Scene First
Bup/Nal Treatment by EMS

Presenters: Dr. Louisa Marion-Bellemare Dr. Julie Samson Seamus Murphy

Date: September 23rd

META:PHI Conference 2023

META:PHI
MENTORING, EDUCATION, AND CLINICAL TOOLS FOR ADDICTION
PARTNERS IN HEALTH INTEGRATION

Disclosure of Financial Support

- This program has not received financial support in any form.
- This program has not received in-kind support from any organization.
  - Cochrane District Paramedic Service (CDPS) is a division of Cochrane District Social Services Administration Board, and all funding and education has been budgeted annually. Our paramedic service considers these directives created to help treat the harm reduction community a part of our regular duties.
- Potential for conflict(s) of interest:

  None to declare.

Presenter Disclosure

- Presenter: Seamus Murphy
- Relationships with financial sponsors: NONE

Presenter Disclosure

- Presenter: Drs Louisa Marion-Bellemare and Julie Samson
- Relationships with financial sponsors:
  - Grants/Research Support: None
  - Speakers Bureau/Honoraria:
    - CSAM conference Symposium Oct/21 (Indivior)
    - Master Clinician Alliance Harley Street Talk Nov/21 & Feb/22
  - Consulting Fees: None

Mitigating Potential Bias

- There are no sources of Bias nor potential bias with apart from my two friends, Louisa and Julie, giving me the opportunity to provide “Scene First” treatment to those in need.
- Contents reports on clinical experience and as such includes off label uses

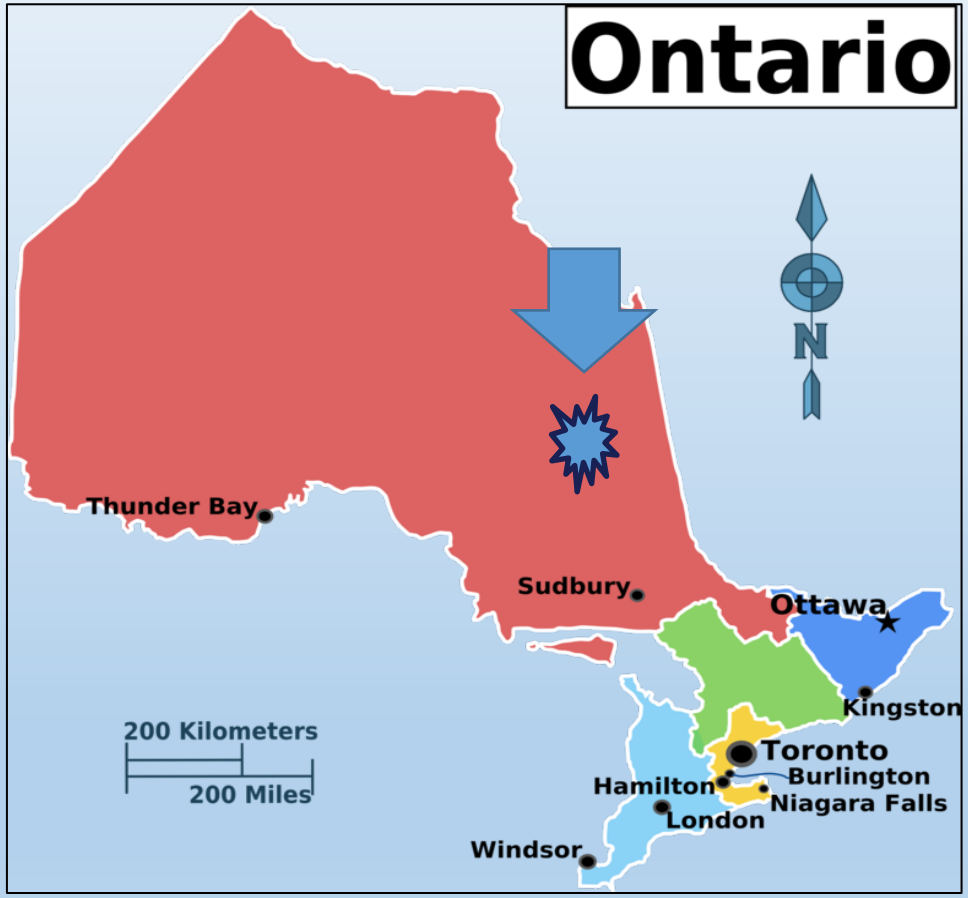
OBJECTIVES

1. Review the medical directive for EMS buprenorphine initiation in the field.
2. Discuss the clinical and administrative considerations involved in developing and implementing the pilot
3. Consider opportunities and challenges in program evaluation and expansion

ONGOING CHALLENGES

- Geography of our district
- Addiction programs not up and running in every city for f/u
- EMS must go to Hospital.. Can't bring pts to other facilities ie: detox centre, RAAM, etc.
- Pt refusing tx-how to convince its life saving
- Pt refusing the dosing offered..
- Trying to convince our ED base hospital physicians that this could work ..
  - Wanted evidence that it would decrease the ER visit ! Would not keep paramedics on scene too long ! Prevent pt from coming to ER

