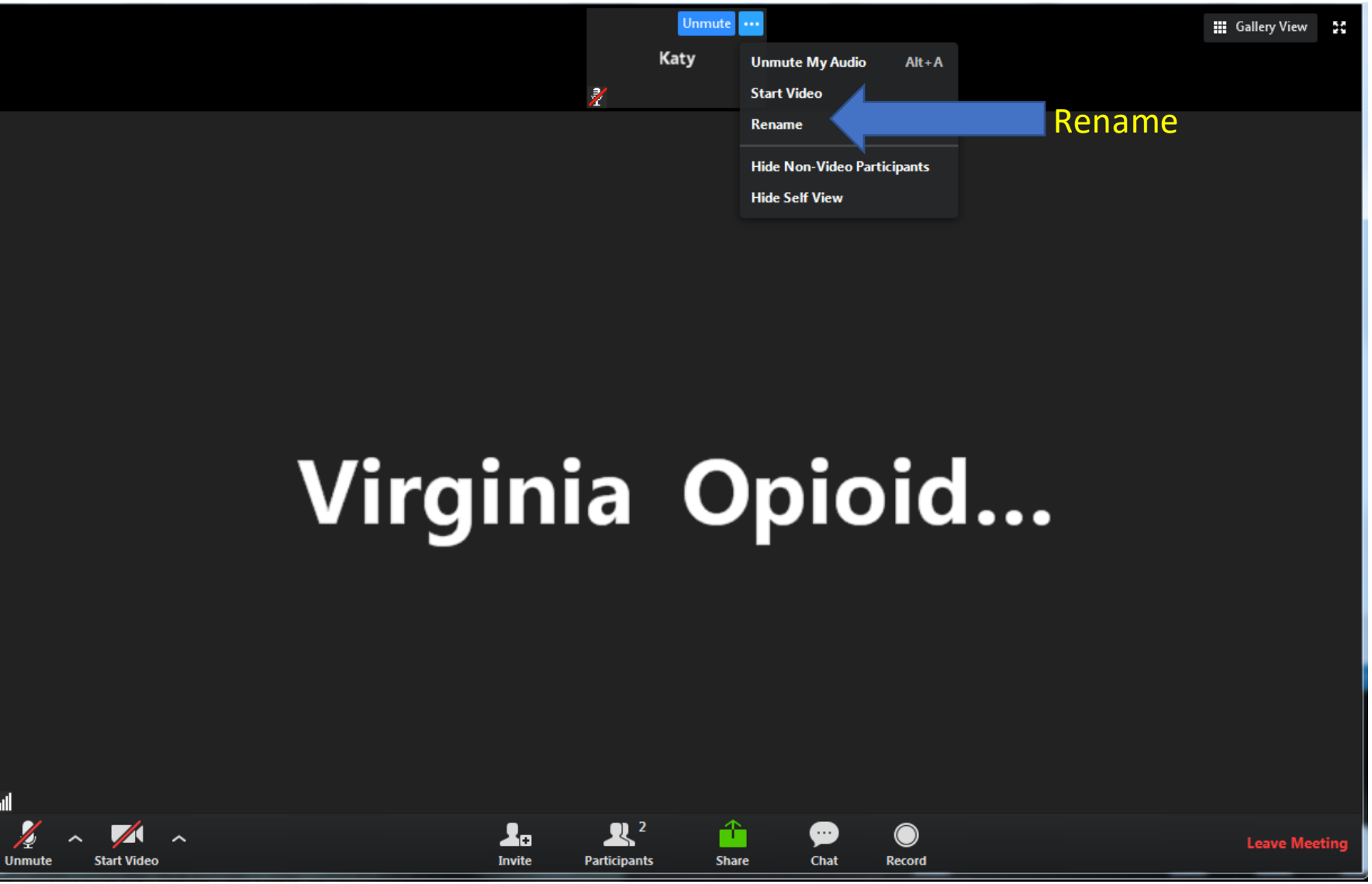
Virginia Opioid Addiction ECHO* Clinic

July 22, 2022

