OPIOID OVERDOSE CRISIS PREVENTION IN RILEY COUNTY, KANSAS

RILEY COUNTY HEALTH DEPARTMENT

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OPIOID OVERDOSE CRISIS RESPONSE COOPERATIVE AGREEMENT

- Funded by the CDC in collaboration with the KDHE
- Awarded in 2018 to the RCHD and other health departments statewide
- Ran from February to October 2019
- Purpose of raising awareness and preventing opioid abuse, misuse, and addiction while considering the needs of our community

COOPERATIVE AGREEMENT GOALS

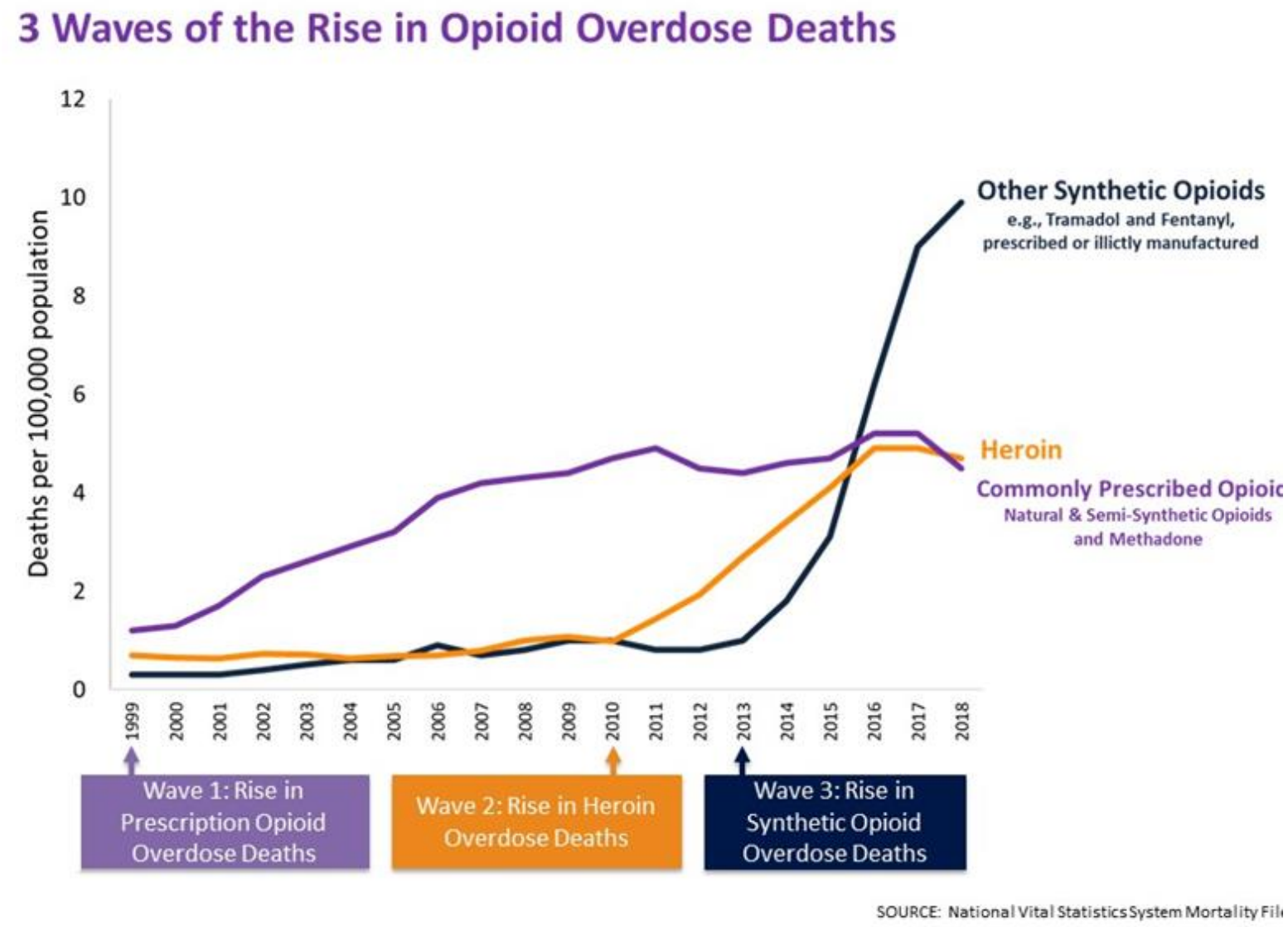
- Create a high-level community needs assessment
- Maintain communication and collaboration with community leaders in law enforcement, first response, education, and healthcare
- Implement a public awareness ad campaign
- Promote referral to treatment and prescription drug monitoring programs to local healthcare providers
- Provide relevant training to first responders, healthcare providers, and community members

PRESENTATION OUTLINE

- Overview of the opioid epidemic
- Learning objectives
- Project description/ Results
- Discussion
- Competencies

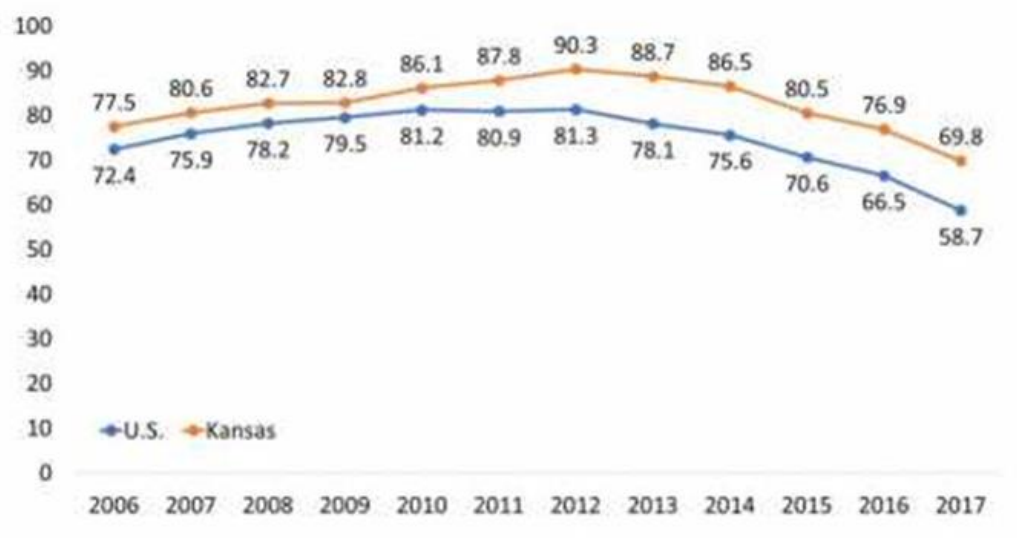
THE THREE WAVES OF OPIOID OVERDOSE DEATHS

- Physician-prescribed opioids (natural & semi-synthetic opioids and methadone) (CDC 2011)
- Those addicted to prescription opioids found heroin to be cheaper and more readily available (Rudd 2014).
- Demand increased and synthetic drugs like tramadol & fentanyl emerged (O'Donnell 2017).

