is a procedure where branches of the genicular nerves are anesthetized diagnostically, similar to the previously discussed facet rhizotomy. If the procedure yields clinical relief of pain, then the rhizotomy is performed. This typically lasts for 6 to 12 months, and can be repeated.

Neuromodulation/ Spinal Cord Stimulation



Spinal cord stimulation (SCS) is used in several clinical instances to treat chronic neuropathic and nociceptive pain. The clinical syndromes that respond best to neuromodulation are typically:

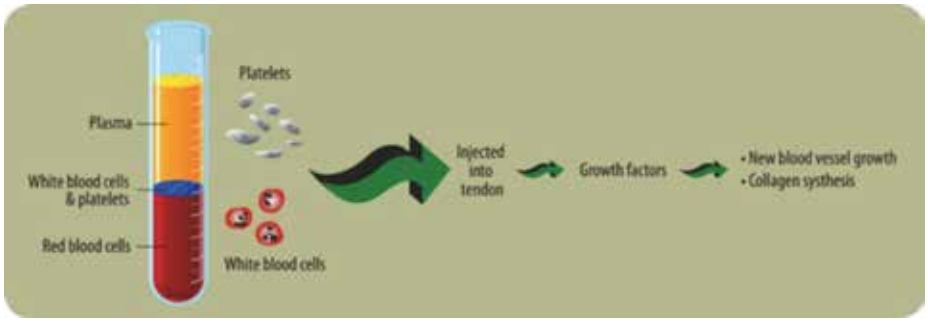
- post laminectomy/failed back surgery syndrome (which typically will include extremity pain),
- alcohol-induced peripheral neuropathy,
- diabetic peripheral neuropathy,
- peripheral neuropathy related to chemotherapy,
- complex regional pain syndrome type I and type II, and
- post herpetic neuralgia.

Prior to the permanent placement of the impulse generator and lead, a trial is performed. A lead is temporarily placed into the epidural space and connected to an external battery that the patient wears around their waist. The trial typically lasts for 5 to 7 days, giving the patient a chance to "test drive" the therapeutic device. The SCS implant is very simple and minimally invasive.

Regenerative Medicine

Platelet Rich Plasma

The initial treatment in the field of regenerative medicine was platelet rich plasma (PRP). Platelet rich plasma is exactly what it sounds like. The patient's blood is drawn, the serum is separated, and is then centrifuged to concentrate the platelets in the lower most portion of the aliquot. Depending on the pathology being treated, the physician may opt to use leukocyte-rich PRP versus leukocyte-poor PRP. Usually with musculotendinous pathology leukocyte-rich PRP is utilized. With intra-articular injections, leukocyte-poor PRP is utilized. Results are typically seen in 6-12 wks.



Stem Cell Therapy

Not to be confused with embryonic stem cell therapy, mesenchymal stem cell therapy is a process by which stem cells are harvested from either bone marrow or adipose tissue. Stem cells are readily available in the bone marrow, as most people in medicine know. In the vascular stromal tissue of the adipocytes, there are cells around small arterioles and capillaries called pericytes. It is believed that the pericytes act as stem cells.

Once stem cells are extracted and concentrated, they are then injected into the site of pathology. Common locations for stem cell therapy include joints, spinal discs, and musculotendinous locations. There are two primary mechanisms. Mesenchymal stem cells exert to promote regenerative healing. First, being mesenchymal stem cells, they have multipotent proliferative potential, meaning they can differentiate into the native tissue. Additionally, stem cells will leave the location of the injection into the vascular circulation and act to recruit other cells to the area for the regenerative process. This is done primarily through an exosome mediated process.

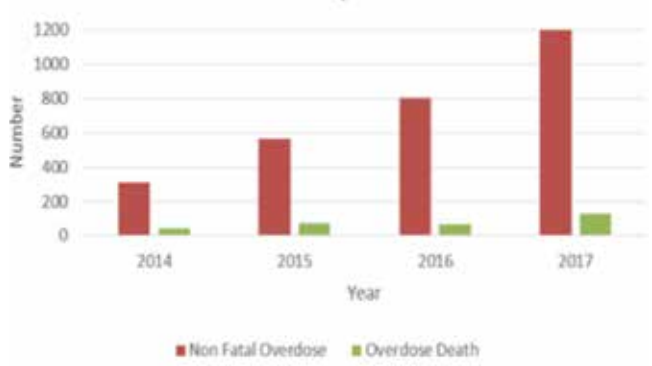
Whether using PRP or stem cell therapy, it is important to discuss with the patient the risks, benefits, and timeline for improvement. Specifically, it can take three months before the patient notices a significant amount of change. In some patients it may take up to six months. In most cases the PRP procedure is done twice within a six month period. With mesenchymal stem cell therapy, we usually follow up the initial stem cell procedure with a PRP booster at six months.