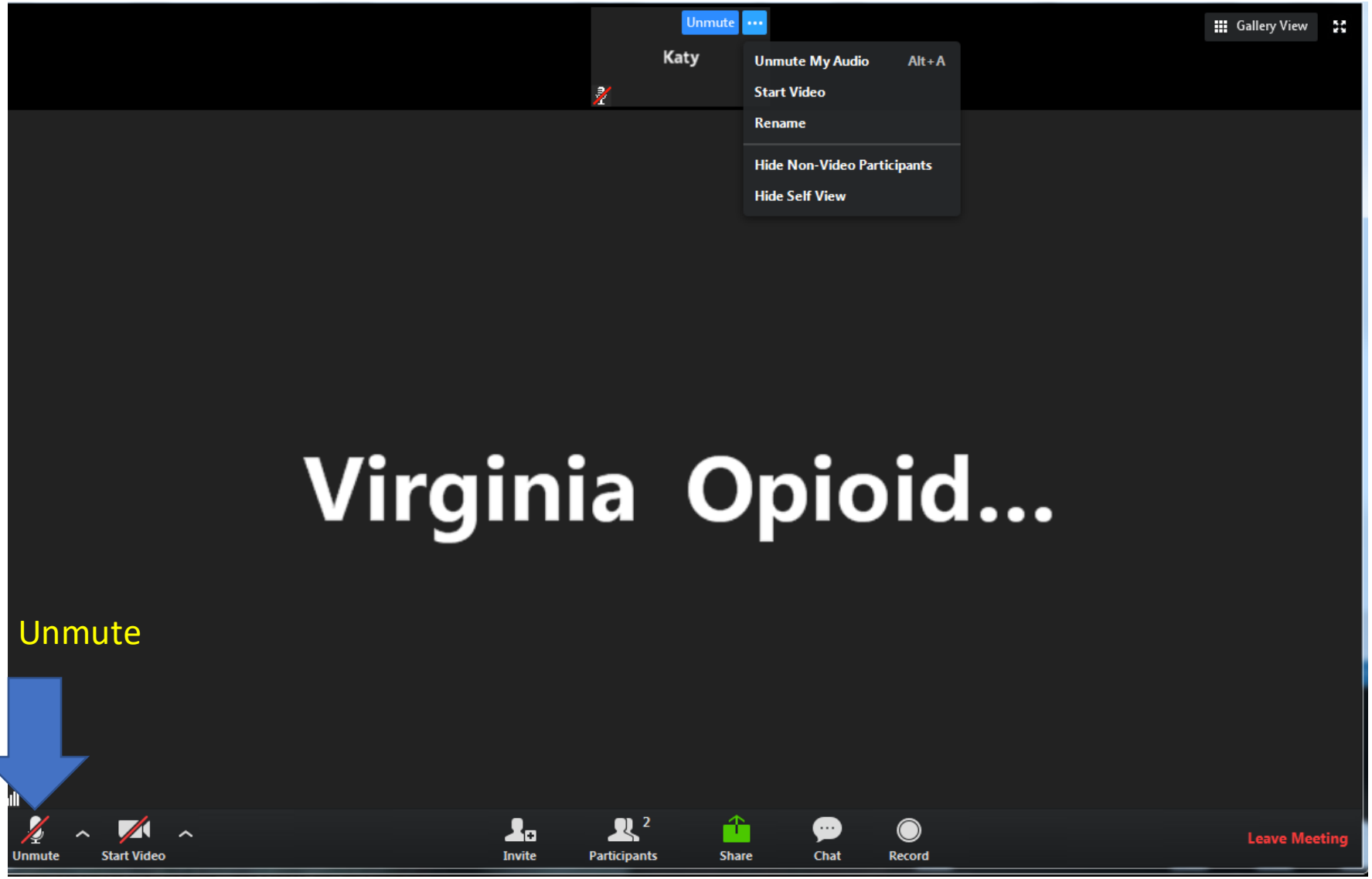
*ECHO: Extension of Community Healthcare Outcomes