TIMMINS, ONTARIO

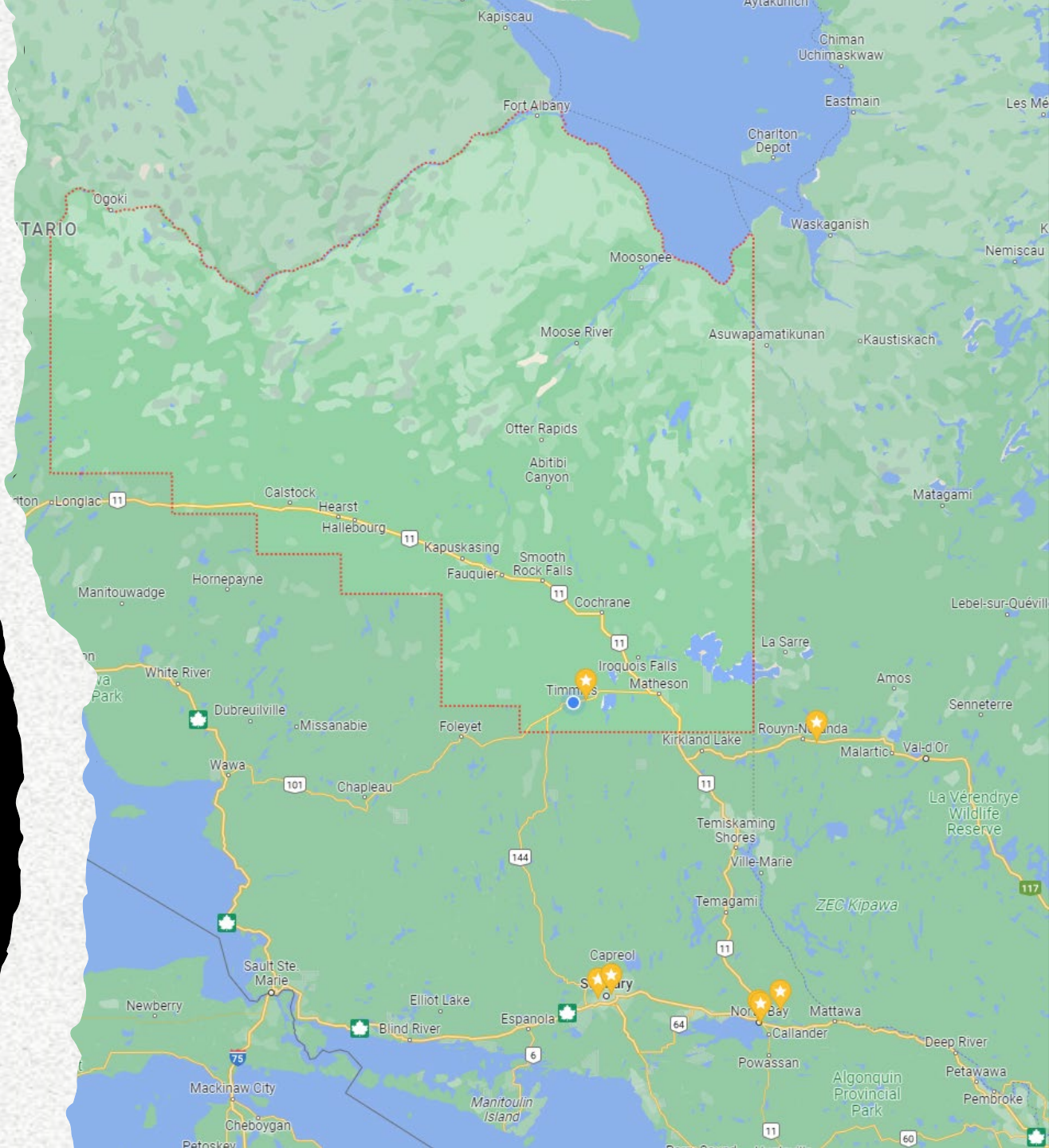


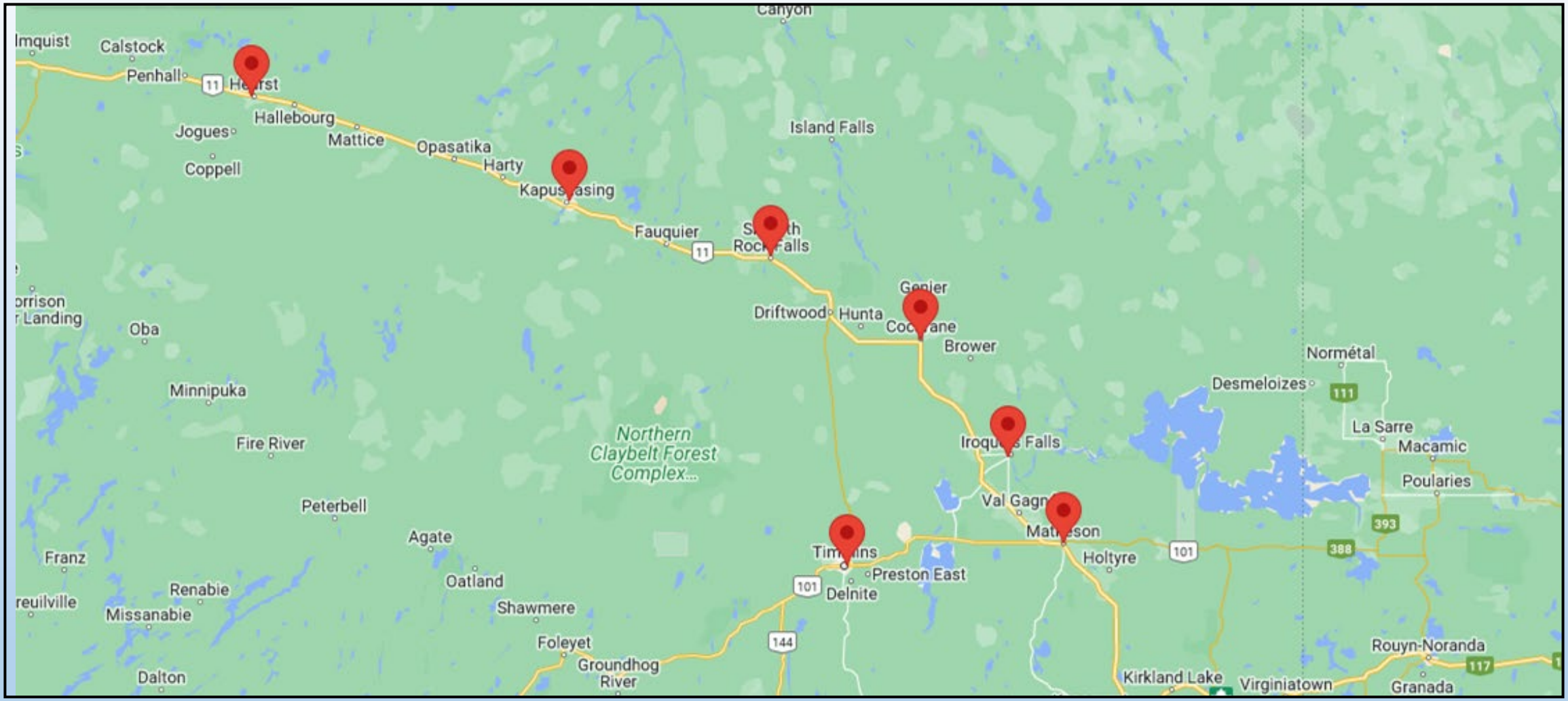
- ~42 0000 pop.
- Vast geography
- 706 km north of Toronto
- Home of
  - Shania Twain
  - Bill Barilko
  - Steve Sullivan

AND ……HOME OF LOU-JU -SHAMOO

Cochrane District

141,247 km²

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Renabie
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Oatland
Shawmere
Foleyet
Groundhog
River
Preston East
Delnite
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Dalton
Kirkland Lake
Virginiatown
Rouyn-Noranda
Granada
117

Bases

Opioid Poisonings Reported:

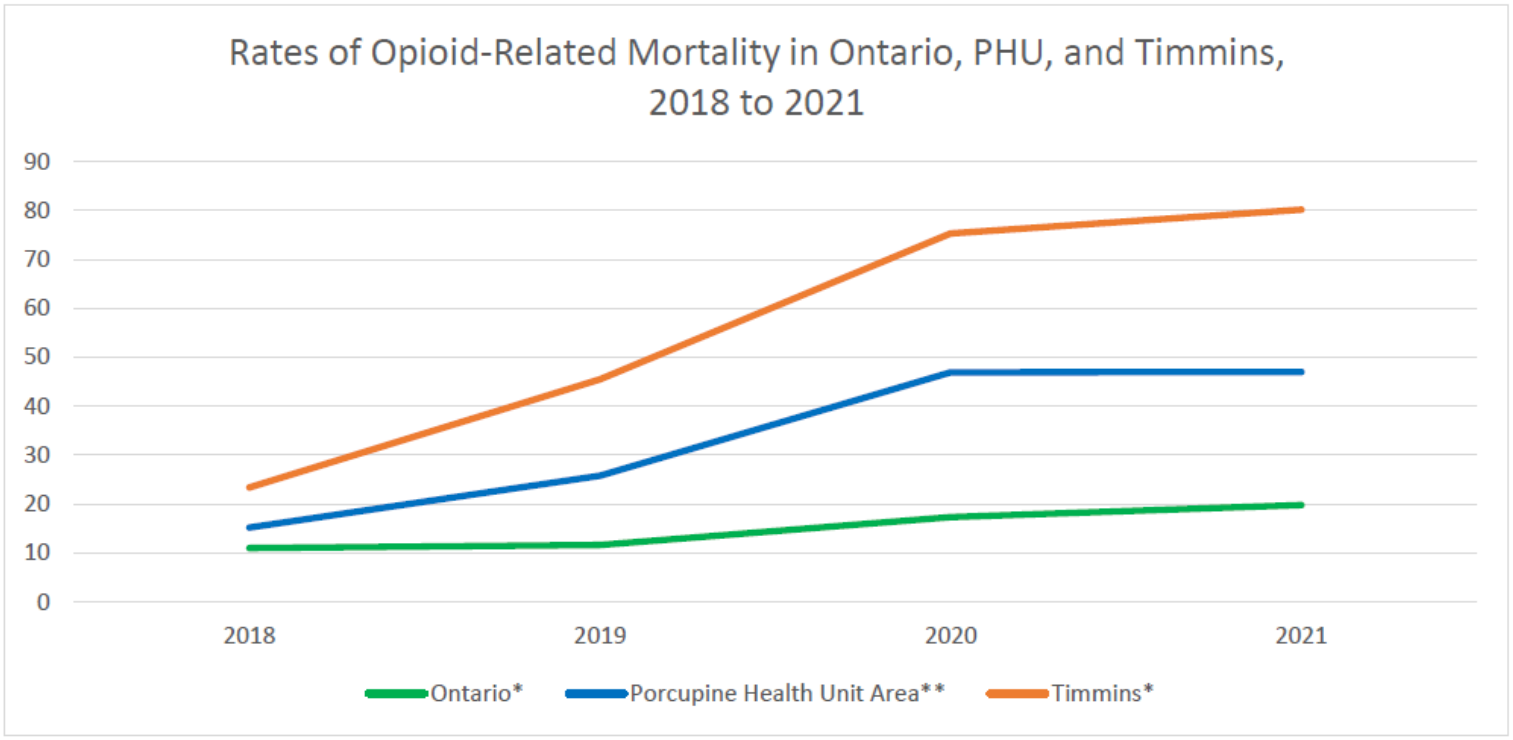


Figure 1 * *Data source: Office of the Chief Coroner - Data effective April 18, 2022. NOTE: 2021 totals include both probable and confirmed cases. 2021 data is preliminary and there will be updates to the totals in some regions.*

** *Data source: Coroner's Opioid Investigative Aid, Office of the Chief Coroner for Ontario, extracted April 18, 2022. Data is preliminary and subject to change*

Opioid Toxicity Mortality Rate by Census Subdivision (CSD)

Ten (10) CSDs with the highest mortality rates in 2022 (Q1-Q3):

Census Subdivision**	Opioid toxicity* mortality rate per 100,000 population
THUNDER BAY	64.3
SAULT STE. MARIE	44.4
NORTH BAY	41.8
PETERBOROUGH	39.4
TIMMINS	38.9
GREATER SUDBURY	34.3
CORNWALL	33.4
BRANTFORD	33.4
BARRIE	28.4
KINGSTON	27.9
Ontario (for reference)	*13.1*