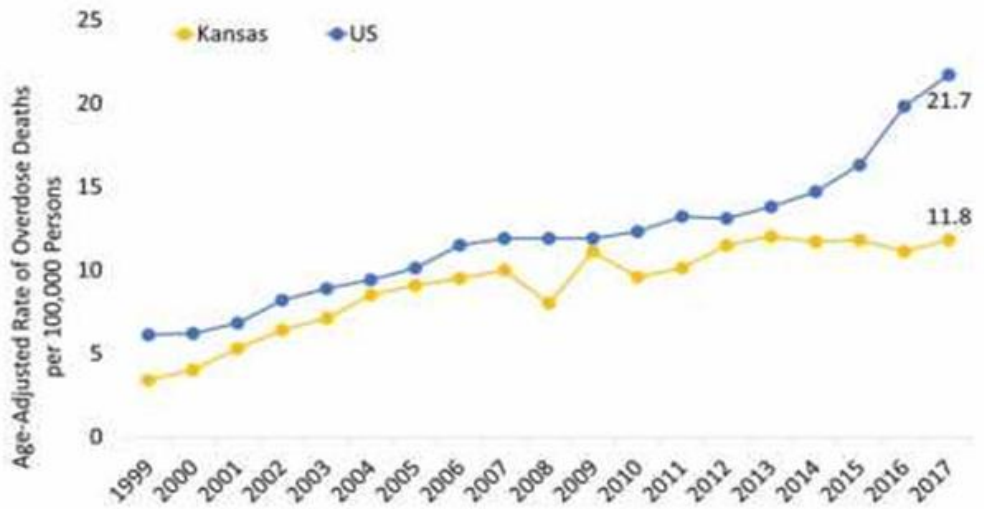


OPIOID STATISTICS STATE- AND NATIONWIDE

- As of 2017, Kansas had a higher opioid prescribing rate than the national average, at 69.8 per 100 people versus 58.7 (NIDA 2019).



- However, drug overdose death rates in Kansas were lower than the national average, at 11.8 per 100,000 people versus 21.7



RILEY COUNTY

- Contains five cities: Manhattan, Leonardville, Riley, Ogden, & Randolph
- Certain unique attributes result in a diverse population
  - 20,799 out of Manhattan's population of nearly 75,000 are K-State students (KSU Registrar 2019).
  - Popular annual events like Fake Patty's Day & Country Stampede bring in over 100,000 visitors each year.
  - Fort Riley military installation located partially in Riley County
  - Location of I-70 brings a lot of traffic through Manhattan and Fort Riley.
- In 2017, Riley County had the lowest rate of opioid prescriptions in the state of Kansas, at 50.5 per 100 residents, or 32,399 prescriptions total (KDHE 2019).
- Our goal was to prevent an increase in opioid addiction and overdose in our county before it happens.

THE RILEY COUNTY HEALTH DEPARTMENT

- Established in 1952 in Manhattan, KS
- Strives "to promote and protect the health, safety and well-being of (our) community through prevention, policies, education, and quality services." (RCHD Citation)
- Provides a variety of public health services to the community, some of which include:
  - Emergency preparedness
  - Maternal and child health
  - Reproductive health
  - Immunizations
  - Childcare licensing
  - Community healthcare clinic
- Jennifer Green, MPH, PhD served as the Director of RCHD and preceptor for my project

LEARNING OBJECTIVES

- Experiencing the field of public health from the perspective of a health department employee and learning the role of the health department in the community
- Acquiring education about the history of public health in Kansas, the structure of different levels of state public health organizations, and the policies that govern them
- Exploring and employing various methods of acquiring public health data
- Studying recent trends in local, state, and nationwide drug abuse and the factors driving them

LEARNING OBJECTIVES (CONTINUED)

- Identifying areas needing improvement and creating steps to address them in screening, referral, and prevention
- Studying evidence-based research and incorporating findings into improving community response to the opioid epidemic
- Collaborating with leaders from all disciplines and backgrounds in order to both understand how perspectives differ and to find common solutions
- Identifying the source of the problem, both in the local community and in general, and using the knowledge to initiate change
- Gaining a deeper understanding of the local community and how social and economic disparities contribute to the issue of opioid addiction

COMMUNITY NEEDS ASSESSMENT

- We developed a high-level community needs assessment regarding opioid abuse, misuse, and overdose in the community in order to identify potential strengths, resources, and areas in need of improvement. Includes:
  - Statistical data about opioid use and overdose in the U.S., Kansas, and Riley County
  - An analysis of ESSENCE data describing drug overdose in Riley County
  - A collection of accounts from community leaders in law enforcement, first response, and healthcare
  - A collection of local resources for individuals in seek of treatment
- Involved updates and conversation with leaders from the Riley County Police Department (RCPD), Riley County Emergency Medical Services (EMS), Ascension Via Christi Hospital, KSU, Lafene Health Center, Riley County Community Corrections, the Riley County Senior Services Center, and Pawnee Mental Health Services during monthly Community Partner Meetings

ESSENCE

- A tool created by the U.S. Department of Defense used to monitor local health data
- Identifies potential health concerns and epidemics before they rise out of control
- All patients admitted to the ER at Ascension Via Christi Hospital in Manhattan are coded by their diagnoses and related information. Codes originate from:
  - Physician diagnoses
  - Patient chief complaints, and
  - Notes from first responders and emergency department staff
- ESSENCE allows designated professionals to search for key terms and obtain relevant community data regarding emergency room visits.
- RCHD Emergency Preparedness Coordinator Andrew Adams assisted us in compiling overdose data for Riley County for use in our needs assessment.
  - We compiled the number of drug and opioid-related emergency visits from 2015 to 2019, including demographic data, time and circumstances.

ESSENCE FINDINGS

- Results differ depending upon the particular codes used and what category they fall under, so we conducted searches that started out broad and narrowed data down to specific.
- Our first search resulted in a count of the number of emergency room visits that were in any way drug-including alcohol- related.
- The coding used in this search was broad and included not only drug-related diagnoses and chief complaints, but also any situational drug involvement.

All Drug-related Visits to Via Christi Manhattan by Year	
Year	**Number of Visits**
2015	11
2016	108
2017	118
2018	117
2019	34
(All 2019 Data from 1 January – 30 April) Using CDC Opioid Overdose v2 Query	

The next search was confined to cases in which drugs & alcohol were specifically identified in the diagnostic codes and thus directly related to the reason for the visit. This could range from "poisonings by drug and/or medicinal substance", to more specific wording, like "intravenous drug user".