Overdose Deaths in Allen County, IN: A Decade of Data

Jana Sanders, M En, Public Health Informatics

Deaths that occurred in Allen County, Indiana as a result of a drug overdose were examined through the study – *A Retrospective Analysis of Overdose Deaths in Allen County, 2008-2017*. This study looked at data from the death certificate, Allen County Coroner's Office's file, including toxicology results, and the INSPECT report. A total of 634 individuals' deaths were examined. This data collection is important because according to the CDC, in 2008 there were 825 non-medical users for every one overdose death. According to the Fort Wayne Police Department's Vice and Narcotic Division, documented non-fatal overdoses in Allen County increased from 310 in 2014 to 1,200 in 2017, as fatal overdoses also increased from 44 to 128 during that same period (figure 1). This study has also provided insight into certain trends and the evolution of the drug crisis in Allen County.

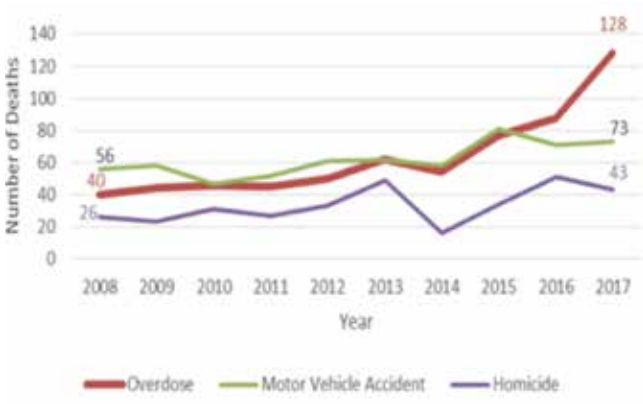
Figure 1: Comparison of Non-Fatal and Fatal Overdose Deaths by Year



In 2017 Fort Wayne Police Department responded to 1200 non-fatal overdoses compared to 128 known fatal overdoses, indicating the epidemic that Allen County is faced with.

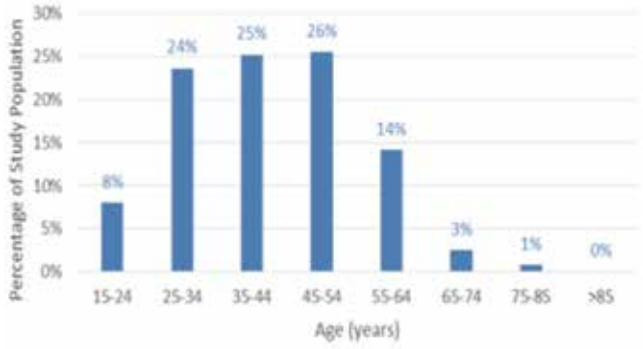
2017 saw the largest number of overdose deaths with a total of 128, which was a 45 percent increase from 2016 (n=88). When looking at the entire study period, Allen County saw a 220 percent increase in the number of overdose deaths since 2008 (n=40) (figure 2).

Figure 2: Cause of Death in Allen County, Indiana by Year, 2008-2017



Allen County, Indiana saw a 220% increase in deaths resulting from drug overdoses from 2008 to 2017. 2017 alone saw a 45% increase in the number of deaths from the previous year. Other leading causes of preventable deaths for which regulator responses are implemented pale in comparison to the number of overdoses in 2017.

Figure 3: Age Distribution of Overdose Deaths in Allen County, Indiana, 2008-2017

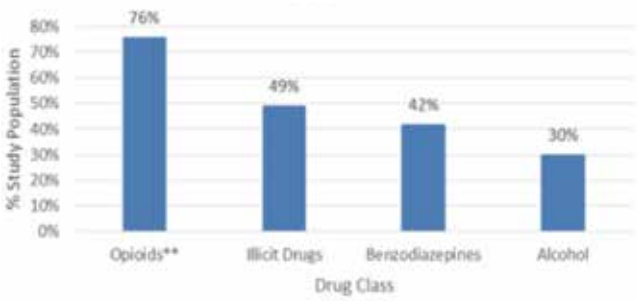


Over the 10 year study period, the average age of decedents was 41 years of age, with 90% of the individuals being distributed almost evenly between the ages of 25 and 64 years.

Sixty-three percent of the decedents were male and 90 percent were between the ages of 25 and 64 years of age (figure 3), with the average age of the study population being 41 years of age. Seventy-six percent of overdoses occurred at a residence of some type and 71 percent of individuals were identified as being employed at the time of their death. Eighty-five percent of the drug overdose deaths were accidental.

When looking at the toxicology reports, it was observed that over the 10-year study period the top four drug classes found in the decedents system were opioids (including prescription opioids, methadone, fentanyl, and weak opioids classes), illicit drugs, benzodiazepines and alcohol (figure 4).