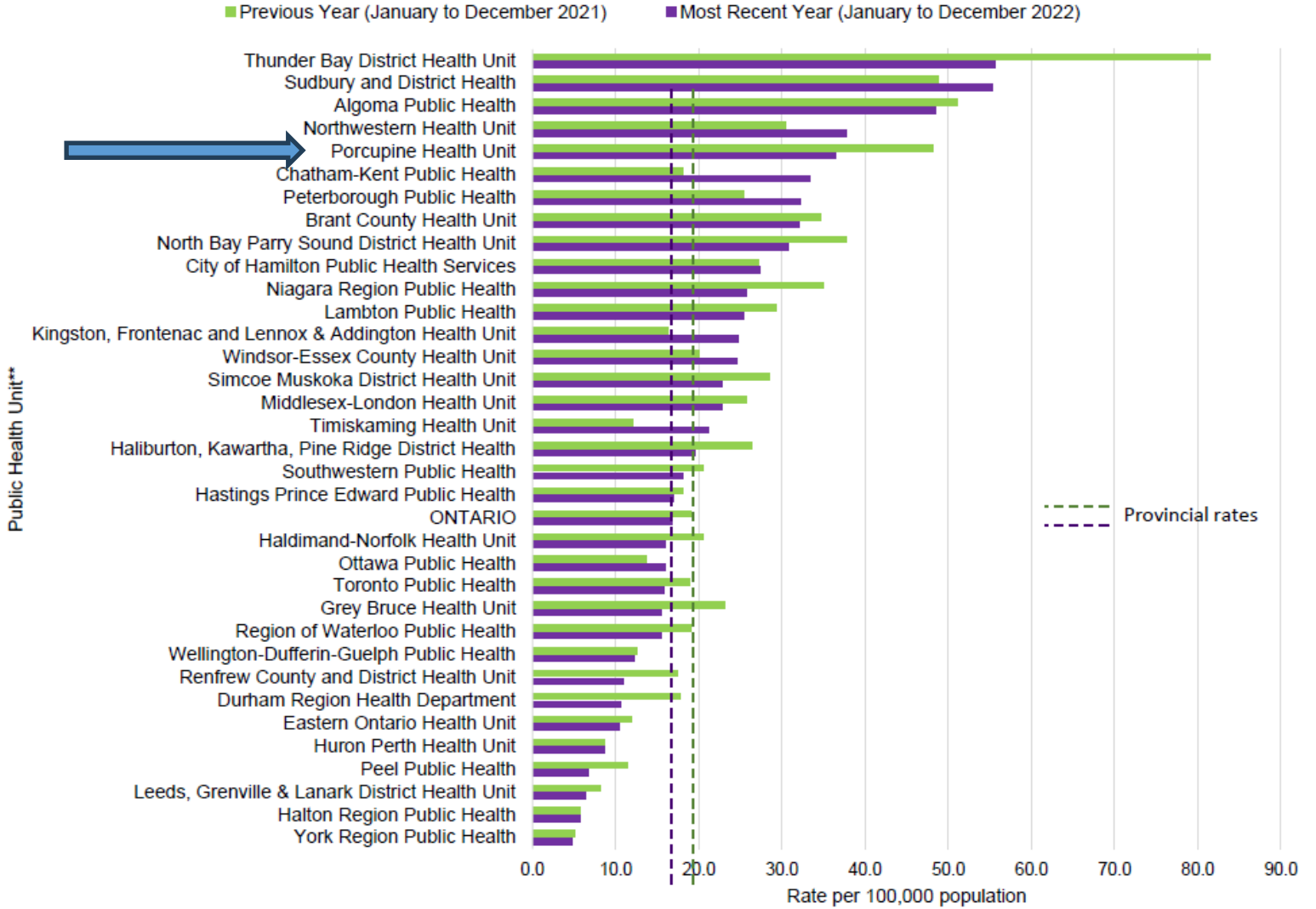
Source: Office of Chief Coroner (OCC) - Data effective Feb 23, 2023

*Includes both confirmed and probable opioid-related deaths; **preliminary and subject to change.**

**Based on location of incident. Among CSDs with >30,000 population.

Opioid toxicity mortality rate by PHU region - Annual

*Most recent two years of data available**



Source: Office of Chief Coroner (OCC) - Data effective May 4, 2023

*includes both confirmed and probable opioid-related deaths, preliminary and subject to change

**based on location of incident

PRACTICE GUIDELINES FOR TREATMENT OF OUD

For Mod & Severe Withdrawals Bup/Nal offered **WITHIN 2 HRS**
HQO Opioid Use Disorder Quality Statements 2018

First Line Treatment Option for Withdrawals & OUD: **BUP/NAL**
Management of OUD: A National Clinical Practice Guideline (CMAJ 2018)

If Not in Withdrawals but Requesting Treatment: should be offered within **MAX 3 DAYS (1st line BUP/NAL)** HQO Opioid Use Disorder Quality Statements /18

If a person enters an inpatient facility, OAT should be continued without disruption HQO Opioid Use Disorder Quality Statements 2018

WHERE CAN WITHDRAWALS BE TREATED WITHIN 2 HOURS?

THE HOSPITAL

AND NOW…

EMS IN THE FIELD

COCHRANE-DISTRICT

PARAMEDIC

History of Partnership

- Virtual North York Emergency Medicine Conference 2021
  - Dr Reuben Strayer –Macrodosing (Lou –Ju doing this in the ED)
- Zoom meeting with Dr Reuben Strayer about macrodosing
  - Mentioned suboxone in the field by a group in New Jersey
- Called Seamus!
- Set up a zoom meeting with New Jersey group and the 3 of us.
- Seamus ran with it !!!! Lots and lots and lots of meetings

Buprenorphine Field Initiation of ReScue Treatment by Emergency Medical Services (Bupe FIRST EMS): A Case Series

Gerard G. Carroll, MD FAAEM EMT-P, Deena D. Wasserman, MD FAWM, Aman A. Shah, MD, Matthew S. Salzman, MD, Kaitlan E. Baston, MD MSc DFASAM, Rick A. Rohrbach, BSN CFRN CCRN-K MICP, Iris L. Jones, MA LPC, LCADC, Rachel Haroz, MD, FAACT

Prehospital Emergency Care 2021;25:289-293

Prehospital Buprenorphine Treatment for Opioid Use Disorder by Paramedics: First Year Results of the EMS Buprenorphine Use Pilot

H. Gene Hern[a], Vanessa Lara[b], David Goldstein[c], M. Kalmin[d], S. Kidane[c], S. Shoptaw[d], Ori Tzvieli[e], and Andrew A. Herring[a]

[a]EMS Project Director, CA Bridge, Emergency Medicine, Alameda Health System – Highland Hospital, Oakland, California; [b]CA Bridge, Emergency Medical Services Division, Oakland, California; [c]Emergency Medical Services, Contra Costa County, Martinez, California; [d]UCLA Center for Behavioral and Addiction Medicine, Los Angeles, California; [e]Public Health Agency, Contra Costa County, Martinez, California

- PREHOSPITAL EMERGENCY CARE
- MARCH 2022
- https://doi.org/10.1080/10903127.2022.2061661

EMERGENCY MEDICAL SERVICES/ORIGINAL RESEARCH

Impact of Administering Buprenorphine to Overdose Survivors Using Emergency Medical Services

Gerard Carroll, MD*; Keisha T. Solomon, PhD; Jessica Heil, MS; Brendan Saloner, PhD; Elizabeth A. Stuart, PhD; Esita Y. Patel, PhD; Noah Greifer, PhD; Matthew Salzman, MD; Emily Murphy, MD; Kaitlan Baston, MD; Rachel Haroz, MD

Annals of Emergency Medicine

Volume 81, Issue 2, February 2023, Pages 165-175

CHALLENGE #1

HOW CAN WE GET THIS GOING
IN TIMMINS ?

History of Partnership

- Called Seamus Murphy!
- Had virtual meeting with New Jersey group (Cooper EMS) in July 2021

Seamus Ran with it!

- CDPS was the first Paramedic Service in Ontario to be a Naloxone Distributor (July 2020)
- Frontline Paramedics will provide patients, bystanders and the public Naloxone Kits.
- Resuscitating poisoned patients and leaving naloxone kits behind for those who refuse transportation.
- This wasn’t enough! Cooper EMS stats and initiatives revealed the benefits Paramedic Services could provide with Scene First MAT!

CBC interview, posted January 2022

The doctors meet with Seamus Murphy, 51, a commander with the Timmins paramedic service. Timmins was the first community in Ontario to hand out Naloxone kits from EMS vehicles. (Nick Purdon/CBC)

CHALLENGE #2

IS THIS NEEDED IN OUR DISTRICT ?

WHAT DOES OUR DATA SHOW?