Drug and Alcohol-related Visits to Via Christi Manhattan by Year*	
Year	**Number of Visits**
2015	4
2016	1
2017	38
2018	51
2019	20
(All 2019 Data from 1 January – 30 April) Based on CDC All Drug v1 CCandDD Category Query	

The next set of data eliminates all alcohol-related diagnostic codes and contains only visits due to other drugs. The majority of these visits were categorized as pain medication-seeking.

Drug-related Visits to Via Christi Manhattan by Year*	
Year	**Number of Visits**
2015	3
2016	1
2017	29
2018	48
2019	17
(All 2019 Data from 1 January – 30 April) Excluding alcohol-related visits Based on CDC All Drug v1 CCandDD Category Query	

The next subset includes all non-alcohol drug overdose visits, whether accidental or intentional.

Accidental and Intentional Overdose Visits to Via Christi Manhattan by Year*	
Year	**Number of Visits**
2015	0
2016	1
2017	21
2018	28
2019	8
(All 2019 Data from 1 January – 30 April) Does not include "poisoning" dx codes Based on CDC All Drug v1 CCandDD Category Query	

The final table includes overdose visits primarily involving opioids.

Opioid Overdose Visits to Via Christi Manhattan by Year	
Year	**Number of Visits**
2015	1
2016	9
2017	14
2018	10
2019	6
(All 2019 Data from 1 January – 30 April)	

COMMUNITY CONVERSATIONS

- As part of our needs assessment, we interviewed community leaders about their professional experiences with the opioid epidemic and their suggestions about how to improve the situation in our community.
- Nine meetings, about 45-60 minutes long, with leaders from:
  - RCPD
  - EMS
  - The Via Christi emergency department
  - Lafene Health Center's Alcohol and Other Drug Education (AODE) office
  - Community Corrections
  - Senior Services
  - Pawnee Mental Health
  - Bowen Family Dentistry
  - Fresh Start Recovery Options
- We used a set of focus group questions from MassTapp Technical Assistance Partnership for Prevention as a foundation, but were flexible in our line of questioning as conversations progressed.

SOME COMMUNITY MEMBERS' EXPERIENCES & OPINIONS

- Hospital staff: over-prescribing resulted from efforts to obtain positive patient satisfaction ratings. Pain control was a big factor in these ratings, so providers felt pressure to prescribe more pain medication.
- Manhattan has few alternative and holistic pain management options, and no inpatient treatment facilities in the region. The hospital has nowhere to send overdose patients.
- ER: Increase in polysubstance abuse in recent years. More street drugs combined with illegally-obtained Rx drugs, often by incoming college students. Variety of abused Rx drugs, like benzodiazepines, amphetamines & fentanyl, and some barbiturates.
- ER: Sharp rise in overdoses requiring Narcan in the last couple of years. EMS believe in conservative use of Narcan; only administer for Code Blue respiratory arrest. RCPD does not carry Narcan, as a matter of cost and comfort level of the officers, but campus police have started to.
- Riley County has a high poverty rate; lack of access to healthcare results in seeking behavior. Can't afford to treat the condition so they come to the ER for pain management- especially dental. Practically all pharmacies use K-TRACS now, but only 3 /13 dental clinics.
- Mental health: Most opioid admissions enter voluntarily (most substance abuse clients there under court order). Seek treatment after relationship conflicts or their job is under threat.

GRANT-FUNDED TRAINING SESSIONS

- An important component of the Cooperative Agreement was to provide free training to local first responders, healthcare providers, and community members.
- Types of training sessions offered included:
  - Adverse Childhood Experiences (ACEs)
  - Mental Health First Aid (MHFA)
  - Screening, Brief Intervention, and Referral to Treatment (SBIRT)
  - K-TRACS
- We promoted upcoming meetings throughout the community and to healthcare providers through email, RCHD newsletters, and flyers, and allowed those interested to sign up on EventBrite.
- We held these meetings from March to October for as many as were interested, in Manhattan and Leonardville

OPIOID ADDICTION PUBLIC AWARENESS AD CAMPAIGN

- Our grant allotted funding to implement an opioid addiction public awareness ad campaign in Riley County
- The ad campaign included:
  - Facebook ads
  - Radio Spots
  - Billboards
  - Posters
  - Handouts
- Materials were selected from the CDC's Rx Awareness website, which offers free materials for this purpose.
- We added acknowledgments of the RCHD and, for the radio spots and billboards, of the Pottawatomie County Health Department as well, who we collaborated with given their proximity and the fact that they were grant recipients as well.

BILLBOARDS

In collaboration with Pottawatomie County, we placed three billboards at three different locations for a month each:

- Downtown Manhattan on 3rd & Humboldt St
- Northeast Manhattan on the corner of Tuttle Creek Blvd & Kimball Ave
- Along Hwy 24 between Manhattan & Wamego

DOWNTOWN MANHATTAN LOCATION

- Located in close proximity to Poyntz Ave, a popular shopping, business, and city government area.
- Placed in April to coincide with Drug Take Back Day
  - An event held by the RCPD encouraging people to bring unused or expired prescription drugs for safe disposal
- Daily Effective Count (DEC) of 8,330
  - DEC = an approximation of the number of views an ad will receive per day

NORTHEAST MANHATTAN LOCATION

- **Tuttle Creek & Kimball: A busy intersection on the northeast corner of Manhattan.**
- **Chosen in June for its location leading to the site of the popular annual event, Country Stampede**
  - **Data we obtained from ESSENCE indicated a surge in overdoses during the time of this event.**
  - **Community partners in the EMS and Via Christi emergency department claimed to see a lot of drugs of all types brought in from out of state during these events.**
- **DEC of this location was 19,390**

HIGHWAY 24 LOCATION

- **Between Manhattan and Wamego, an important and busy highway for commuters**
- **Placed in July to coincide with Wamego's popular 4th of July Fireworks Show**
- **Had the most views of the three locations with a DEC of 26,665**

POSTERS

We distributed large posters featuring the same ad as on the billboards among community buildings and healthcare facilities in Manhattan.