Figure 4: Drug Class Found in Toxicology Screen of Overdose Deaths in Allen County, Indiana, 2008-2017

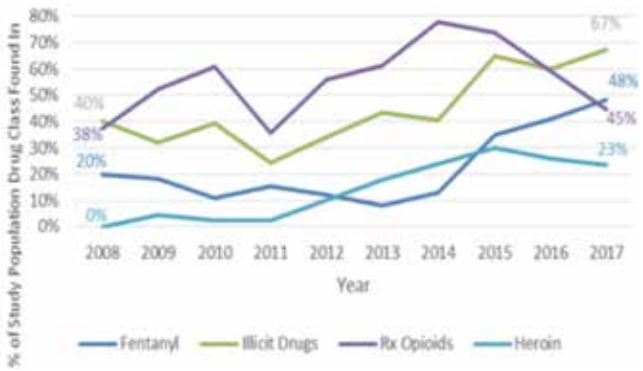


Opioids were found in most individual's toxicology screens. Illicit drugs were found in almost 50% of the population.

When looking specifically at prescription opioids, the percentage of prescription opioids found in the study population peaked in 2014 with 78 percent of the study population having prescription opioids found in their toxicology reports. As an interesting sidebar, 2014 is also when the prescribing rules were implemented for physicians, which helped decrease the amount of prescription opioids being prescribed to 45 percent in 2017. Illicit drugs were found in 49 percent of the study population throughout the study period, showing a trend upwards in recent years from 40 percent in 2008 to 67 percent in 2017. In particular, heroin increased from 0 percent in 2008 to 23 percent in 2017 while the presence of fentanyl increased from 20 percent in 2008 to 48 percent in 2017 (figure 5). Benzodiazepines and Methadone both decreased over the study period from 47.5 percent and 27.5 percent to 20.3 percent and 3.1 percent respectively (figure 6).

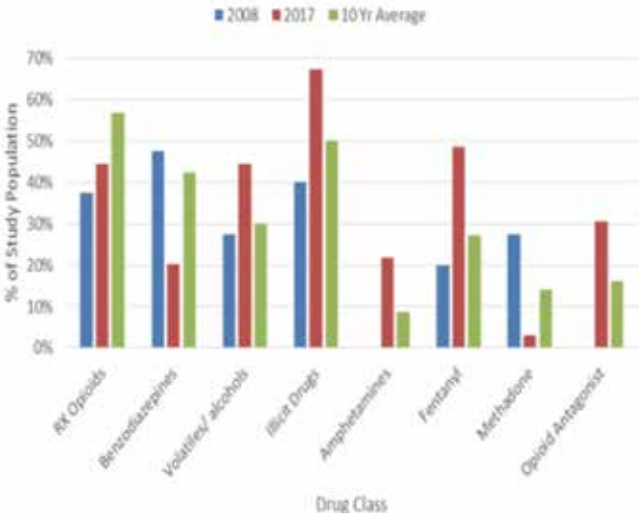
Public Health Informatics as a discipline strives to link public health professionals, public officials, partner entities, and the community with relevant public health statistics. The Allen County Department of Health's Informatics division works with community partners to provide data from various initiatives. A brief description and summary of results of a couple of those initiatives are discussed here but can be found in more detail in the 2018 Allen County Department of Health Annual Report.

Figure 5: Evolving Drug Trends in Allen County, Indiana Overdose Death Toxicology Reports, 2008-2017



Although trends changed during the study period, the most prominent is the rapid decrease of opioid prescriptions after 2014 and the dramatic increase of illicit drugs, including fentanyl and heroin. Heroin had a sharp increase in 2012 and continued to rise until 2015 when heroin started to become more prominently cut with illicit fentanyl. In 2017, 67% of individuals toxicology screens had an illicit drug found in their system, speaking to the evolution of this drug crisis.

Figure 6: Changes Over Time in the Presence of Drug Classes in Overdose Deaths in Allen County, Indiana, 2008-2017



When comparing drug classes over time looking at 2008 and 2017 it is noteworthy that the presence of Illicit drugs, fentanyl, and alcohol increased. When looking at the entire study period, it is quite clear that the efforts to reduce the number of prescription opioids and benzodiazepines has been successful.

Contribution of Opioids to Traumatic Falls

During the summer months of 2018, Allen County Health Commissioner Dr. Deborah McMahan and Informatics Director Jana Sanders participated in the IU School of Medicine Fort Wayne's Student Education and Research Fellowship Program as proctors to Stephanie Adjei, IU School of Medicine Fort Wayne, and Jake Muha, IU. Along with community partners Lisa Hollister, Director of Trauma & Acute Care Surgery for Parkview Trauma Centers, and Annette Chard, Trauma Program Manager for Lutheran Hospital, the group examined the potential role opioids played in individuals admitted to a local trauma center as a result of a fall through the study.