CDPS Opiate Poisoning Calls

	2018	2019	2020	2021
EMS Responses	35	86	273	321
Patients transported	27	62	129	174
Patients that refused	8	24	78	73
Crew Naloxone	13	29	54	40

Transport refusal

- Percentage of pts not transported
  - 27% over the last 3 years
- Losing out on offering tx to those refusing transport
  - 261 Patients
- Need to bring treatment to them and not expect them to go to treatment

Purpose:

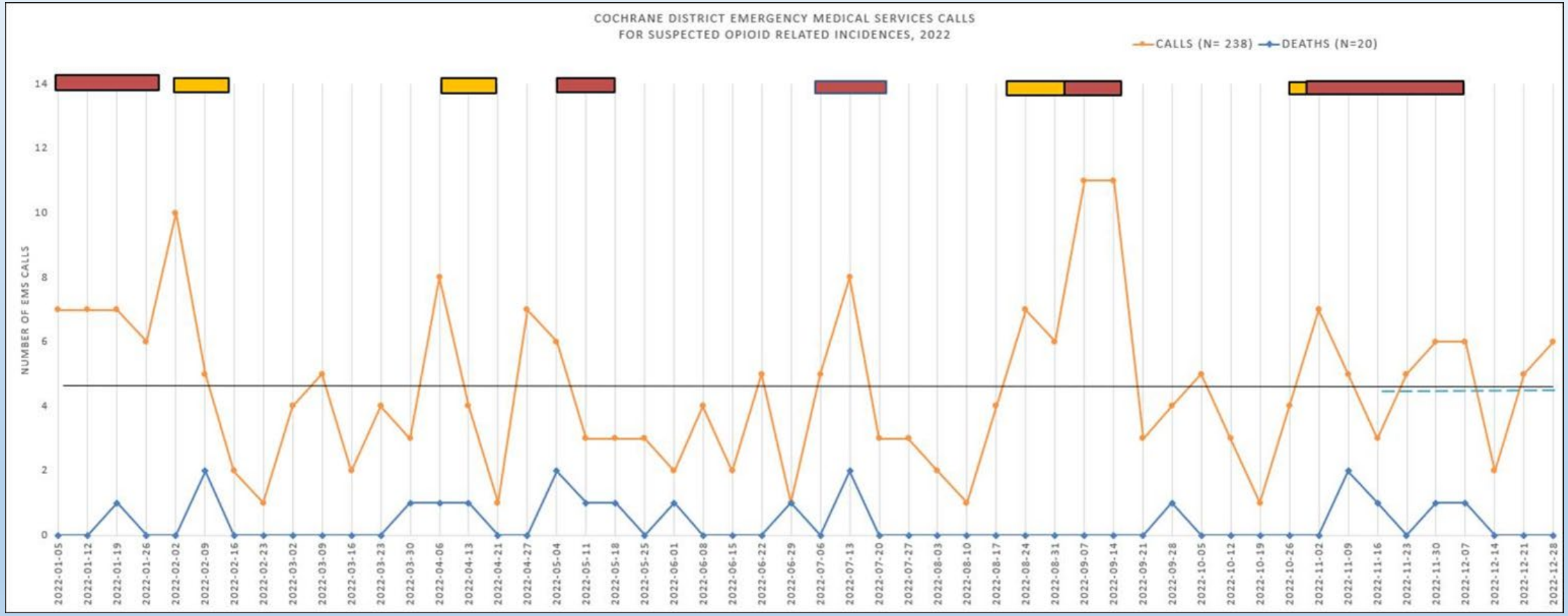
- To reduce morbidity and mortality from Opioid Use Disorder (OUD) by offering treatment with Buprenorphine/Naloxone on scene and schedule a follow-up appointment with Withdrawal Management Services after reversal of opiate poisoning from administration of Naloxone should the patient refuse transport to Timmins and District Hospital (TDH) or respective receiving facility.