Helpful Reminders



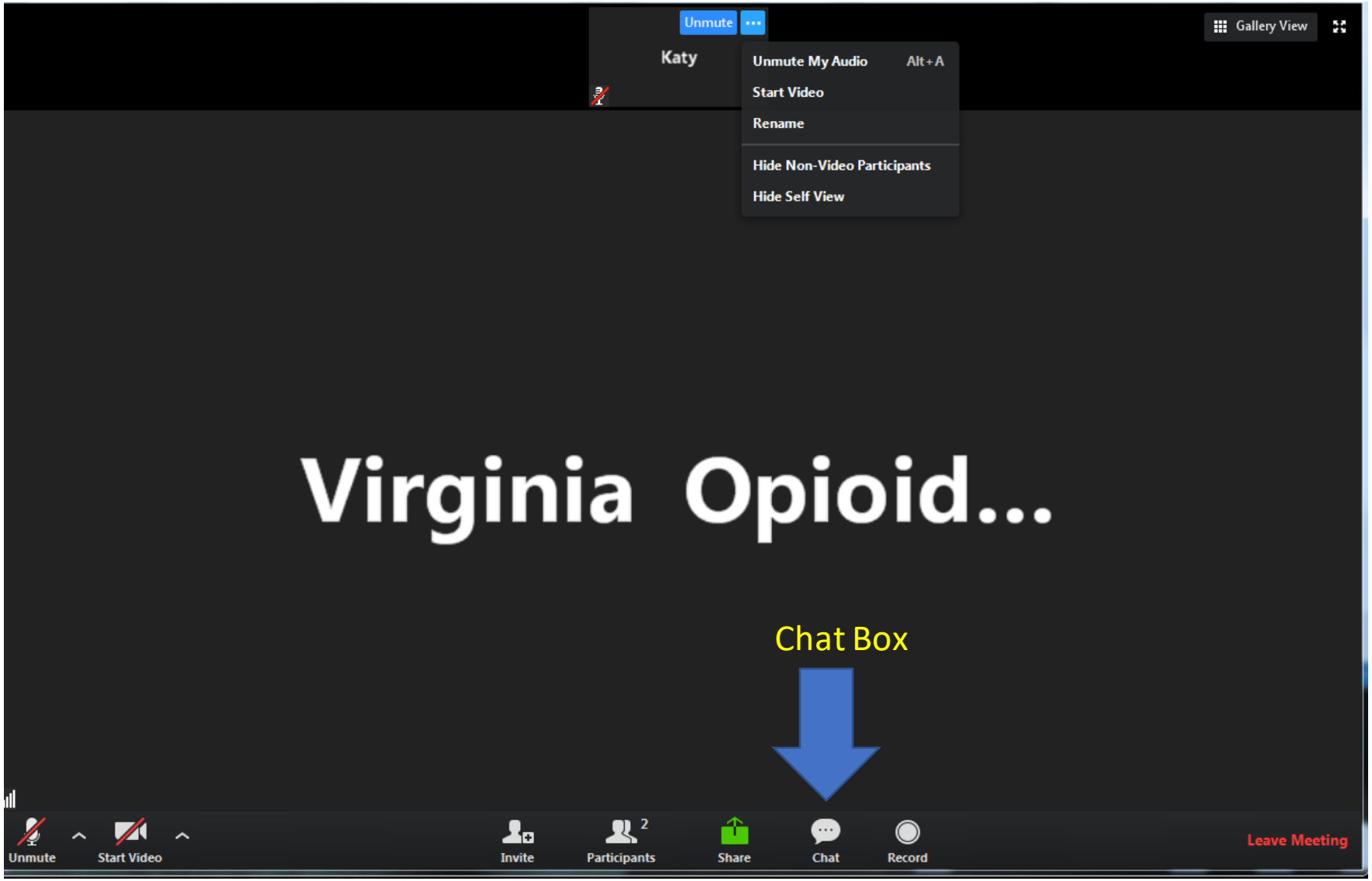
- Rename your Zoom screen, with your name and organization

Helpful Reminders



- You are all on mute please unmute to talk
- If joining by telephone audio only, *6 to mute and unmute

Helpful Reminders



- Please type your full name and organization into the chat box
- Use the chat function to speak with IT or ask questions