A Retrospective Analysis of Fall Patients and the Potential Contribution of Opioids.

Background: The leading cause of death due to unintentional injuries amidst individuals 65 years and older is falls, and there is increasing evidence of an association between opioid use and falls in older adults.

Objective: The aim of this study was to observe the rate at which patients admitted to trauma centers had opioids listed on their current medications list or present in their urine drug screen.

Methods & Design: This study conducted a retrospective, descriptive, correlational study of 2,873 patients aged 15 years and older who were admitted to Allen County trauma centers as a result of a fall between January 1, 2017 and April 30, 2018. Data regarding if the patient had an opioid or benzodiazepine medication on their current medications list and if they were discharged with an opioid were gathered via chart review. The age groups were divided into two groups to observe differences between younger and older adults. Associations were evaluated via univariate and multivariate logistic regression tests. Odds ratios (ORs) were utilized to demonstrate the results with 90 percent confidence intervals (90% CI). Additional sub analyses for length of stay (LOS), patient status at time of discharge, and injury severity score (ISS) were also performed.

Results: Of all the patients who were admitted to a trauma center for a fall, 30 percent had an existing opioid prescription in their medical records. Of those that had a documented opioid prescription in their current medications list, 87.2 percent were in the older adult age group. Overall, older adults with an opioid prescription comprised 31.2 percent of the total fall population (OR=0.71; 90% CI 0.59-0.86).

Conclusion: This study demonstrates that the proportion of patients on opioid medications prior to their fall may have been underestimated, compared to the previous literature.

Opioid Use Disorder: Roadmap of Treatment, Research & Innovation at Parkview | Tammy Toscos, PhD.

Behavioral Health Integration in Primary Care

Parkview Research Center (PRC) has partnered with Parkview Behavioral Health (PBH) to evaluate an initiative, funded by the Lutheran Foundation to assess the impact of integrating mental health providers into traditional primary care settings. The purpose of this initiative is to assess the impacts of co-location on increasing access to and reducing stigma associated with mental healthcare. This model has been externally explored, focusing on how health issues like depression, anxiety, suicide ideation and substance abuse can be immediately addressed during a typical physician visit. This model has succeeded in reducing stigma, reducing time for mental health evaluations, and created more holistic care for the patients. Through the evaluation of this study, we hope to see similar patterns in two clinics that are establishing this model as a new standard of care.

Peer Navigator Program for Substance Use Disorder Recovery

The Peer Recovery Program was developed to meet the needs of individuals and families who are dealing with the disease of addiction. In the past several years, the State of Indiana has witnessed a tremendous increase in opioid overdoses; Parkview Health has treated over 1100 non-fatal overdose patients in our Emergency Departments since January 2016. In an effort to combat these tragedies, Parkview sought funding from the Indiana Division of Mental Health Addiction through the CURES (21st Century Cures Act, State Targeted Response to the Opioid Crisis) Grant. This grant allows the hiring of a Peer Recovery Manager and five Peer Recovery Coaches. This team continues to educate themselves on opiate addictions, along with the co-morbidities that accompany drug addiction. Each team member has training in Peer Recovery, QPR (Question, Persuade, Refer), CPR, HIV-HEP A, and naloxone.

A Peer Recovery Coach monitors each of the eight Parkview Emergency's Department's, and responds to all individuals seeking care for opioid misuse. Within a one-on-one conversation, support and encouragement of future recovery is immediately established.

The Coach offers a variety of supports, including but not limited to emotional support, insurance resources, linkage to halfway houses, and medication assistance treatment. All with the goal to offer hope for recovery!

American Hospital Association (AHA) Innovation Competition Winner

The 2018 AHA Innovation Challenge was launched to provide an opportunity for AHA member hospitals and health systems to share creative approaches to integrated care delivery redesign and financing targeted to populations with complex needs. Parkview Innovation coach John Hill and Connie Kerrigan enlisted Parkview Research Center to assist with a submission aimed at developing a mobile application that would keep substance use disorder recoverees connected with their peer navigators. The team won first prize with their innovative idea and a $100,000 award to work on the design and development of the mobile application.

Substance Abuse and Mental Health Services Administration (SAMHSA) $1.5 million Grant to Expand Medication Assisted Treatment

Indiana is one of the top 10 states in opioid related deaths. The loss of life and the financial burdens that have plagued our state are staggering. Our largest county, with just over 350,000 residents, lost on average a person every three days to an overdose in 2017. The 127 deaths we witnessed in 2017 were almost two times that of the prior year. A recent report showed that opioid misuse costs Indiana over 11 million dollars daily and more than 4 billion each year.