CDEMS Responses to Suspected Opioid-Related Deaths, 2017 to 2021

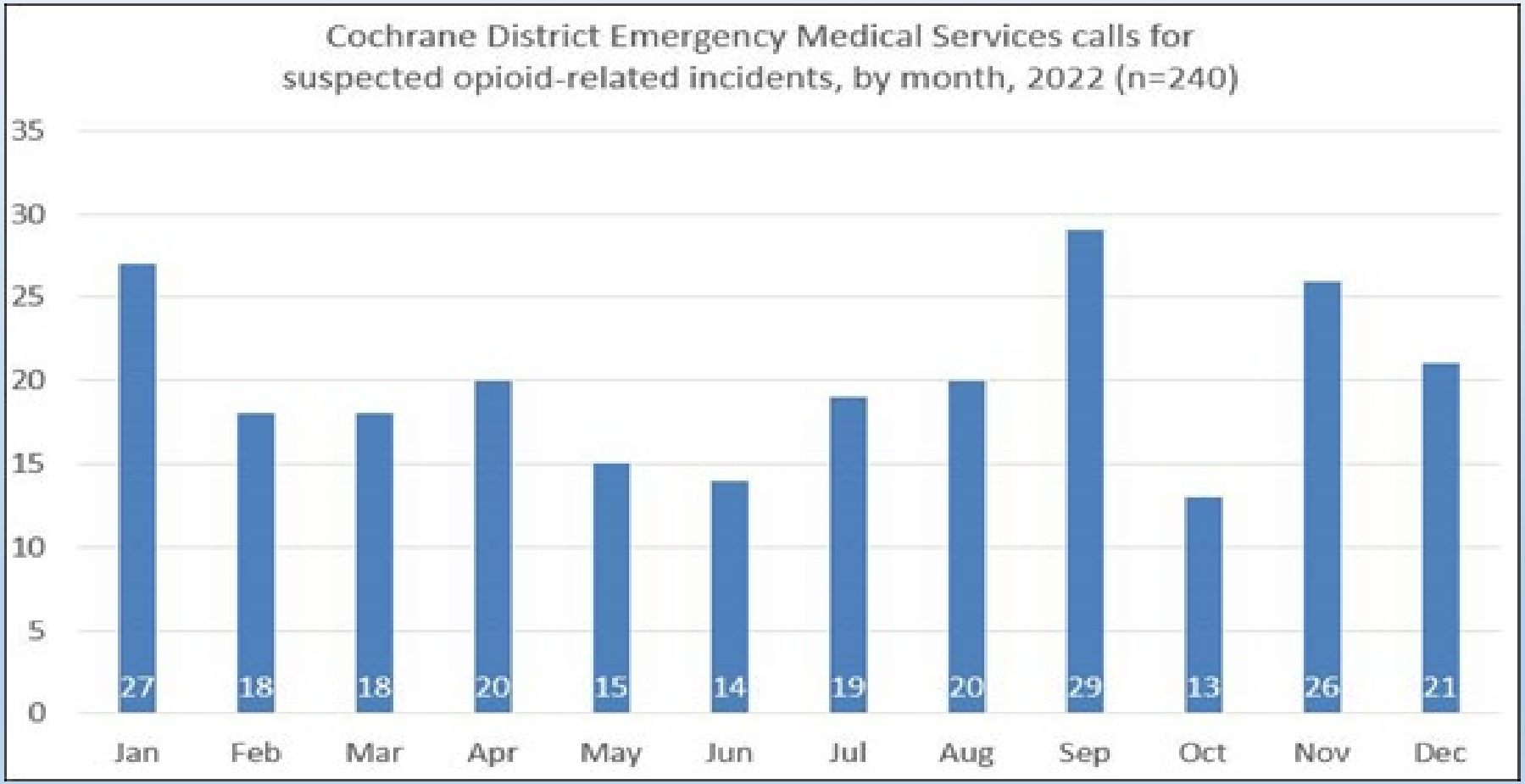
2017	2018	2019	2020	2021
2	13	22	27	33*

Figure 2 CDEMS data

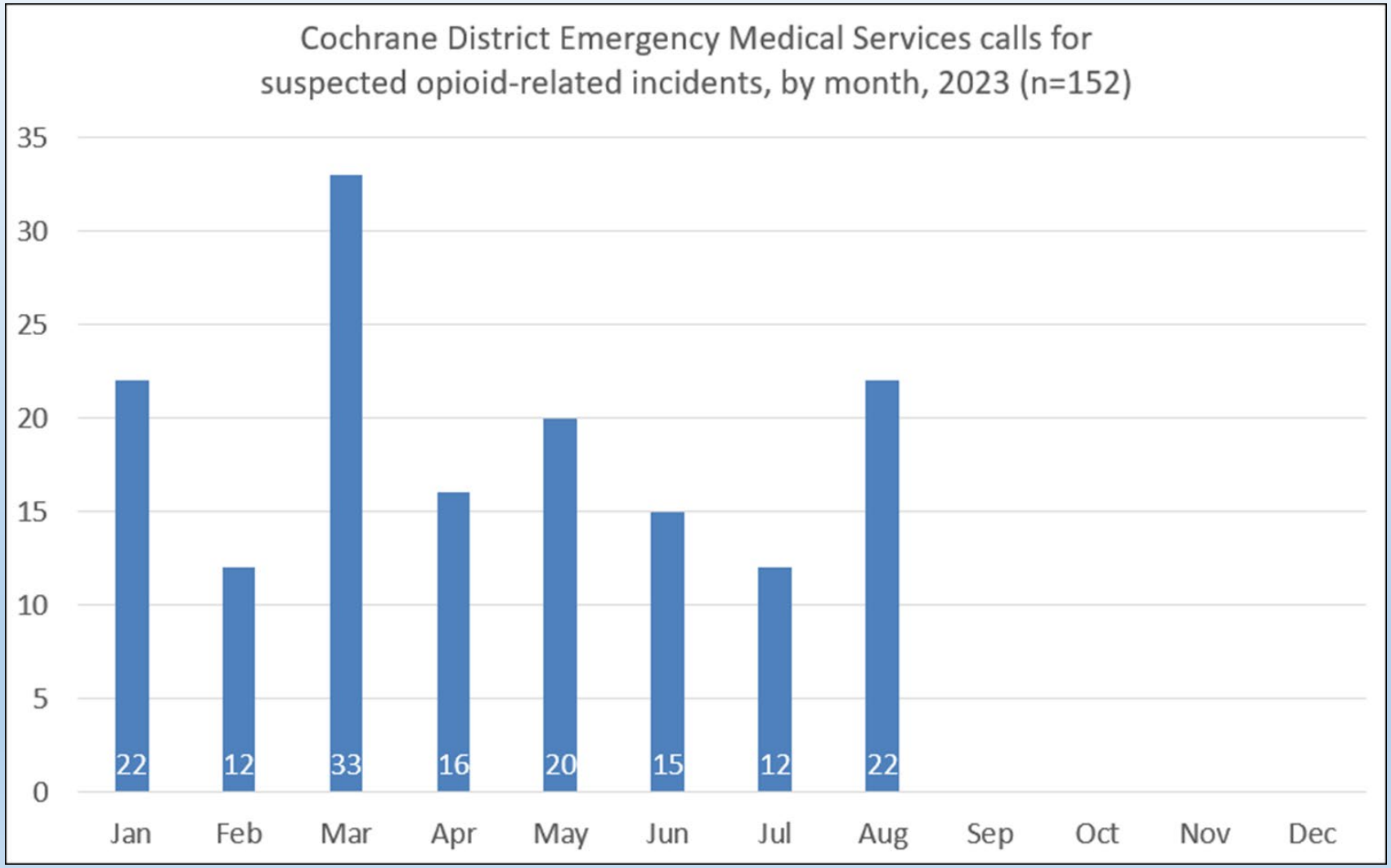
2022 Opioid OD Calls



2022 Opioid Calls



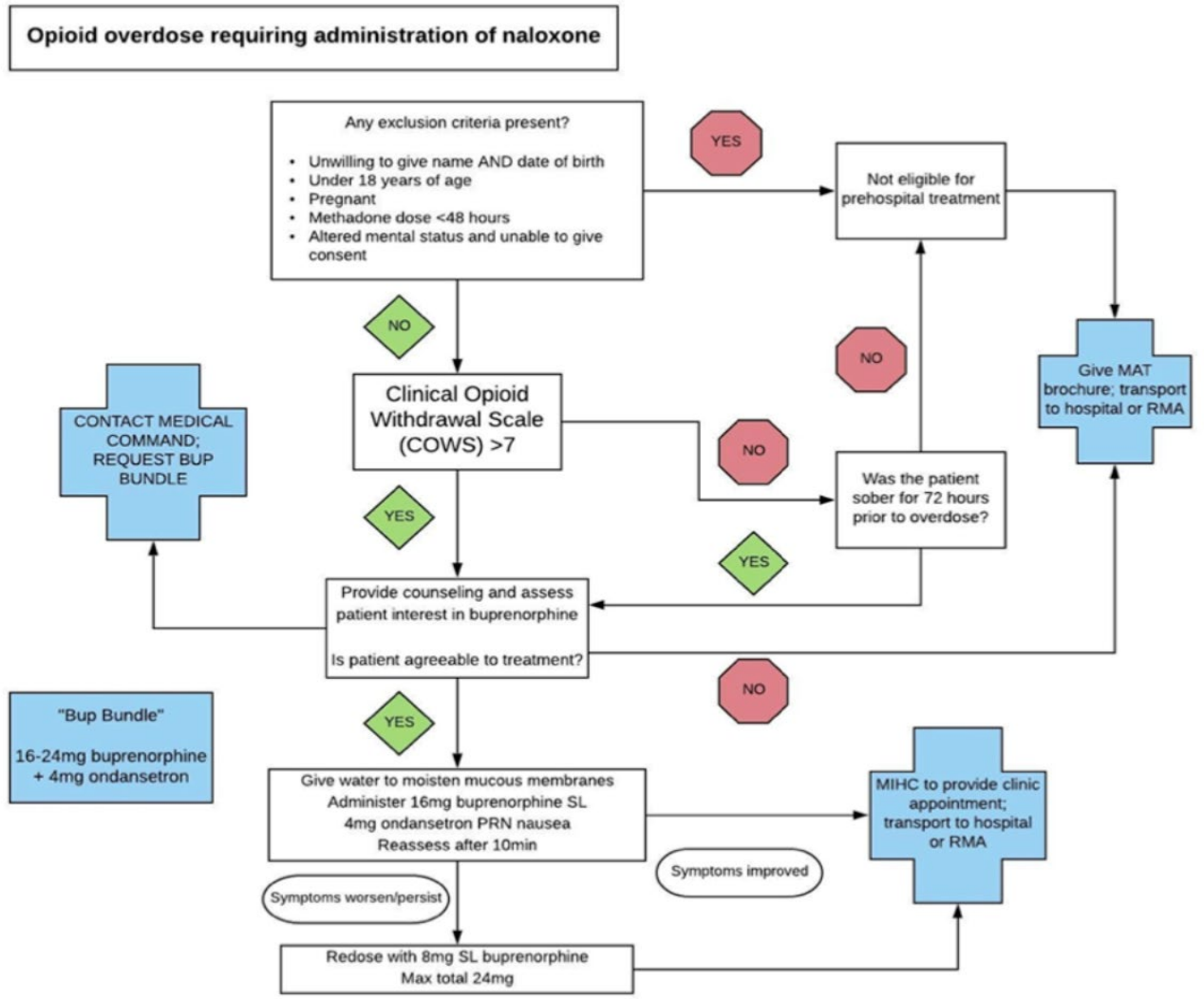
2023 Opioid Calls



CHALLENGE #3

Development of our Medical Directive

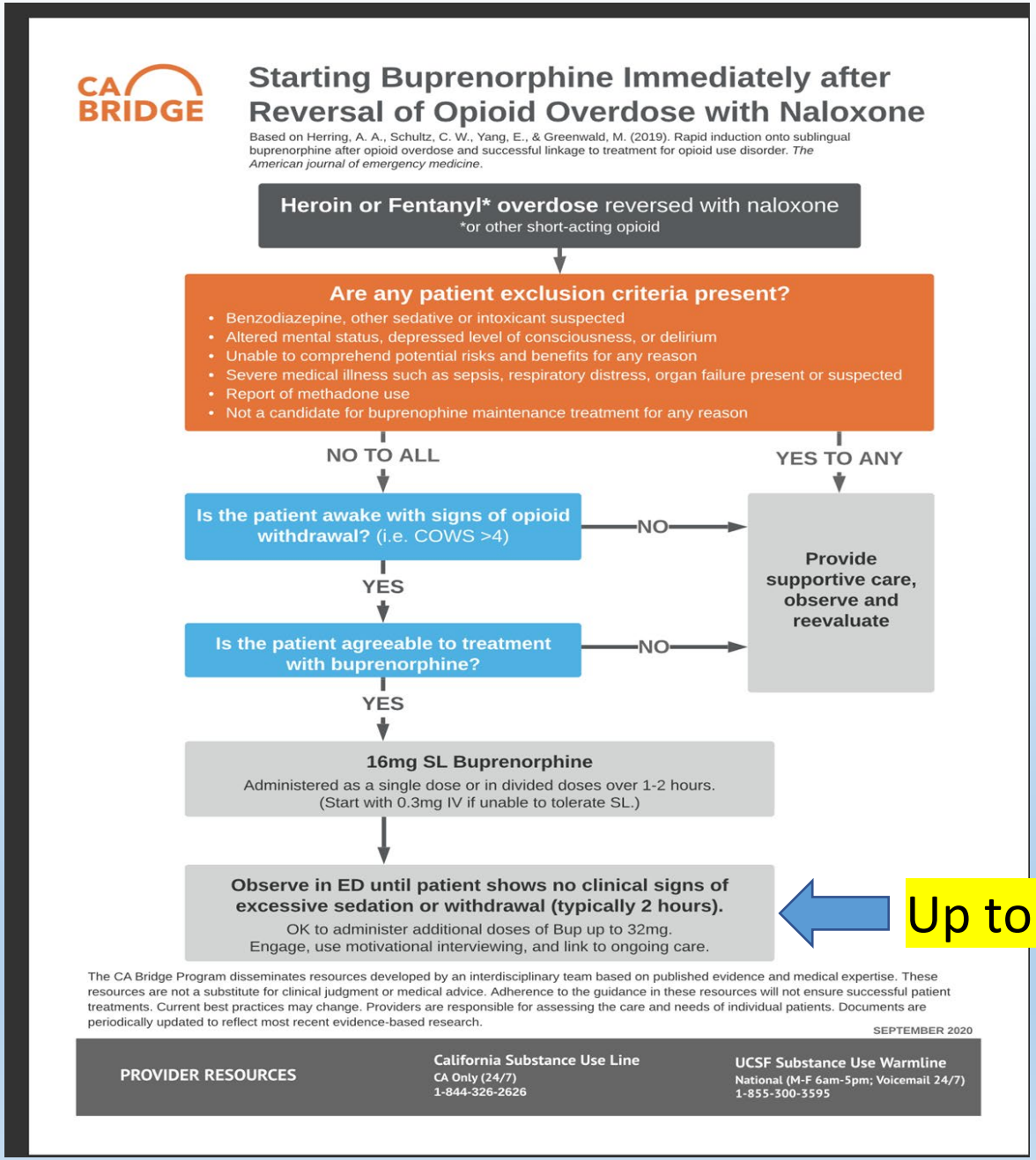
New Jersey Cooper EMS Bupe FIRST EMS Protocol