VCU Opioid Addiction ECHO Clinics

VCU Health
VCU School of Medicine

VDH Virginia Department of Health | VDHLiveWell.com

Virginia Department of Behavioral Health & Developmental Services

- Bi-Weekly 1 hour tele-ECHO Clinics
- Every tele-ECHO clinic includes a 30 minute didactic presentation followed by case discussions
- Didactic presentations are developed and delivered by inter-professional experts
- Website Link: www.vcuhealth.org/echo

Hub and Participant Introductions

VCU Team	
Clinical Director	Gerard Moeller, MD
Administrative Medical Director ECHO Hub	Vimal Mishra, MD, MMCi
Clinical Experts	Lori Keyser-Marcus, PhD Courtney Holmes, PhD Albert Arias, MD Megan Lemay, MD Katie Adams, PharmD
Didactic Presentation	Jason Lowe, MSW
Program Manager	Bhakti Dave, MPH
Senior Program Coordinator	Laura Porter
Acute Telehealth Manager	Tamera Barnes, MD
IT Support	Vladimir Lavrentyev, MBA

- Name
- Organization

Reminder: Mute and Unmute screen to talk

*6 for phone audio

Use chat function for Introduction

What to Expect

I. Didactic Presentation
   I. Brandon Wills, MD
   II. Theresa Davis, NP
   III. Case 1
      I. Case summary
      II. Clarifying questions
      III. Recommendations

II. Closing and questions

Lets get started!

Didactic Presentation

Disclosures

Brandon Wills & Theresa Davis no financial conflicts of interest to disclose.

There is no commercial or in-kind support for this activity.

Buprenorphine Home Induction

Brandon Wills, DO, FACEP, FAACT
Professor
Addictions Division, Department of Psychiatry & Emergency Medicine
Medical Director, MOTIVATE Clinic
Fellowship Director, Medical Toxicology
VCU Medical Center

Tracy Davis, MSN, RN, FNP-BC
Clinical Research Nurse Practitioner
Virginia Commonwealth University
Department of Psychiatry
Center for Clinical and Translational Research
Institute for Drug and Alcohol Studies