Parkview Behavioral Health, Park Center, and the Parkview Research Center came together to develop a grant proposal to battle opioid use disorder by expanding access to medication assisted treatment. In October, 2018 the United States Department of Health and Human Services, SAMHSA awarded Parkview Health roughly $1.5 million over three years to build a hub and spoke model of care delivery. The primary hub clinic will be located in Allen County and established in year one of the grant. The spoke clinics will be established in years two and three of the grant period. In year two, spokes will be set up in Adams, Wells, Huntington, and Wabash counties. In year three, we will add spokes in LaGrange, Noble, Kosciusko, and Whitley counties. This initiative is being led by the principal investigator, Tom Allman, MA, LMHC, LCAC who is Vice President of Addiction Services at Park Center along with Connie Kerrigan who is orchestrating the community connections.

Research: FWMEP

Brian Henrikson, PhD

Physician's Role in Fatal Drug Poisonings

The local opioid crisis has been an area of research for the Fort Wayne Medical Education Program (FWMEP) since 2013. Our efforts have led to a peer reviewed manuscript and 23 local, regional, national and international presentations. The most recent efforts compared INSPECT reports with the toxicology reports of people who died from a drug overdose. These resources have allowed us to demonstrate that physicians are giving an average of ten fewer prescriptions per year for controlled substances. Also, the average daily dose of opioids has been cut in half. The data also showed that in a great many cases where prescription drugs were involved, the person did not have a prescription themselves. They obtained the drugs illegally, such as by theft or diversion from someone with a valid prescription. These results have been presented to numerous local legislative bodies in the past year with the hopes of getting more law enforcement and public health dollars set aside to curb this epidemic in our community.

Assessment of Substance Use and Mental Health

Fort Wayne Medical Education Program in collaboration with Park Center offered patients in the in-patient facility the opportunity to fill out a voluntary survey about the prior substance use and mental health. The survey was developed through a collaboration between numerous area university faculty, FWMEP, the Department of Health and the Fort Wayne Police Department's Division of Vice and Narcotics. The survey was evaluated by an IU-Public Health faculty member with expertise in survey design research. He reviewed and edited the survey. The majority of people were between 26 – 45 years old. Over half of them had child protective services involved as a result of their drug use and 90% of heroin users reported neglecting their family. A fifth of the participants have had Narcan administered to them five or more times!

This epidemic is having a substantial impact on our community and their families. We will be presenting the results of this project this March locally and again in May at a statewide research conference.

These studies show prime examples as to why interdisciplinary collaborations are essential to helping address the drug crisis the country currently faces. No one entity will solve this ever-evolving drug crisis by themselves, but rather, to make sound, evidence-based decisions, resources and knowledge needs to be pooled for the greater good.

Lutheran Downtown Hospital

Construction kickoff for $120 million project expected this summer

Lutheran Health Network recently shared additional details about St. Joseph Hospital's replacement facility, which will ultimately be called Lutheran Downtown Hospital.

Situated at the southwest corner of Main and Van Buren, the 60-bed acute care hospital will be built across the street from the existing hospital on property that's currently designated for physician and employee parking. Lutheran Downtown's main entrance will be on Van Buren facing east. The decision to build a leading-edge, vibrant hospital in this area is consistent with Lutheran Health Network's goals to stay downtown and remain an active participant in its success.

The planned size of the facility reflects that more and more services are being offered in outpatient settings as medical technologies advance. The facility will be built with space to accommodate future growth to more than 100 beds, based on the community's needs. Design work and planning with local officials will begin immediately. Construction of the five-floor, 181,000-square-foot hospital is expected to begin this summer, once the required city and state approvals are received, and will take between 18 and 24 months to build. Anticipated completion of the project is late 2021.

Upon completion, Lutheran Downtown will include a 19-bed emergency department, a six-suite OR, three cardiac catheterization labs, two gastroenterology suites, hyperbaric medicine, wound care, imaging services including MRI and CT, robotic-assisted surgery, laboratory services and the regional burn center. With input from its employees and members of the medical staff, the full scope of services available at Lutheran Downtown will continue to be solidified.

The attached medical office building on campus, which was expanded and renovated in 2008, and the parking garage will continue to be utilized once Lutheran Downtown opens. At that time, the old hospital will be razed to allow for additional parking. The vacant plaza office building, which once housed the school of nursing, will also be demolished.

Lutheran Hospital Receives Accreditations from the American College of Cardiology

The American College of Cardiology has recognized Lutheran Hospital for its demonstrated expertise and commitment in treating patients who come to its cardiac cath lab for care, including diagnostic catheterizations and percutaneous coronary interventions. Lutheran achieved Cardiac Cath Lab Accreditation with PCI based on rigorous onsite evaluation of the staff's ability to evaluate, diagnose and treat patients in this setting. Lutheran is the second Lutheran Health Network facility to earn this distinction. St. Joseph Hospital was the first in Indiana to achieve the accreditation in January 2018.