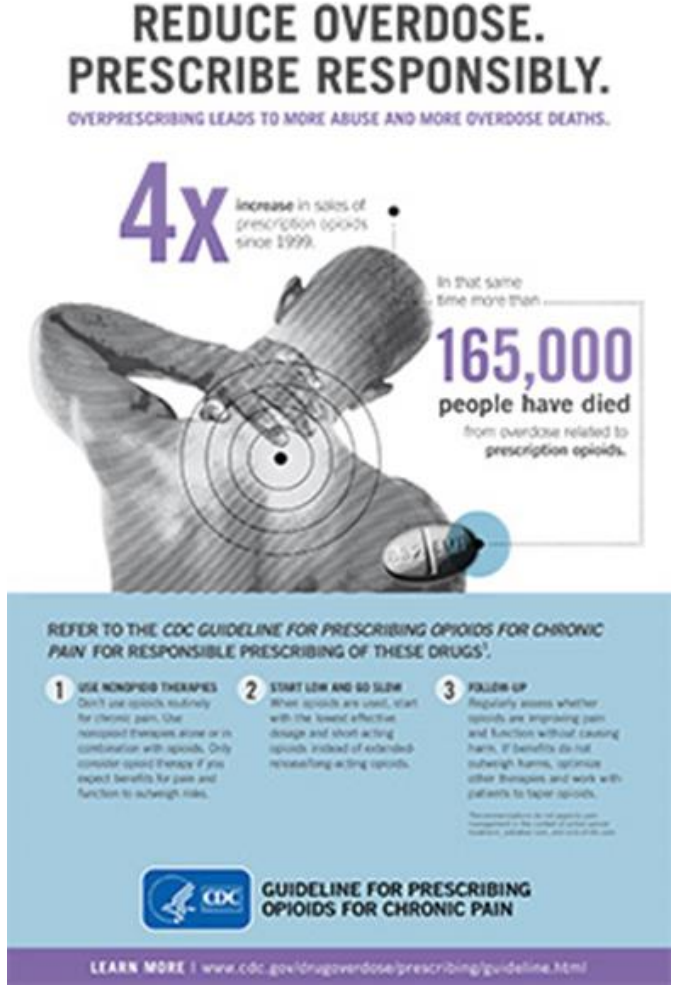
We distributed posters featuring facts and infographics to healthcare facilities

Some posters were targeted to patients and placed in waiting rooms

Others were targeted to prescribers as a source of information to be placed in their personal offices

Posters Targeted Toward Patients

Posters Targeted Toward Prescribers



FACTSHEETS

- We printed informative factsheets on high quality glossy cardstock for physicians
- Detailed safe prescribing practices, nonopioid treatments for chronic pain, dosage calculating tips, and prescribing checklists.
- It was our hope that physicians would keep these factsheets on their desks as a source of reference and a helpful reminder.
- These factsheets were distributed to all healthcare facilities in Manhattan as a part of a packet, which also contained the following:
  - A cover letter
  - An SBIRT promotional booklet which I adapted for local providers from SBIRT Colorado
  - A handout promoting K-TRACS
  - A handout promoting the CDC's Opioid Prescribing Guidelines mobile app
  - The previously mentioned ad campaign posters

Checklist for prescribing opioids for chronic pain

For primary care providers treating adults (18+) with chronic pain ≥ 3 months, excluding cancer, palliative, and end-of-life care

CHECKLIST

When CONSIDERING long-term opioid therapy

- ☐ Set realistic goals for pain and function based on diagnosis (eg, walk around the block).
- ☐ Check that non-opioid therapies tried and optimized.
- ☐ Discuss benefits and risks (eg, addiction, overdose) with patient.
- ☐ Evaluate risk of harm or misuse.
  - Discuss risk factors with patient.
  - Check prescription drug monitoring program (PDMP) data.
  - Check urine drug screen.
- ☐ Set criteria for stopping or continuing opioids.
- ☐ Assess baseline pain and function (eg, PEG scale).
- ☐ Schedule initial reassessment within 1–4 weeks.
- ☐ Prescribe short-acting opioids using lowest dosage on product labeling; match duration to scheduled reassessment.

If RENEWING without patient visit

- ☐ Check that return visit is scheduled ≤ 3 months from last visit.

When REASSESSING at return visit

Continue opioids only after confirming clinically meaningful improvements in pain and function without significant risks or harm.

- ☐ Assess pain and function (eg, PEG); compare results to baseline.
- ☐ Evaluate risk of harm or misuse:
  - Observe patient for signs of over-sedation or overdose risk.
    - If yes: Taper dose.
  - Check PDMP.
  - Check for opioid use disorder if indicated (eg, difficulty controlling use).
    - If yes: Refer for treatment.
- ☐ Check that non-opioid therapies optimized.
- ☐ Determine whether to continue, adjust, taper, or stop opioids.
- ☐ Calculate opioid dosage morphine milligram equivalent (MME).
  - If ≥ 50 MME/day total (≥ 50 mg hydrocodone; ≥ 33 mg oxycodone), increase frequency of follow-up; consider offering naloxone.
  - Avoid ≥ 90 MME/day total (≥ 90 mg hydrocodone; ≥ 60 mg oxycodone), or carefully justify; consider specialist referral.
- ☐ Schedule reassessment at regular intervals (≤ 3 months).

REFERENCE

EVIDENCE ABOUT OPIOID THERAPY

- *Benefits of long-term opioid therapy for chronic pain not well supported by evidence.*
- *Short-term benefits small to moderate for pain; inconsistent for function.*
- *Insufficient evidence for long-term benefits in low back pain, headache, and fibromyalgia.*

NON-OPIOID THERAPIES

Use alone or combined with opioids, as indicated:

- Non-opioid medications (eg, NSAIDs, TCAs, SNRIs, anti-convulsants).
- Physical treatments (eg, exercise therapy, weight loss).
- Behavioral treatment (eg, CBT).
- Procedures (eg, intra-articular corticosteroids).

EVALUATING RISK OF HARM OR MISUSE

Known risk factors include:

- Illegal drug use; prescription drug use for nonmedical reasons.
- History of substance use disorder or overdose.
- Mental health conditions (eg, depression, anxiety).
- Sleep-disordered breathing.
- Concurrent benzodiazepine use.

Urine drug testing: Check to confirm presence of prescribed substances and for undisclosed prescription drug or illicit substance use.

Prescription drug monitoring program (PDMP): Check for opioids or benzodiazepines from other sources.

ASSESSING PAIN & FUNCTION USING PEG SCALE

PEG score = average 3 individual question scores (30% improvement from baseline is clinically meaningful)

Q1: *What number from 0–10 best describes your **pain** in the past week?*
0 = "no pain", 10 = "worst you can imagine"

Q2: *What number from 0–10 describes how, during the past week, pain has interfered with your **enjoyment of life**?*
0 = "not at all", 10 = "complete interference"

Q3: *What number from 0–10 describes how, during the past week, pain has interfered with your **general activity**?*
0 = "not at all", 10 = "complete interference"

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TO LEARN MORE | www.cdc.gov/drugoverdose/prescribing/guideline

NONOPIOID TREATMENTS FOR CHRONIC PAIN

PRINCIPLES OF CHRONIC PAIN TREATMENT

Patients with pain should receive treatment that provides the greatest benefit. Opioids are not the first-line therapy for chronic pain outside of active cancer treatment, palliative care, and end-of-life care. Evidence suggests that nonopioid treatments, including nonopioid medications and nonpharmacological therapies can provide relief to those suffering from chronic pain, and are safer. Effective approaches to chronic pain should:

- Use nonopioid therapies to the extent possible
- Identify and address co-existing mental health conditions (e.g., depression, anxiety, PTSD)
- Focus on functional goals and improvement, engaging patients actively in their pain management
- Use disease-specific treatments when available (e.g., triptans for migraines, gabapentin/pregabalin/duloxetine for neuropathic pain)

- Use first-line medication options preferentially
- Consider interventional therapies (e.g., corticosteroid injections) in patients who fail standard non-invasive therapies
- Use multimodal approaches, including interdisciplinary rehabilitation for patients who have failed standard treatments, have severe functional deficits, or psychosocial risk factors

NONOPIOID MEDICATIONS

MEDICATION	MAGNITUDE OF BENEFITS	HARMS	COMMENTS
Acetaminophen	Small	Hepatotoxic, particularly at higher doses	First-line analgesic, probably less effective than NSAIDs
NSAIDs	Small-moderate	Cardiac, GI, renal	First-line analgesic, COX-2 selective NSAIDs less GI toxicity
Gabapentin/pregabalin	Small-moderate	Sedation, dizziness, ataxia	First-line agent for neuropathic pain, pregabalin approved for fibromyalgia
Tricyclic antidepressants and serotonin/norepinephrine reuptake inhibitors	Small-moderate	TCAs have anticholinergic and cardiac toxicities; SNRIs safer and better tolerated	First-line for neuropathic pain; TCAs and SNRIs for fibromyalgia, TCAs for headaches
Topical agents: Lidocaine, capsaicin, NSAIDs	Small-moderate	Capsaicin initial flare/burning, irritation of mucus membranes	Consider as alternative first line, thought to be safer than systemic medications. Lidocaine for neuropathic pain, topical NSAIDs for localized osteoarthritis, topical capsaicin for musculoskeletal and neuropathic pain

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CALCULATING TOTAL DAILY DOSE OF OPIOIDS FOR SAFER DOSAGE

Higher Dosage, Higher Risk.

Higher dosages of opioids are associated with higher risk of overdose and death—even relatively low dosages (20-50 morphine milligram equivalents (MME) per day) increase risk. Higher dosages haven't been shown to reduce pain over the long term. One randomized trial found no difference in pain or function between a more liberal opioid dose escalation strategy (with average final dosage 52 MME) and maintenance of current dosage (average final dosage 40 MME).

WHY IS IT IMPORTANT TO CALCULATE THE TOTAL DAILY DOSAGE OF OPIOIDS?

Patients prescribed higher opioid dosages are at higher risk of overdose death.

In a national sample of Veterans Health Administration (VHA) patients with chronic pain receiving opioids from 2004-2009, **patients who died** of opioid overdose were prescribed an average of **98 MME/day**, while **other patients** were prescribed an average of **48 MME/day**.

Calculating the total daily dose of opioids helps identify patients who may benefit from closer monitoring, reduction or tapering of opioids, prescribing of naloxone, or other measures to reduce risk of overdose.

HOW MUCH IS 50 OR 90 MME/DAY FOR COMMONLY PRESCRIBED OPIOIDS?

50 MME/day.

- 50 mg of hydrocodone (10 tablets of hydrocodone/acetaminophen 5/300)
- 33 mg of oxycodone (~2 tablets of oxycodone sustained-release 15 mg)
- 12 mg of methadone (<3 tablets of methadone 5 mg)

90 MME/day.

- 90 mg of hydrocodone (9 tablets of hydrocodone/acetaminophen 10/325)
- 60 mg of oxycodone (~2 tablets of oxycodone sustained-release 30 mg)
- ~20 mg of methadone (4 tablets of methadone 5 mg)

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LEARN MORE | www.cdc.gov/drugoverdose/prescribing/guideline.html

HOW SHOULD THE TOTAL DAILY DOSE OF OPIOIDS BE CALCULATED?

1. **DETERMINE** the total daily amount of each opioid the patient takes.
2. **CONVERT** each to MMEs—multiply the dose for each opioid by the conversion factor. (*see table*)
3. **ADD** them together.

Calculating morphine milligram equivalents (MME)

OPIOID (doses in mg/day except where noted)	CONVERSION FACTOR
Codeine	0.15
Fentanyl transdermal (in mcg/hr)	2.4
Hydrocodone	1
Hydromorphone	4
Methadone	
1-20 mg/day	4
21-40 mg/day	8
41-60 mg/day	10
≥ 61-80 mg/day	12
Morphine	1
Oxycodone	1.5
Oxymorphone	3

These dose conversions are estimated and cannot account for all individual differences in genetics and pharmacokinetics.

CAUTION:

- Do not use the calculated dose in MMEs to determine dosage for converting one opioid to another—the new opioid should be lower to avoid unintentional overdose caused by incomplete cross-tolerance and individual differences in opioid pharmacokinetics. Consult the medication label.

USE EXTRA CAUTION:

- **Methadone:** the conversion factor increases at higher doses
- **Fentanyl:** dosed in mcg/hr instead of mg/day, and absorption is affected by heat and other factors

HOW SHOULD PROVIDERS USE THE TOTAL DAILY OPIOID DOSE IN CLINICAL PRACTICE?

- Use caution when prescribing opioids at any dosage and prescribe the lowest effective dose.
- Use extra precautions when increasing to ≥50 MME per day* such as:
  - Monitor and assess pain and function more frequently.
  - Discuss reducing dose or tapering and discontinuing opioids if benefits do not outweigh harms.
  - Consider offering naloxone.
- Avoid or carefully justify increasing dosage to ≥90 MME/day.*

* These dosage thresholds are based on overdose risk when opioids are prescribed for pain and should not guide dosing of medication assisted treatment for opioid use disorder.

LEARN MORE | www.cdc.gov/drugoverdose/prescribing/guideline.html

RADIO SPOTS

- Radio ads created by CDC; available on their Rx Awareness website
- Featured real individuals telling stories of their experiences with opioid addiction or those of their loved ones
- Ran 30 secs long and included Riley & Pottawatomie County Health Department acknowledgments
- Ran in bi-weekly rotations from Apr-Oct on local stations Sunny 102.5 and Z96.3
- Additional spots on B104.7, a country music station, around the time of Country Stampede
- TSA Cume = total # of people estimated to listen to a station for at least 5 min/day. TSA Cume for each station:
  - Sunny 102.5 - 26,800
  - Z96.3 - 24,000
  - B104.7 - 17,300 (not taking into account the increased number of listeners in the area for Country Stampede)

EXAMPLE OF RADIO AD: MIKE'S STORY

FACEBOOK ADS

- We used remaining grant funds to promote Facebook posts featuring CDC opioid addiction awareness and educational videos.
- We alternated two videos posts in June and July:
  - An individual's personal story of addiction, similar to the radio ads, and
  - An educational video about what opioids are and how they can lead to addiction
- Over a thirteen-day period, 6,100 people viewed the posts and 170 clicked on the links to watch the videos.