Disclosures

None

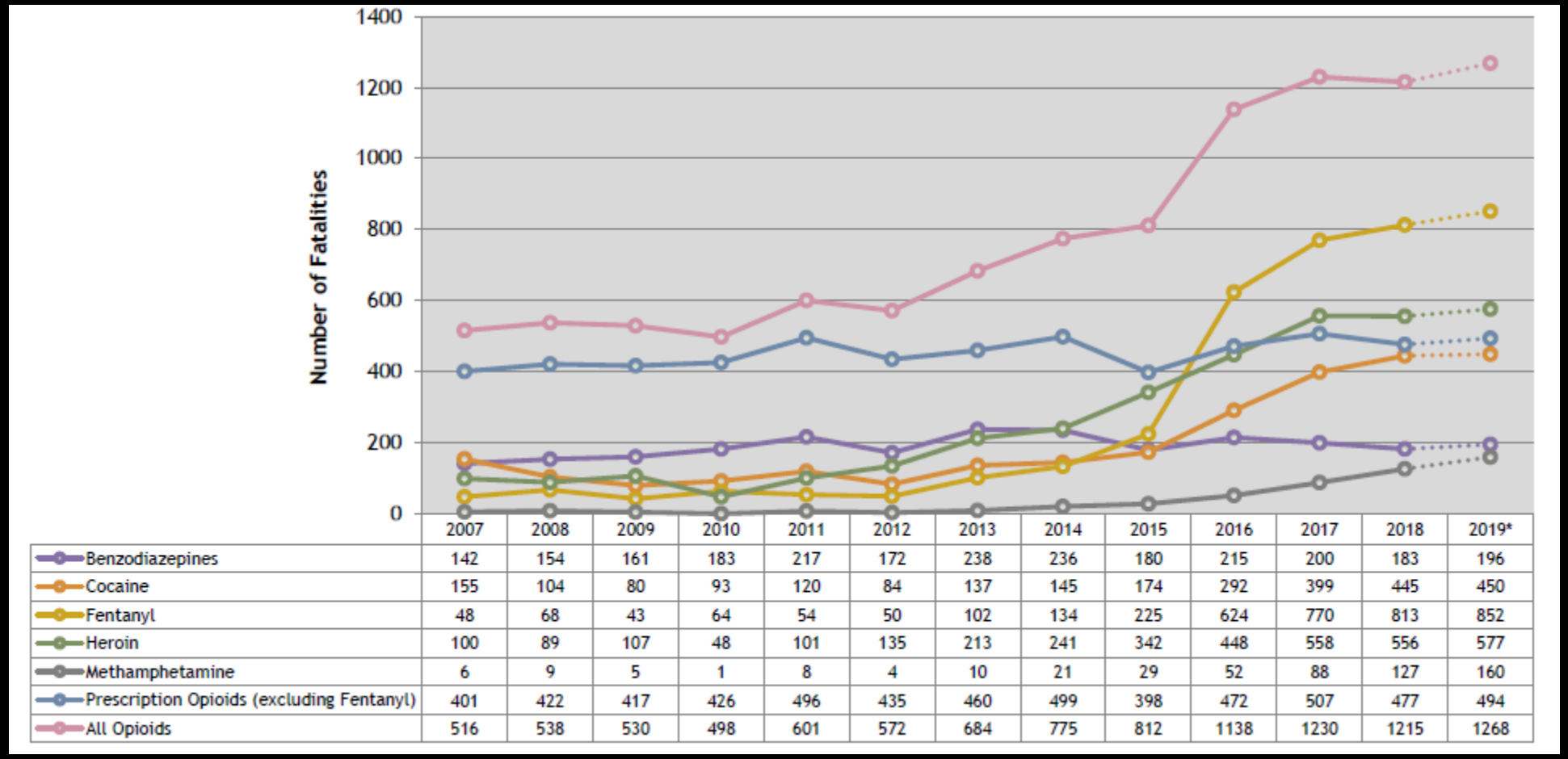
Objectives

- Distinguish strategies for buprenorphine induction
- Summarize literature on home induction
- Discuss efficacy and retention with home induction
- Review telehealth encounters with home induction

Traditional Buprenorphine Induction

- 2-4mg Q 2h
- Potential **problems** with this approach?

The Rise of Fentanyl



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019*
Benzodiazepines	142	154	161	183	217	172	238	236	180	215	200	183	196
Cocaine	155	104	80	93	120	84	137	145	174	292	399	445	450
Fentanyl	48	68	43	64	54	50	102	134	225	624	770	813	852
Heroin	100	89	107	48	101	135	213	241	342	448	558	556	577
Methamphetamine	6	9	5	1	8	4	10	21	29	52	88	127	160
Prescription Opioids (excluding Fentanyl)	401	422	417	426	496	435	460	499	398	472	507	477	494
All Opioids	516	538	530	498	601	572	684	775	812	1138	1230	1215	1268