The ACC has also recognized Lutheran with its Heart Failure Accreditation. Lutheran's team was assessed on its ability to evaluate, diagnose and treat patients with heart failure through prehospital care, early stabilization, acute care, transitional care, clinical quality measures and more. Facilities that achieve accreditation meet or exceed an array of stringent criteria and have organized a team of doctors, nurses, clinicians, and other administrative staff that earnestly support the efforts leading to better patient education, improved patient outcomes, and more effective and efficient disease control.

Lutheran Children's Hospital

In December, the Dupont Hospital unveiled three different areas that had undergone transformations during the previous 14 months. New additions at Dupont included the establishment of a six-bed inpatient unit for general pediatric care and a three-bed pediatric intensive care unit. Nurses and therapists with advanced training in pediatrics and pediatric intensive care, respectively, will work alongside physicians who also deliver specialized pediatric care at Lutheran Children's Hospital.

The new pediatric inpatient unit on the second floor was previously designated for medical surgical patients. That space has been significantly changed to reflect the warmth and color of Lutheran Children's Hospital. New features for Dupont include pediatric hospitalist coverage, a pediatric treatment room, a pediatric playroom and an emphasis on family-centered care to allow more opportunity for parental involvement.

Dupont's new pediatric intensive care unit is located in a secured area just beyond the pediatric inpatient unit. It is supported by pediatric specialists and offers advanced monitoring equipment and ventilators. Like the pediatric inpatient unit, it has sleeper sofas for parents and private bathrooms.

A separate but concurrent renovation at Dupont included the addition of 10 private neonatal intensive care beds, which brought the total number of private NICU beds on the hospital's third floor to 25.

This new section of Dupont's Level III NICU was constructed in space that was left shelled during the hospital's first major expansion in 2006.

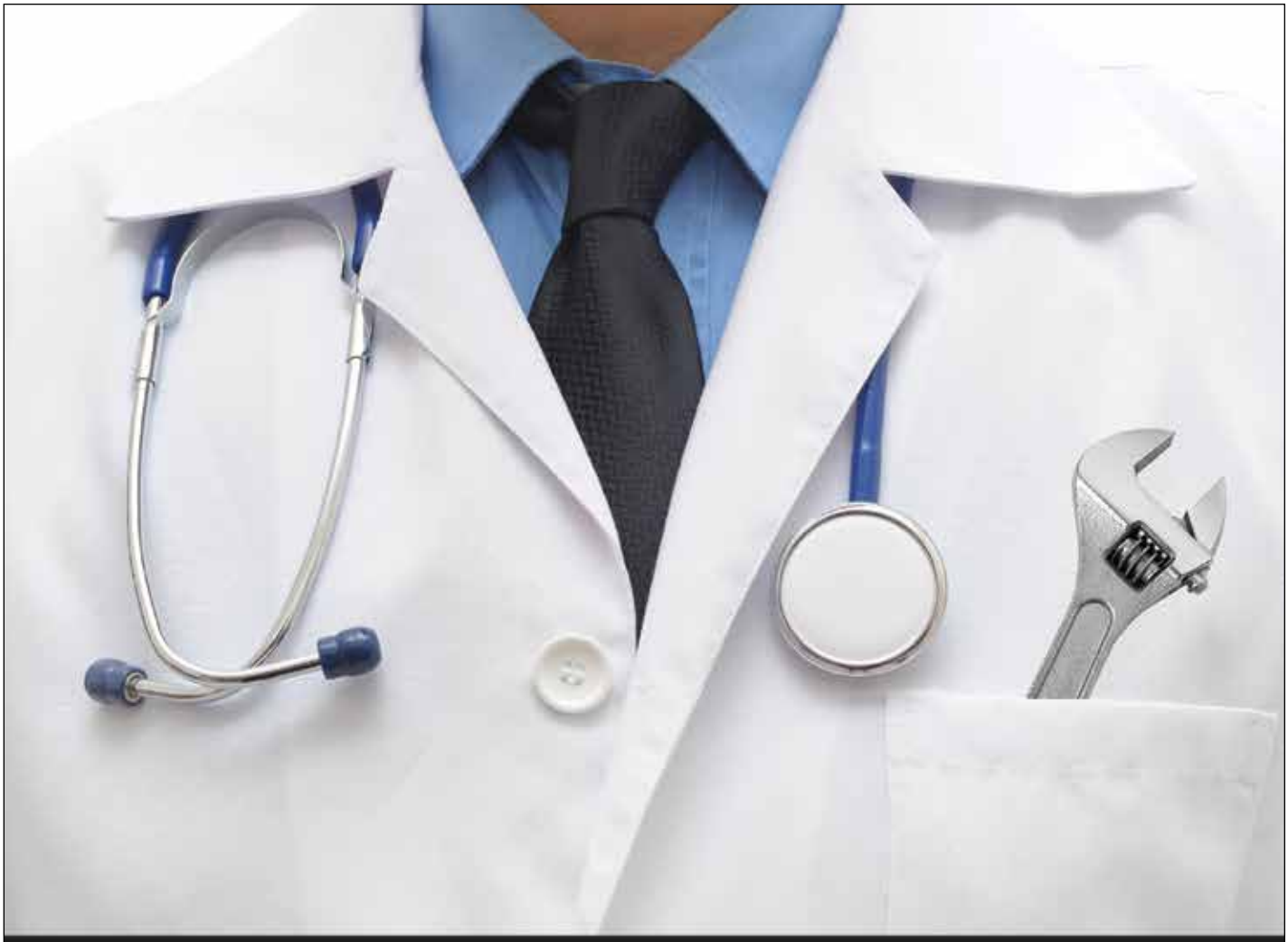
Including beds located in an open NICU overflow area on Dupont's second floor, the hospital will soon have the capacity to care for 33 total preemies with 24/7 in-house coverage from board-certified neonatologists. All third floor NICU rooms at Dupont, including those designed for multiples, are private.