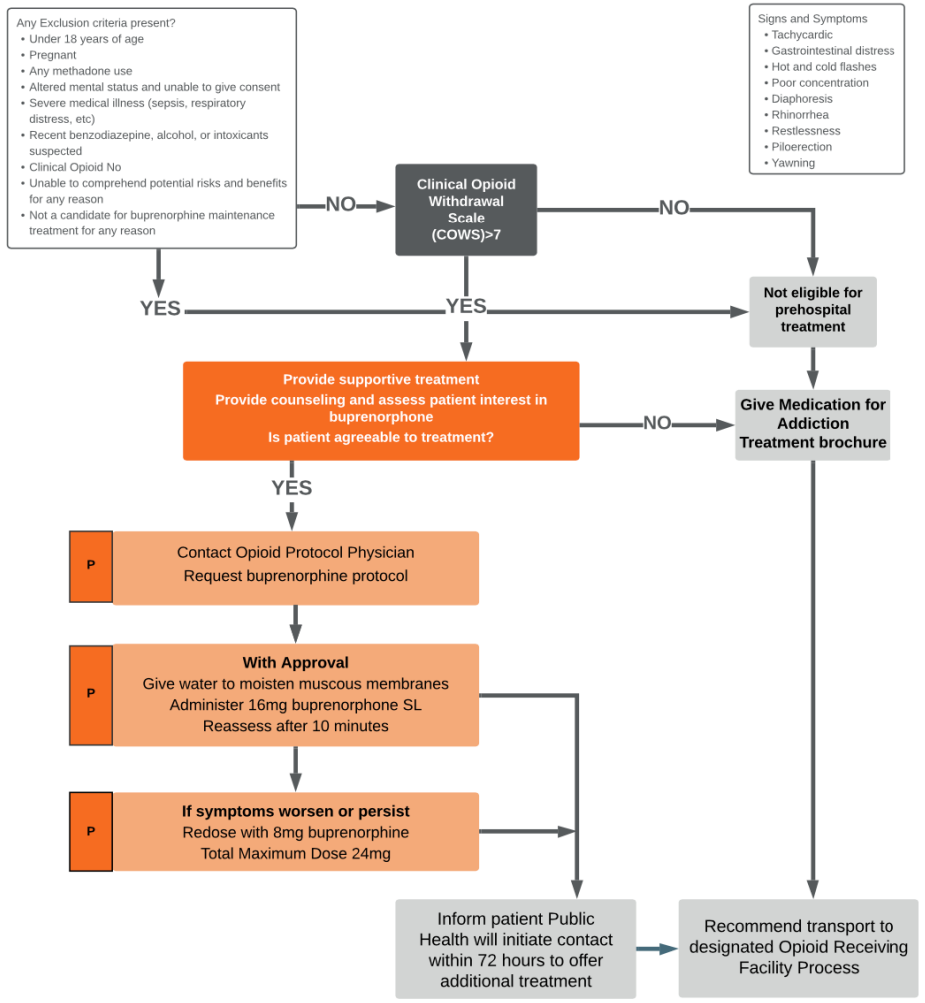
1. Bupe FIRST EMS Protocol.

CA Bridge – Post Naloxone reversal in Hospital

PROTOCOLS FOR MACRODOSING



Emergency Medical Services
Opioid Withdrawal: Adult Medical Treatment Guidelines

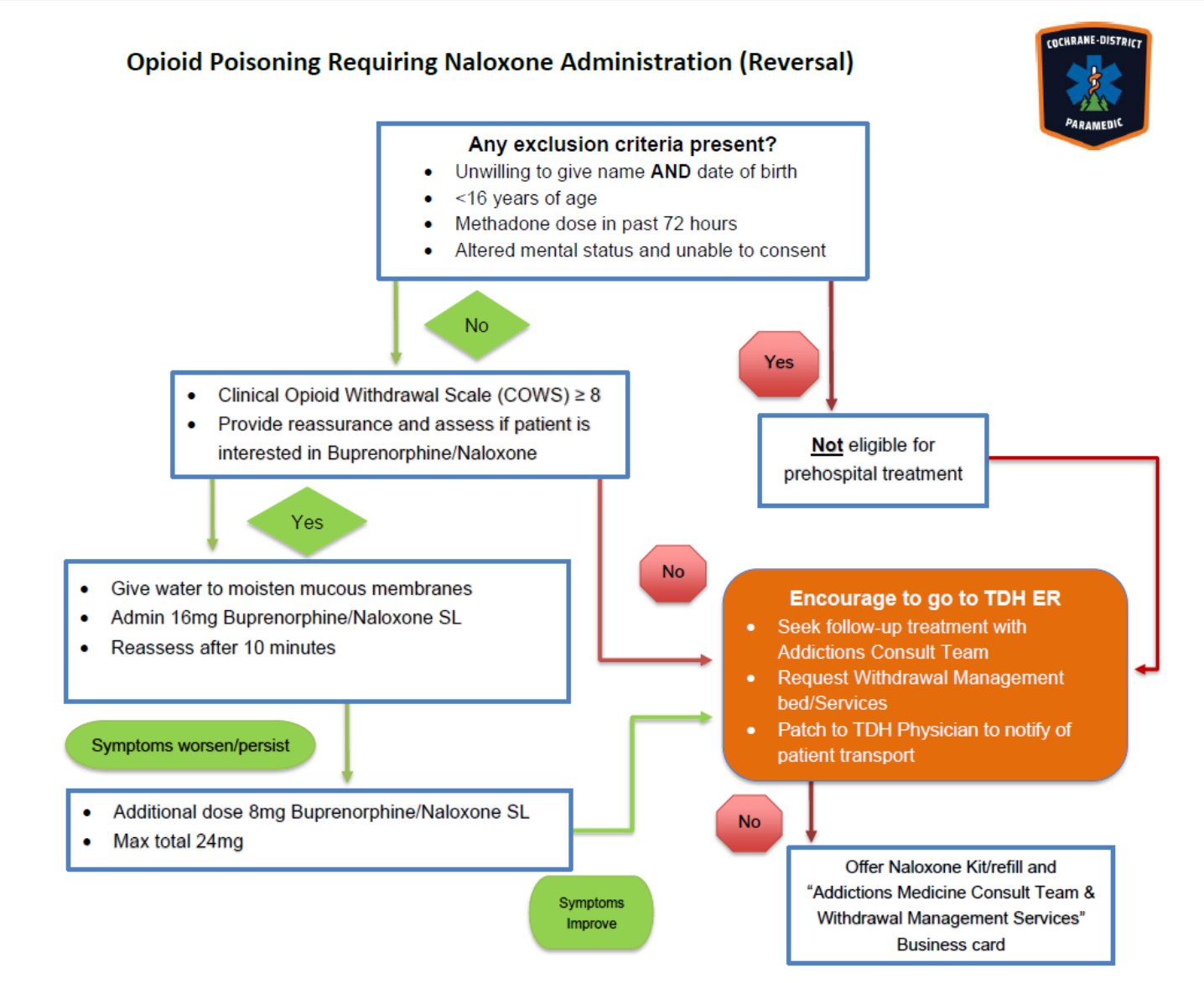


This project was supported by the CARESTAR Foundation. CA Bridge is a program of the Public Health Institute. The Public Health Institute promotes health, well-being and quality of life for people throughout California, across the nation, and around the world.

Treatment Guidelines

Opioid Poisoning

Go through the Flowchart to help determine whether the patient meets the criteria for Bup/Nal treatment.



Cochrane District EMS

BUPRENORPHINE/Naloxone (Suboxone) FOR OPIOID WITHDRAWAL Medical Directive

Administration by Community Paramedics, and Acting/Commanders

A Commander, Acting Commander or Community Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

The following procedures are authorized for patients whom have overdosed on opioids **AND** received naloxone by EMS provider or bystander unless there are any exclusion criteria present:

- Unwilling to give name AND date of birth
- <16 years of age
- Methadone dose in past 72 hours
- Altered mental status and unable to consent

Conditions

Buprenorphine/ Naloxone	
Age	≥16 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	Pt. agreeable to treatment
COWS	≥ 8

Treatment

Consider Buprenorphine/Naloxone		
	Route	**Route**
	SL	SL
First Dose	16 mg	
Second dose		8 mg
Dosing interval	10 min	
Max. Dose		24 mg

Clinical Considerations

Encourage to go to TDH ER:

- Seek follow-up treatment with Addictions Consult Team
- Request Withdrawal Management bed/Services
- Patch to TDH Physician to notify of patient transport

If refusing all treatment, offer Naloxone Kit/refill and “Addictions Medicine Consult Team & Withdrawal Management Services” Business card

Post Naloxone Revival

Whether the patient received Naloxone prior to EMS arrival or given by EMS, evaluate the COWS to see if the patient meets the criteria for Bup/Nal.

Clinical Opiate Withdraw Scale (COWS)

< 5 - No active withdraw	13-24 - moderate withdraw	> 36 - SEVERE WITHDRAW
5-12 - mild withdraw	25-36 - Moderately severe withdraw	

A score of greater than 7 is an indication for Buprenorphine/Naloxone (Suboxone) administration.