Drug and Alcohol Dependence 214 (2020) 108147

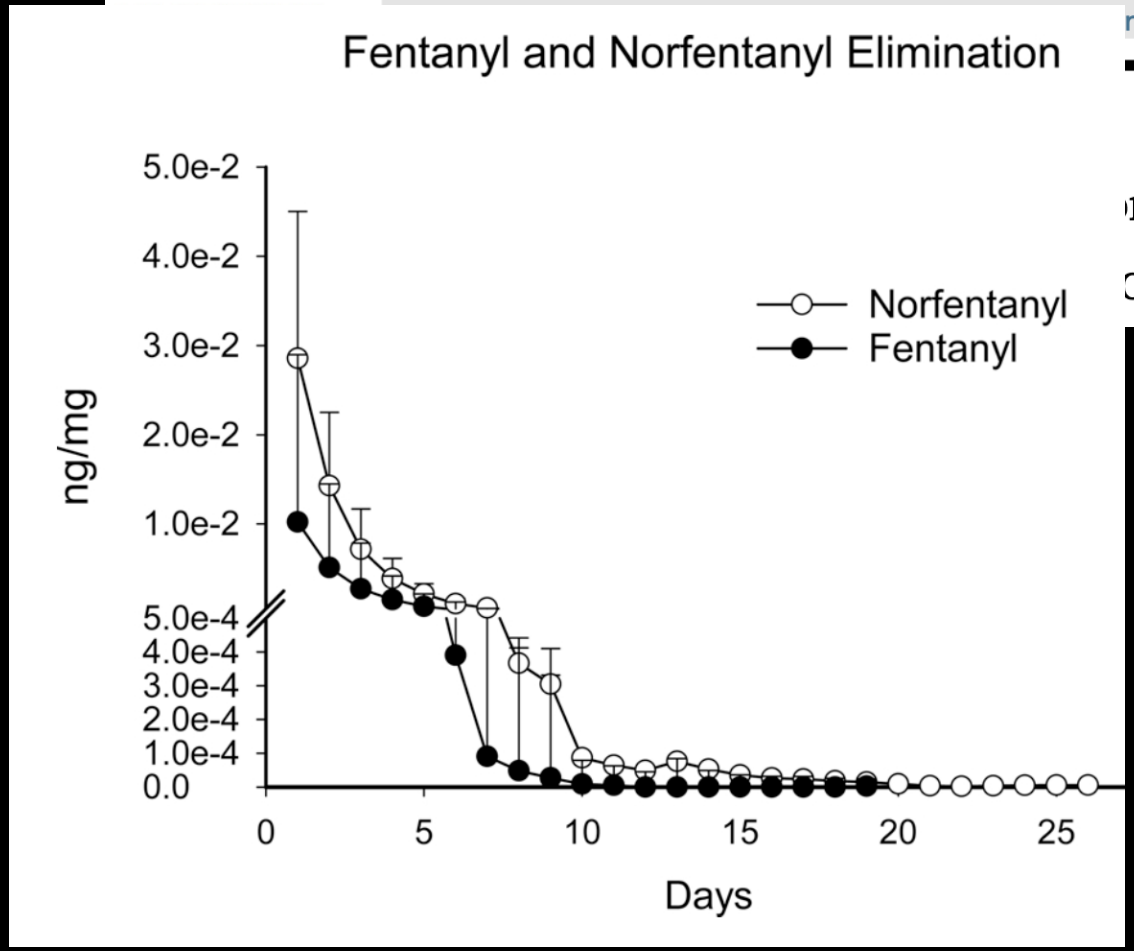
Contents lists available at ScienceDirect

Drug and Alcohol Dependence

r.com/locate/drugalcdep

ns with opioid use disorder

Oyler[c], Eric C. Strain[a]



Fentanyl Elimination:
Single use≈ 3 hrs
Daily use≈ 7 days

Huhn, *Drug Alc Dep*, 2020
Mather, *Clin Pharmacokinet*, 1983
Lotsch, *Clin Pharmacokinet*, 2013

Macrodose Induction

Potential Benefits

- Faster induction
- ↓ risk of P.O.W
  - Receptor saturation
  - Reduce withdrawal sx

Potential Risks

- ADR of high-dosing
  - Concurrent benzo's
  - Transitioning from methadone
  - Concomitant medical co-morbidities

Adapted from Rutgers Project ECHO, June 4, 2021

Macrodose induction

- ~~2-4mg Q 2h~~
- ~~Max day 1 dose: 16mg~~
- ~~Max day 2 dose: 24mg~~

-Start with higher doses (8-16 mg)
-Escalate quickly (Q 30-60 min)
-Max doses ~32 mg

Microdose induction

- Useful for inpatients actively treated w/ full agonists
- Limited use in the outpatient setting

Day	Buprenorphine Dose (SL)
1	0.5 mg QD
2	0.5 mg BID
3	1 mg BID
4	2 mg BID
5	4mg BID
6	8 mg QD
7	8 mg am, 4mg pm
8	12 mg (stop full agonist)

Home Induction: buprenorphine

"Traditional" versus "Macrodosing"

- Minimal/ no data
- Evolving standards of care…

Home Induction: Risks v Benefits

***Potential* Benefits**

- Flexibility
- Patient-centered
- Clinic throughput

***Potential* Risks**

- Lack of supervision
- Precipitated withdrawal?

When to start?