First Robotic-Arm Joint Replacement

Representatives of The Orthopedic Hospital of Lutheran Health Network including medical staff members from Fort Wayne Orthopedics recently demonstrated northeastern Indiana's first robotic-arm assisted joint replacement surgery system as part of a training session.

Those assembled also had the option of donning appropriate cover to enter an OR for a brief glimpse of a training session that showed the system's capabilities for hip, knee and partial knee replacements.

Prior to surgery, a CT scan of the joint being replaced is uploaded into system software and a virtual 3D model is created. The orthopedic surgeon uses the virtual model to help identify details such as appropriate implant size, orientation and alignment, and then develops a precise pre-surgery plan. During surgery, the orthopedic surgeon guides the robotic arm, removing diseased bone and cartilage and positioning the new implant based on the predetermined surgical plan. The system also enables the surgeon to virtually adjust the plan as needed.



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Parkview Behavioral Health receives 2018 Press Ganey NDNQI Award for Outstanding Nursing Quality®

Parkview Behavioral Health has been awarded the 2018 NDNQI Award for Outstanding Nursing Quality® by Press Ganey. The award recognizes the psychiatric hospital that has achieved excellence in overall performance in nursing quality indicators and has also made impressive and measurable improvements in nursing performance and patient outcomes.

The 2018 Press Ganey NDNQI Award is given annually to the top performing organization across 17 quality measures in each of seven categories: academic medical center, teaching hospital, community hospital, pediatric hospital, rehabilitation hospital, psychiatric hospital and international. The highest-ranking hospital in each category receives the award.

Parkview Heart Institute receives American College of Cardiology's highest recognition

The American College of Cardiology (ACC) has recognized the Parkview Heart Institute for its demonstrated commitment to comprehensive, high-quality cardiovascular care and culture of continuous improvement. The Parkview Heart Institute was awarded the HeartCARE Center National Distinction of Excellence, based on meeting accreditation criteria related to quality of care, and through their ongoing performance registry reporting.

The Parkview Heart Institute has been recognized because of the strength of its programs treating patients with a heart failure diagnosis and heart rhythm disorders. In addition, the Parkview Heart Institute participates in the Peripheral Vascular Intervention Registry, providing another level of quality standards for patient care.

Hospitals and health systems that have earned an ACC HeartCARE Center designation have met a set of criteria, including at least two ACC accreditations, and a third cardiovascular accreditation or ongoing reporting to a national cardiovascular data registry, and participation in efforts to close gaps in guideline-based quality of patient care.

New Parkview Sports Medicine Field Turf, performance center open at Empowered Sports Club

Officials with Empowered Sports Club and Parkview Sports Medicine celebrated the opening of the new Parkview Sports Medicine Field Turf and Parkview Sports Medicine Performance Center at Empowered Sports Club, both of which are expected to serve thousands of athletes in northeast Indiana.

The nearly 26,000 square foot Parkview Sports Medicine Field Turf provides a multi-sport training facility for athletes of all ages. Fort Wayne Sport Club, a soccer organization with roots dating back to 1927, is the flagship club that will utilize the space, in addition to athletes playing rugby, lacrosse, baseball and flag football. The turf can be divided into as many as four smaller fields with marked lines, goals and safety netting. The mezzanine at Empowered Sports Club gives spectators a great view to watch on-field activities.