PERSONAL ACCOUNT VIDEO FROM FACEBOOK POST: DEVIN'S STORY

EDUCATIONAL VIDEO FROM FACEBOOK POST

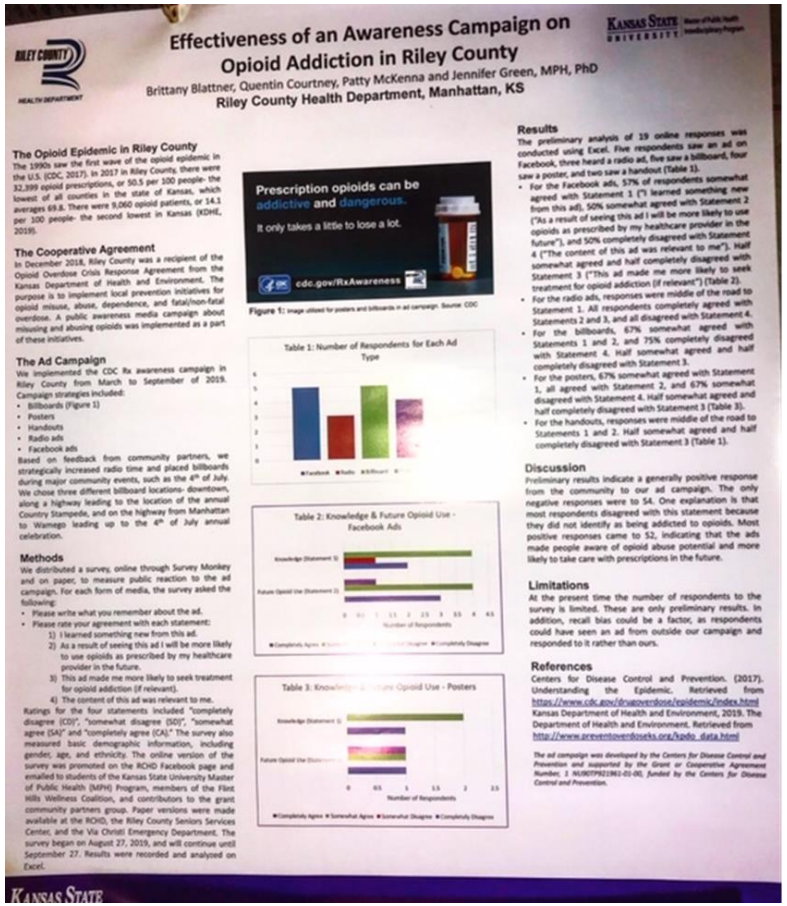
AD CAMPAIGN REACTION SURVEY

- After six months of running ads, I developed and distributed surveys to measure the visibility of each form of ad and the response of community members to them.
- Questions included:
  - What type of ads they remembered seeing/hearing (e.g., billboards, radio, etc.)
  - What they remembered about the ads
  - Whether or not they learned something new from the ads
  - Whether or not they would be more likely to use opioids as prescribed in the future as a result of seeing/hearing the ads
  - Whether or not the ads made them more likely to seek treatment for addiction, if relevant
  - Whether or not they felt the content of the ads was relevant to them
  - Suggestions for improvement of the ad campaign
  - Demographic data including age, ethnicity, and gender

DISTRIBUTION METHODS

- Link to online version of the survey emailed to MPH students
- Paper copies left in the RCHD clinic waiting room, the Senior Center, the Via Christi emergency waiting room, and the Riley County Child and Family Resource Center
  - I left slotted boxes with instructions next to the surveys and returned to gather the completed forms after two weeks.
- Surveys were available from Aug 28 – Sept 27

2019 KPHA CONFERENCE POSTER PRESENTATION



Effectiveness of an Awareness Campaign on Opioid Addiction in Riley County

Brittany Blattner, Quentin Courtney, Patty McKenna and Jennifer Green, MPH, PhD

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Kansas State University

The Opioid Epidemic in Riley County

The 1990s saw the first wave of the opioid epidemic in the U.S. (CDC, 2017). In 2017 in Riley County, there were 32,399 opioid prescriptions, or 50.5 per 100 people- the lowest of all counties in the state of Kansas, which averages 69.8. There were 9,060 opioid patients, or 14.1 per 100 people- the second lowest in Kansas (KDHE, 2019).

The Cooperative Agreement

In December 2018, Riley County was a recipient of the Opioid Overdose Crisis Response Agreement from the Kansas Department of Health and Environment. The purpose is to implement local prevention initiatives for opioid misuse, abuse, dependence, and fatal/non-fatal overdose. A public awareness media campaign about misusing and abusing opioids was implemented as a part of these initiatives.

The Ad Campaign

We implemented the CDC Rx awareness campaign in Riley County from March to September of 2019. Campaign strategies included:

- Billboards (Figure 1)
- Posters
- Handouts
- Radio ads
- Facebook ads

Based on feedback from community partners, we strategically increased radio time and placed billboards during major community events, such as the 4th of July. We chose three different billboard locations- downtown, along a highway leading to the location of the annual Country Stampede, and on the highway from Manhattan to Wamego leading up to the 4th of July annual celebration.

Methods

We distributed a survey, online through Survey Monkey and on paper, to measure public reaction to the ad campaign. For each form of media, the survey asked the following:

- Please write what you remember about the ad.
- Please rate your agreement with each statement:
  1) I learned something new from this ad.
  2) As a result of seeing this ad I will be more likely to use opioids as prescribed by my healthcare provider in the future.
  3) This ad made me more likely to seek treatment for opioid addiction (if relevant).
  4) The content of this ad was relevant to me.

Ratings for the four statements included "completely disagree (CD)", "somewhat disagree (SD)", "somewhat agree (SA)" and "completely agree (CA)." The survey also measured basic demographic information, including gender, age, and ethnicity. The online version of the survey was promoted on the RCHD Facebook page and emailed to students of the Kansas State University Master of Public Health (MPH) Program, members of the Flint Hills Wellness Coalition, and contributors to the grant community partners group. Paper versions were made available at the RCHD, the Riley County Seniors Services Center, and the Via Christi Emergency Department. The survey began on August 27, 2019, and will continue until September 27. Results were recorded and analyzed on Excel.

Figure 1: Image utilized for posters and billboards in ad campaign. Source: CDC

Results

The preliminary analysis of 19 online responses was conducted using Excel. Five respondents saw an ad on Facebook, three heard a radio ad, five saw a billboard, four saw a poster, and two saw a handout (Table 1).