Resting Pulse Rate (BPM)	
< 80	0
81-100	1
101-120	2
> 120	4

Sweating	
No report of chills or flushing	0
Subjective report of chills of flushing	1
Flushed or observable moistness on face	2
Beads of sweat on brow or face	3
Sweat streaming off face	4

Restlessness Observation during assessment	
Able to sit still	0
Reports difficulty sitting still, but is able to do so	1
Frequent shifting or extraneous movements of legs/arms	3
Unable to sit still for more than a few seconds	5

Pupil Size	
Pupils pinned or normal size for room light	0
Pupils possibly larger than normal for room light	1
Pupils moderately dilated	2
Pupils so dilated that only the rim of the iris is visible	5

Bone or Joint aches	
Not present	0
Mild diffuse discomfort	1
Patient reports severe diffuse aching of joints/muscles	2
Patient is rubbing joints or muscles and is unable to sit still because of discomfort	4

Runny nose or tearing	
Not present	0
Nasal stuffiness or unusually moist eyes	1
Nose running or tearing	2
Nose constantly running or tears streaming down cheeks	4

GI Upset	
No GI symptoms	0
Stomach Cramps	1
Nausea or loose stool	2
Vomiting or diarrhea	3
Multiple episodes of vomiting or diarrhea	5

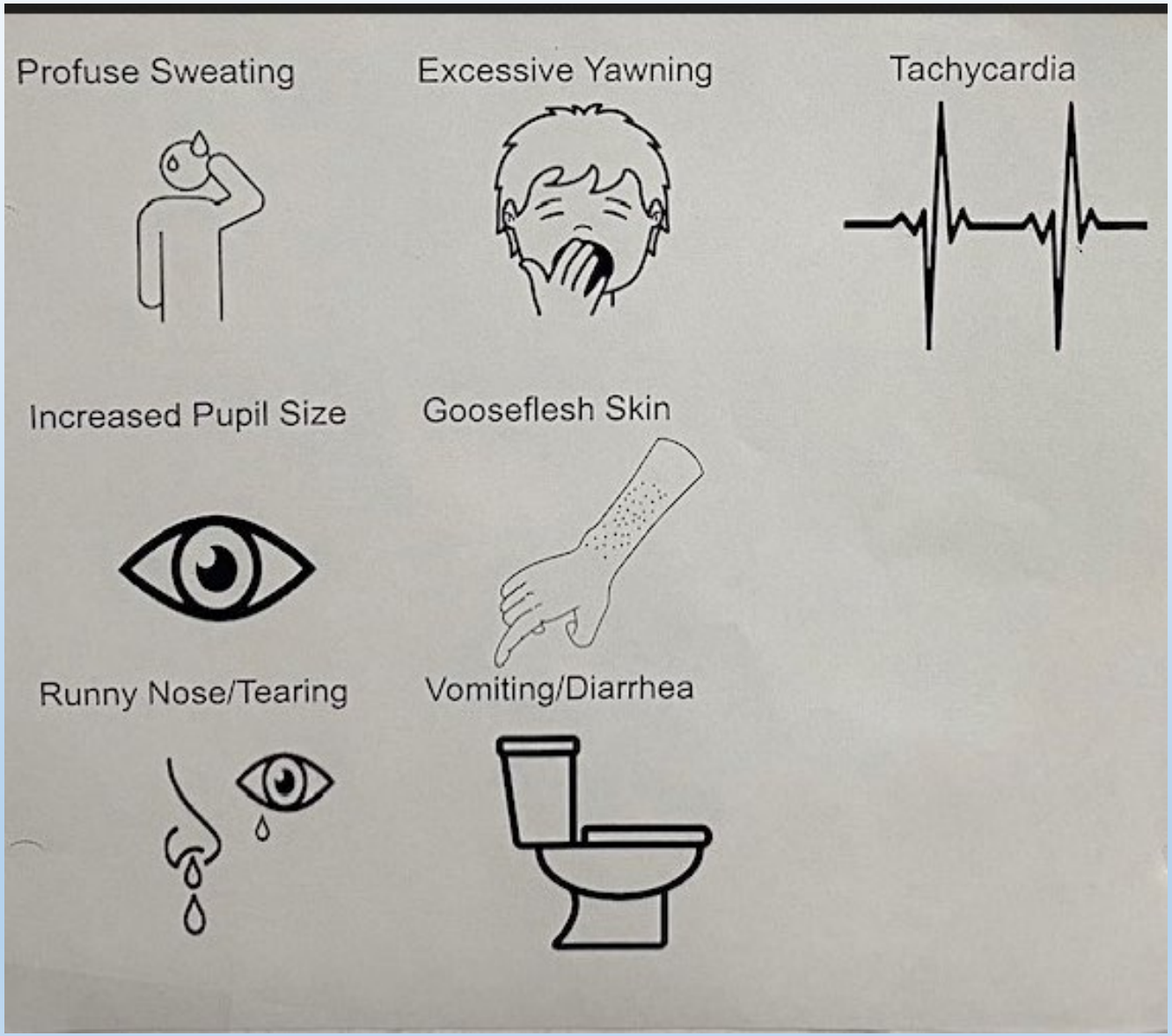
Tremor observation of outstretched hands	
Not present	0
Tremor can be felt, but not observed	1
Slight tremor observable	2
Gross tremor or muscle twitching	4

Yawning observation during assessment	
No yawning	0
Yawning once or twice during assessment	1
Yawning three or more times during assessment	2
Yawning several times/minute	4

Anxiety or irritability	
None	0
Patient reports increasing irritability or anxiousness	1
Patient obviously irritable/anxious	2
Patient too irritable/anxious to participation in the assessment	4

Gooseflesh skin	
Skin is smooth	0
Piloerection can be felt or hairs standing up on arms	3
Prominent piloerection	5

Simplified COWS-Hard Signs of Withdrawals



Medical Directive

Medical Directive

Indications

Opioid overdose

And

Received Naloxone treatment for current overdose.

Conditions

buprenorphine/naloxone	
Age	≥ 16
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	Received naloxone for current opioid toxicity episode COWS ≥ 8

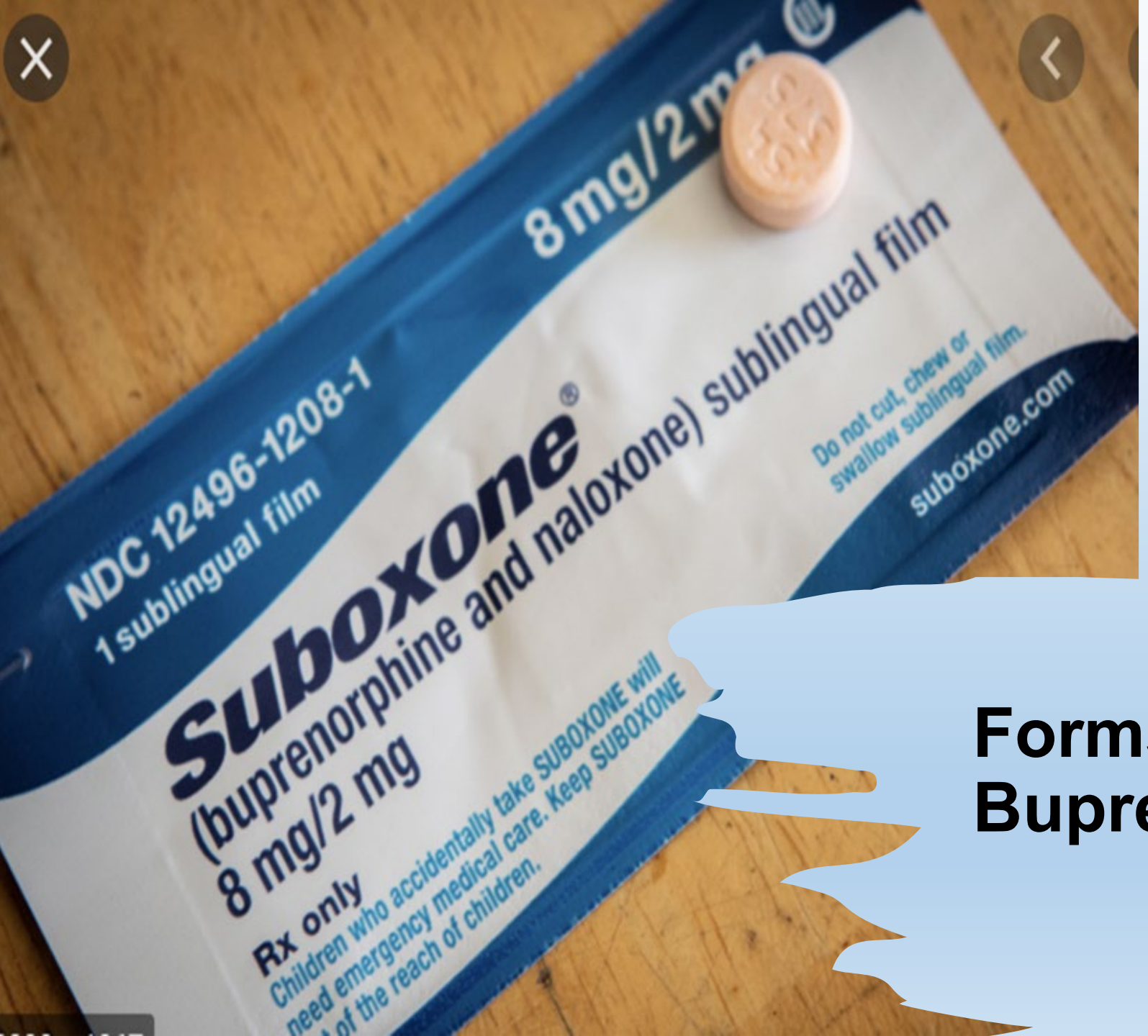
Contraindications

buprenorphine/naloxone
Allergy or sensitivity to buprenorphine
Taken methadone in the past 72 hours