The 8,000 square foot Parkview Sports Medicine Performance Center will offer sports performance training to young athletes beginning at age eight through college. The facility includes a multi-purpose turf designed for speed, agility and injury prevention training, two fully-equipped weight rooms for strength development and sports performance training programs staffed by Parkview Sports Medicine professionals.

In all, nearly 500 Fort Wayne Sport Club soccer athletes will join roughly 300 Empowered Volleyball Academy athletes, and those from various other sports, in using both the Parkview Sports Medicine Field Turf and Parkview Sports Medicine Performance Center year-round

Samaritan 2 celebrates 20 years

Parkview Health Flight Services celebrated the 20th anniversary of the Parkview Samaritan 2 medical helicopter with an open house Saturday, Feb. 2. Samaritan 2, which is based at the Fulton County Airport in Rochester, IN, averages one and a half calls per day. It has transported more than 8,000 patients in the North Central IN region since Feb. 1, 1999.

Parkview Huntington Hospital Center for Wound Healing opened December 2018

On Dec. 18, the new Parkview Huntington Hospital (PHH) Center for Wound Healing officially opened its doors to patients. Now, Huntington County residents who have struggled with chronic, non-healing wounds have closer-to-home access to clinically proven, state-of-the-art treatments that can help their bodies heal.

The need for specialized wound care locally is significant, says Juli Johnson, president, PHH: "Diabetes and other medical conditions present serious challenges for many area residents. Often, those conditions – or even injuries, such as burns or other traumas – can lead to painful, lingering wounds that resist healing. Our team at the center will be focused on helping these individuals find relief and improvement."

Until now, patients who needed this kind of care typically had to travel out of county, which can be especially difficult for individuals without regular transportation, or who may reside in senior facilities.

The 3,657-square-foot space inside the center encompasses the hyperbaric oxygen (HBO) suite – which features two, see-through HBO chambers – five treatment rooms, a changing area with lockers and restrooms, supply storage, reception and waiting area, and offices. Treatments offered include HBO therapy, negative-pressure wound therapy, bioengineered tissues, biosynthetic dressings and growth-factor therapies, as well as debridement. PHH is partnering with Healogics, the nation's largest provider of advanced wound care services, to make the range of therapies available.

The facility is the third such Center for Wound Healing to be added to a Parkview hospital in recent years; other centers are located at Parkview Randallia Hospital in Fort Wayne and Parkview Noble Hospital in Kendallville. All three centers operate under the medical direction of Parkview physician James Edlund, MD.

Edlund and the center's care team members were on hand for a ribbon-cutting ceremony PHH leaders held on the day before the opening, in partnership with the Huntington County Chamber of Commerce. They were joined by members of the hospital's board of directors, the Parkview Huntington Foundation board, Chamber Ambassadors, and local business, government and community leaders. Hospital and medical office building co-workers and the medical staff were invited to visit the wound center for a quick look before it would begin serving the public.

Juli Johnson (center), PHH president, prepares to cut the ribbon for the Parkview Huntington Hospital Center for Wound Healing at an event in December. Joining her to celebrate the opening are (left to right) Todd Sider, MD, who will provide care at the center; Darlene Stanley, member, PHH Board of Directors; Susan Zahn, member, PHH Board of Directors; Amy Rosen, clinical program director for the center; John Nelson, member, PHH Board of Directors; Ryan Warner, chair, PHH Board of Directors; James Edlund, MD, medical director for the center; Doug Selig, vice president, Patient Care Services, PHH; Jeremy Nix, chair, Parkview Huntington Foundation Board of Directors; and Sonya Foraker, manager, Finance, PHH.

PHH Center for Wound Healing team members joined hospital leaders in the ribbon-cutting event for the center in December. Shown left to right are: Maia Brainard, Healogics; Susan Oedy, Healogics; Jessica Goodnight, nurse; Diane Shaw, hyperbaric tech; Juli Johnson, president, PHH; Jennica Maggard, nurse; Amy Rosen, clinical program director; James Edlund, MD, medical director for the center; Ryan Warner, chair, PHH Board of Directors; Sonya Foraker, manager, Finance, PHH; and Doug Selig, vice president, Patient Care Services, PHH.

Fort Wayne Medical Society Mission Statement

The Fort Wayne Medical Society is committed to the goals of the American Medical Association, the purpose of which is the preservation of the art and science of medicine, the personal development of member physicians and the protection and betterment of the public health.

The Fort Wayne Medical Society is committed to the principles of physician autonomy and self-determination in the practice of medicine.

The Fort Wayne Medical Society is committed to fulfilling the role of an active cohesive leader of the healthcare resources of our community by maintaining and assuring the quality, availability and the responsible economic utilization of our healthcare resources.

The Fort Wayne Medical Society is committed to active involvement in the decision-making process regarding medical, social, political and economic issues affecting patients and physicians within hospital and all various inpatient and outpatient settings.

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