- For the Facebook ads, 57% of respondents somewhat agreed with Statement 1 ("I learned something new from this ad), 50% somewhat agreed with Statement 2 ("As a result of seeing this ad I will be more likely to use opioids as prescribed by my healthcare provider in the future"), and 50% completely disagreed with Statement 4 ("The content of this ad was relevant to me"). Half somewhat agreed and half completely disagreed with Statement 3 ("This ad made me more likely to seek treatment for opioid addiction (if relevant") (Table 2).
- For the radio ads, responses were middle of the road to Statement 1. All respondents completely agreed with Statements 2 and 3, and all disagreed with Statement 4.
- For the billboards, 67% somewhat agreed with Statements 1 and 2, and 75% completely disagreed with Statement 4. Half somewhat agreed and half completely disagreed with Statement 3.
- For the posters, 67% somewhat agreed with Statement 1, all agreed with Statement 2, and 67% somewhat disagreed with Statement 4. Half somewhat agreed and half completely disagreed with Statement 3 (Table 3).
- For the handouts, responses were middle of the road to Statements 1 and 2. Half somewhat agreed and half completely disagreed with Statement 3 (Table 1).

Discussion

Preliminary results indicate a generally positive response from the community to our ad campaign. The only negative responses were to S4. One explanation is that most respondents disagreed with this statement because they did not identify as being addicted to opioids. Most positive responses came to S2, indicating that the ads made people aware of opioid abuse potential and more likely to take care with prescriptions in the future.

Limitations

At the present time the number of respondents to the survey is limited. These are only preliminary results. In addition, recall bias could be a factor, as respondents could have seen an ad from outside our campaign and responded to it rather than ours.

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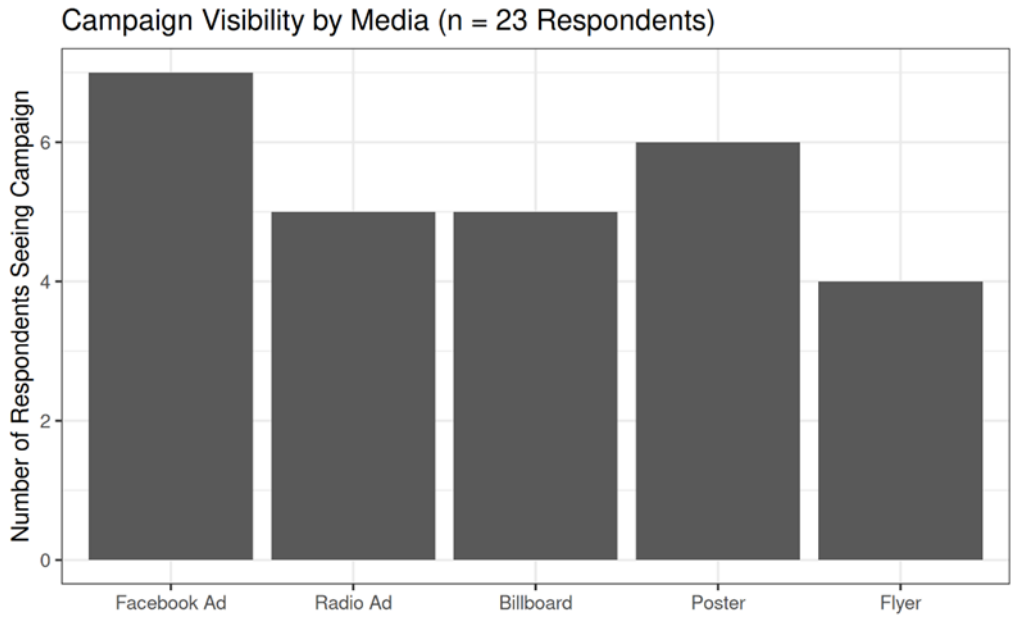
The ad campaign was developed by the Centers for Disease Control and Prevention and supported by the Grant or Cooperative Agreement Number, 1 NU90TP921961-01-00, funded by the Centers for Disease Control and Prevention.

Kansas State

- I analyzed the preliminary survey results using Excel, and then presented them on a poster at the 2019 Kansas Public Health Association (KPHA) Conference in Topeka on September 25.

AD CAMPAIGN REACTION SURVEY RESULTS

- 19 completed online surveys and 4 completed paper surveys
- Ratings of whether or not respondents gained new information, were more likely to take opioids as prescribed, were more likely to seek treatment, or found the content relevant tended to vary.
- Some comments included:
  - “The (radio) ads seem to be relatively frequent - almost each time I have the radio on. I seem to recall lines such as "it only takes one." Stories are intended to be relatable for a variety of situations - adults/parents, sons/daughters, etc.”
  - “Good poster, talked about risks in a pertinent way, graphics were appropriate and catchy.”



THE COMMUNITY CARE TEAM (CCT)

- A multi-agency team of health and social service providers who meet weekly at the RCHD to help community members in need receive access to care and services such as:
  - access to healthcare
  - housing
  - transportation
  - nutrition
  - drug rehabilitation
  - social, legal, and financial services
- Includes members of EMS, the RCHD, and local healthcare facilities
- They come together to find ways to help those they have repeatedly had contact with on the job
- I attended some of their meetings and developed brochures to put in the ER waiting room describing their services and how to contact them.

DISCUSSION

Given statistics that show Riley County with the fewest opioid prescriptions in the state, we could assume there's not much of a problem.

ESSENCE data however shows a sharp rise in overdose ER visits after 2015, and most preliminary 2019 data seemed to be on course to meet or exceed former numbers. Opioids were involved in many ER overdose visits.

While it is unclear exactly why there was such a rise in overdose ER visits after 2015, it is apparent that now is the time to take action to stop this trend.

COMMUNITY CONVERSATIONS: WHAT NEEDS TO CHANGE

- Improved access to healthcare
- In-patient rehab options in the area
- Education of physicians about responsible prescribing practices
- More medication take-back programs and pill drop boxes
- Education of the public about the dangers of opioid addiction
- Policy changes related to chronic pain and the number of pills prescribed to individuals
- Better access to mental health services
- More doctors certified to taper patients off opioids
- More state and federal funding opportunities for suboxone
- More dental clinics using K-TRACS
- More alternative and holistic pain management options in Manhattan
- Better marketing of existing alternative therapy options

MPH COMPETENCIES:

Number and Competency		Description
4	Interpret results of data analysis for public health research, policy, or practice.	Assisted in completing a needs assessment and completed a public survey.
6	Discuss the means by which structural bias, social inequities, and racism undermine health and create challenges to achieving health equity at organizational, community, and societal levels.	In creating the needs assessment, I explored the societal factors behind addiction.
8	Apply awareness of cultural values and practices to the design or implementation of public health policies or programs.	Considered the most effective ways to reach out to community members with an ad campaign and access to services system.
16	Apply principles of leadership, governance, and management, which include creating a vision, empowering others, fostering collaboration, and guiding decision making.	Took the lead in initiating various tasks while in collaboration with others.
21	Perform effectively on interprofessional teams.	Collaborated with leaders from multiple disciplines as well as other grant recipients statewide.