Treatment

Consider buprenorphine/naloxone (if available and authorized)	
	Route
	SL
Initial dose	16mg
Subsequent dose(s) dose	8 mg
Dosing interval	10 minutes
Max. cumulative dose	24 mg

Change	Code Group	Code	Descriptor
Added	Procedures	020.03	Clinical Opiate Withdraw Scale (COWS)
Added	Medications	611	Buprenorphine/Naloxone



Forms of Buprenorphine/Naloxone

COCHRANE-DISTRICT PARAMEDIC

CDSSAB

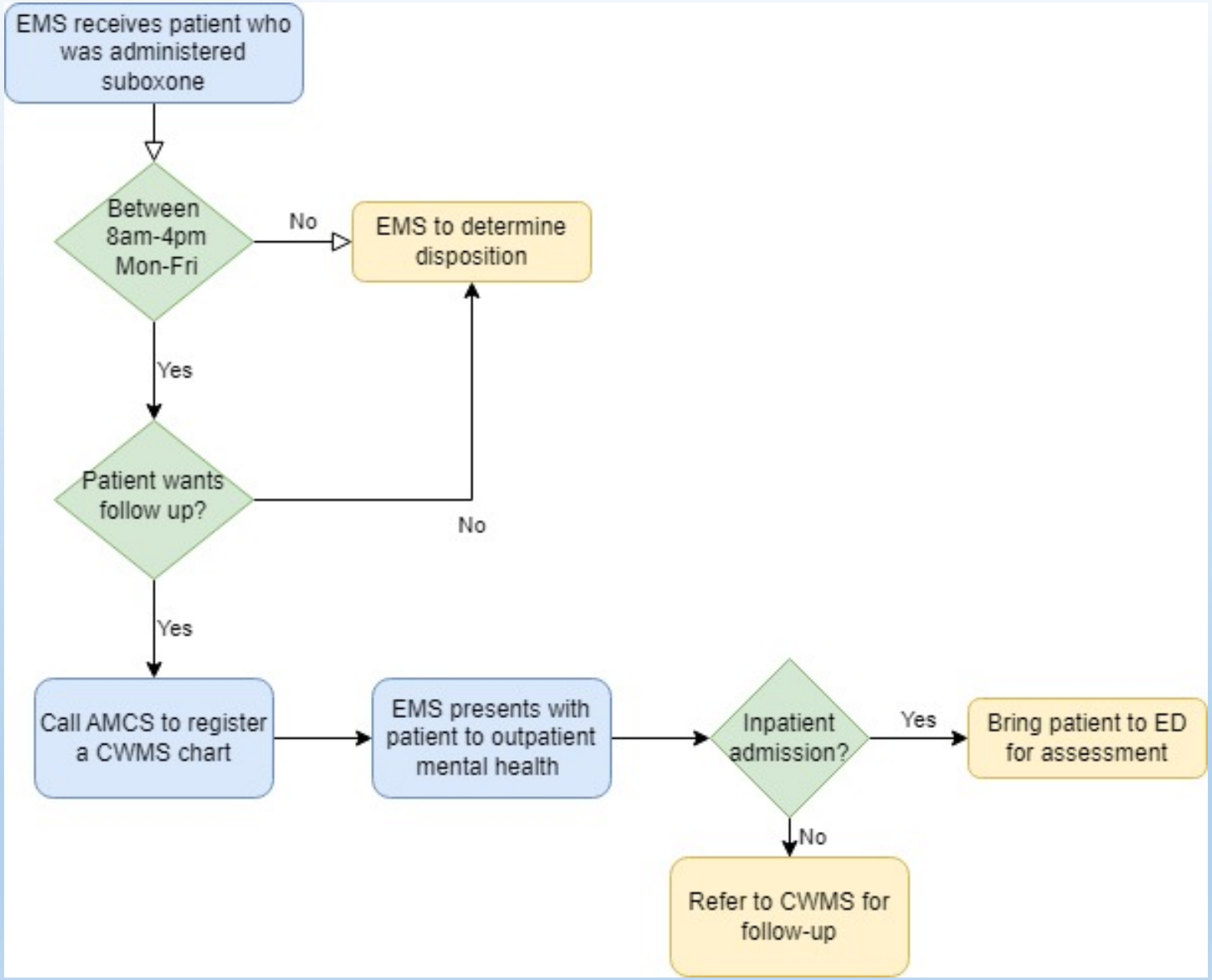
Opioid Crisis and Buprenorphine/Naloxone Pilot

Start Date: May 1st, 2023

Considerations

- Transport Timmins patients to Addiction Medicine clinic (TADH MHU Out-patient) weekdays between 08:00-16:00 and to TADH ED during off hours and holidays.
- Transport Hwy 11 corridor patients to closest ED.
- Have Dispatch notify receiving facility to ensure MHU Outpatient or ED is aware of Buprenorphine/Naloxone dose administered.

CWMS Patient Flow



CHALLENGE #4

CONVINCE EMS

HOW TO CONVINCE PARAMEDIC SERVICES?

- EDUCATION…EDUCATION….EDUCATION

  - OAT (Bup/Nal) should be started as soon as possible in pts requesting help
  - Bup/Nal helps treat withdrawal symptoms immediately
  - Bup/Nal decreases mortality up to 70%

We need to treat patients with addictions like we would anyone else presenting with a life-threatening medical illness

CHALLENGE #5

MOH APPLICATION

MAC and OBHG

- Proposal for Bup/Nal pilot was given to the Medical Advisory Committee Chairman (Dr. Prpic) to present to Ontario Base Hospital Group (July 2022)
- OBHG accepted the proposal and wanted the Buprenorphine/Naloxone Medical Directive to go Province-wide for every Paramedic Service to Access (which was to be released in February 2023)
- CDPS is the first Paramedic Service in the country to provide Bup/Nal Treatment to people suffering from OUD
- A life **saved** today could be a life **changed** tomorrow.

Guidelines for Treating Opiate Addiction and Withdrawals with Bup/Nal

Treat On Scene = Better outcomes

https://northernontario.ctvnews.ca/video?clipId=2576826&fbclid=IwAR35VaEH_JR8Mmx5jhewTjVSRj9XKMy0QMrFlVKX63uyYs5IHBRICB53bM8

https://northernontario.ctvnews.ca/video?clipId=2690592&jwsource=cl

https://northernontario.ctvnews.ca/northern-ont-paramedics-first-in-canada-to-offer-opioid-withdrawal-treatment-1.6498856

EMS specific Data:

- Patient demographics, including age and sex
- Naloxone administration (dosage and by whom) prior to the Bup/Nal treatment
- COWS score pre and post Bup/Nal treatment
- Total dosage of Bup/Nal, any adverse effects
  - Knowing that the medication decreases their symptoms is a key component of this.
- Average “on-scene” time with patients that accept Bup/Nal treatment
- Track times/dates of the overdoses
- Patient destination location (Withdrawal Management Services or ED)
- Transfer of Care times (specific to destination location)
- Patients that have accepted treatment versus refused treatment
- Recurrent EMS calls for patients recently treated with this directive
  - 7-day time interval
  - 30-day time interval

Results thus far:

- Started May 1st, 2023
- Administered Bup/Nal to 16.67% Opiate Overdose patients
  - We were initially expecting 1 in 10 (10%)
- 67% were transported to TADH
  - 33% refused transport or left AMA u/a TADH
- 17% have accepted long-term (Buprenorphine extended-release injection) treatment
- Average on scene time: 16:54 *
- 12% fatality rate

WHY OFFER TREATMENT IN THE FIELD

- IMMEDIATE ACCESS TO EVIDENCED BASED LIFE SAVING TREATMENT
- PORTAL OF ENTRY/ ACCESS FOR ADDICTION TREATMENT/HEALTH CARE
- PT MAY REMAIN IN TREATMENT AFTER INITIATION IN EMS CARE
- WELL KNOWN LONG TERM BENEFITS IF THEY DO REMAIN IN TREATMENT
- DECREASE IN EMS CALLS
- LARGE PERCENTAGE OF REFUSAL OF HOSPITAL TRANSPORT (~25%)
- IMPROVED JOB SATISFACTION
- DECREASED COMPASSION FATIGUE

THEY CAN'T REMAIN IN TREATMENT IF THEY ARE NOT OFFERED TREATMENT

REDEFINING THE ROLE OF EMS IN THE OPIOID CRISIS

Naloxone dispensing

Access Medication Assisted Treatment (MAT)

Questions?