#4 INTERPRET RESULTS OF DATA ANALYSIS FOR PUBLIC HEALTH RESEARCH, POLICY, OR PRACTICE.

- Assisted in completing a needs assessment in which I compiled statistics on opioid prescription rates in our county using official data collection sources such as the U.S. census and KDHE
- Helped compile and analyze data from ESSENCE about drug overdose emergency department visits in our county over the past few years
- Held multiple meetings with local leaders in law enforcement, first response, and healthcare to record their experiences with the opioid epidemic and suggestions for preventing overdoses
  - Compiled this data into a high-level community needs assessment, which we presented to our community partners.
- Designed and distributed a survey to measure public reaction to our opioid addiction awareness ad campaign and then analyzed the data and presented it at the 2019 KPHA Conference.

#6 DISCUSS THE MEANS BY WHICH STRUCTURAL BIAS, SOCIAL INEQUITIES, AND RACISM UNDERMINE HEALTH AND CREATE CHALLENGES TO ACHIEVING HEALTH EQUITY AT ORGANIZATIONAL, COMMUNITY, AND SOCIETAL LEVELS.

- In creating our community needs assessment, I compiled a significant amount of demographic data for Riley County in addition to data involving opioid prescription and overdose.
- I also gained a great amount of insight into the socioeconomic factors that make some people in our community more vulnerable to and more burdened in overcoming opioid addiction.
- I found that poverty levels are high in Riley County and access to healthcare is a major problem for a lot of people, meaning that they suffer from chronic pain and often feel the need to turn to cheaper street drugs for pain relief and in order to maintain their addiction.

#8 APPLY AWARENESS OF CULTURAL VALUES AND PRACTICES TO THE DESIGN OR IMPLEMENTATION OF PUBLIC HEALTH POLICIES OR PROGRAMS.

- Consideration of the best way to reach our local community and make our message relatable and accessible
- These considerations were also heavily involved in the creation of our Community Care Team brochure, which was targeted to the most vulnerable members of our community. Much thought was involved in presenting the information in a compassionate and non-intimidating manner.

#16 APPLY PRINCIPLES OF LEADERSHIP, GOVERNANCE, AND MANAGEMENT, WHICH INCLUDE CREATING A VISION, EMPOWERING OTHERS, FOSTERING COLLABORATION, AND GUIDING DECISION MAKING.

- Leading community partner meetings
- Taking the lead on choosing, developing, and printing ad campaign materials
- Designing promotional packets and brochures
- Developing, distributing and analyzing a survey
- Interviewing community leaders
- With this project, taking the lead was just as essential as collaborating with my co-interns and community partners. Every day I found different tasks that I could take the lead on while keeping constant communication and cooperation with my co-interns. We each identified tasks that would suit our individual strengths and took action to complete them and contribute to our common goal in the best way possible.

#21 PERFORM EFFECTIVELY ON INTERPROFESSIONAL TEAMS.

- Collaboration with leaders in law enforcement, education, first response, and healthcare as well as other RCHD employees and members of the cooperative agreement statewide
- Held monthly community partner meetings with leaders from all different backgrounds
- Conducted individual interviews with a variety of leaders
- Kept in continual contact with the Wichita State University (WSU) Community Engagement Institute and other grant recipients to communicate what actions were proving most effective in our communities
- Under this cooperative agreement, I was able to bring together professionals from many different fields under one common goal.

MPH EMPHASIS COMPETENCIES

MPH Emphasis Area: Infectious Disease/ Zoonoses		
Number and Competency		**Description**
1	Pathogens/ Pathogenic mechanisms	The pathological process of opioid addiction
2	Host response to pathogens/ Immunology	The attributes of an individual's health status which make him/her more or less vulnerable to addiction
3	Environmental/ Ecological influences	The environmental and social factors that make an individual more or less vulnerable to addiction
4	Disease surveillance	The analysis of opioid overdose data across time and location
5	Disease vectors	N/A

#1 PATHOGENS/ PATHOGENIC MECHANISMS

- Opioid addiction, just like any substance dependency, follows a particular pathological process.
- Prolonged opioid use changes the brain chemically and leads to tolerance, and eventually dependence.
- With opioid misuse and abuse there is always the potential for overdose, characterized by respiratory distress and failure. When opioids are prescribed for chronic pain and taken long term, this initiates the pathological process that can lead to overdose and death.
- To prevent occurrences of opioid abuse and overdose, we distributed educational packets and posters to prescribers and offered them and their staff free trainings for implementation of SBIRT and K-TRACS in their practice.
- With education and caution, we hope that physicians will avoid prescribing their patients opioids long-term.

#2 HOST RESPONSE TO PATHOGENS/ IMMUNOLOGY

- In infectious disease, a host's immune status is a significant part of the disease triad which determines the outcome of exposure. A compromised immune system creates vulnerability to any physical threat. With prolonged opioid use, a compromised immune system can intensify the effects of the drug or make one more vulnerable to overdose.
- Genetic factors also come into play when it comes to the tendency to develop addiction. Some people can take opioids for a fairly long period of time without complications, while others rapidly become addicted.
- Perhaps even more importantly, mental health is a big factor in the development of and struggle with addiction. Without proper access to mental healthcare, an individual is at higher risk of developing any form of addiction.

#3 ENVIRONMENTAL/ ECOLOGICAL INFLUENCES

- One unusual attribute of opioid addiction is that it tends to affect people of all demographics, all races, all socioeconomic statuses, all ages, and all levels of education. However, those lacking access to healthcare are at a distinct disadvantage when it comes to falling into opioid addiction.
- In compiling our community needs assessment, I spoke with healthcare workers who repeatedly saw patients in the emergency department seeking medication for pain because they could not afford whatever procedures were required to treat it. Prescription drugs were their only option, and when these became cost-prohibitive or no longer available, they turned to cheaper and more dangerous street drugs.
- Another environmental factor in the disease of opioid addiction is access to treatment, which Riley County is unfortunately lacking. An in-patient rehab facility in the area would be a tremendous source of support for struggling individuals.

#4 DISEASE SURVEILLANCE

- Many governmental organizations monitor opioid prescription, addiction, and overdose. We examined their data in completing our needs assessment.
- We also conducted our own surveillance through the use of ESSENCE, which allowed us to view the occurrences of emergency department intakes and the circumstances surrounding them over the past five years in Riley County. Surveillance such as this is critical in fighting the opioid epidemic.
  - If we had simply relied upon state surveillance statistics, it would appear that Riley County is not particularly vulnerable to the opioid epidemic, but when we explored the numbers for our county specifically over time we could see a rather sharp increase in overdose hospital admissions.
- Surveillance is as important for opioid addiction and overdose as it is for any disease because it allows us to catch dangerous trends and take action to prevent them before they escalate.

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- The Flint Hills Volunteer Center
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THANK YOU!
QUESTIONS?