- Opioid kinetics: short vs long elimination
- SOWS score > 17

SOWS

Item	Symptom	Not at all	A little	Moderately	Quite a bit	Extremely
1	I feel anxious	0	1	2	3	4
2	I feel like yawning	0	1	2	3	4
3	I am perspiring	0	1	2	3	4
4	My eyes are teary	0	1	2	3	4
5	My nose is running	0	1	2	3	4
6	I have goosebumps	0	1	2	3	4
7	I am shaking	0	1	2	3	4
8	I have hot flushes	0	1	2	3	4
9	I have cold flushes	0	1	2	3	4
10	My bones and muscles ache	0	1	2	3	4
11	I feel restless	0	1	2	3	4
12	I feel nauseous	0	1	2	3	4
13	I feel like vomiting	0	1	2	3	4
14	My muscles twitch	0	1	2	3	4
15	I have stomach cramps	0	1	2	3	4
16	I feel like using now	0	1	2	3	4

Mild Withdrawal = score of 1 – 10
Moderate withdrawal = 11 – 20
Severe withdrawal = 21 – 30

Logistics

how to start BUPRENORPHINE

WAIT FOR MODERATE WITHDRAWAL SYMPTOMS

On a scale of 1-10, with 10 being the most sick you have ever felt, you should be at an 8 before starting buprenorphine.

Day 1

Take the first dose:
Put ¼ -½ of the 8mg film or tab under your tongue until it dissolves (about 10 minutes).

wait 2-4 hours

Still not feeling better?

Take another ¼-½ film or tab and repeat every 2-4 hours as needed.

No more than 1-2 films or tabs (8-16mg) per day.

Day 2

Add all doses from day 1

Take them all in the morning OR split the total amount from Day 1 into two equal doses for Day 2, taking half in the morning and half in the evening.

Still having withdrawal?

Take another ¼-½ film or tab every 4 hours as needed.

No more than 2 films or tabs (16mg) per day.

Day 3

Add all doses from day 2

Take them all in the morning OR split total from Day 2 into two equal doses for Day 3. Take this same dose every day until your follow up.

Do NOT take more than 2 films or tabs per day. Continue current dose until your follow up with your provider.

IF you take more than 2 films or tabs (16mg) per day you WILL run out & your provider cannot send you more.

Relevant Induction Literature

ELSEVIER

Journal of Substance Abuse Treatment 39 (2010) 51–57

Journal of Substance Abuse Treatment

Regular article

Factors associated with complicated buprenorphine inductions

Susan D. Whitley, (M.D.)[a,*], Nancy L. Sohler, (Ph.D., M.P.H.)[b,c],

Retrospective observational out-patient data:

- n=107 buprenorphine office-based induction
- Complicated* induction in 18 (17%)
- Complicated induction:
  - -Worse treatment retention
  - -Recent use of methadone/ benzo's
  - -Low dose buprenorphine (2 mg)

*Complicated= POW

ELSEVIER

Journal of Substance Abuse Treatment 38 (2010) 153 – 159

Journal of Substance Abuse Treatment

Regular article

Home- versus office-based buprenorphine inductions for opioid-dependent patients

Nancy L. Sohler, (Ph.D., M.P.H.)[a,b,c,*], Xuan Li, (M.S.)[d], Hillary V. Kunins, (M.D., M.P.H., M.S.)[c,d],

Retrospective observational data:

- Evaluated 30 day retention with home vs office induction
- n= 115 (51= home-based, 64= office-based)
- Induction: 2-4 mg → 2-4 mg → 2-4 mg, 16 mg day 1 max
- Difficult induction similar between groups (17%)
- Retention was similar
  - 78% Office induction
  - 78% Home induction

Addictive Behaviors 35 (2010) 537–540

Contents lists available at ScienceDirect

Addictive Behaviors

Short Communication

Unobserved versus observed office buprenorphine/naloxone induction: A pilot randomized clinical trial

Erik W. Gunderson [a,b,*], Xin-Qun Wang [c], David A. Fiellin [d], Benjamin Bryan [b], Frances R. Levin [b,e]

Pilot RCT:

- n= 20, randomized to home vs office induction
- Weekly follow-up x 4
- 2-4 mg after 16 hr abstinence + SOWS ≧ 17, additional 2-4 mg, 16 mg day 1 max
- Primary outcome: retention + no withdrawal
    - 60% successfully induced in each group

ELSEVIER

Journal of Substance Abuse Treatment 40 (2011) 349–356

Journal of Substance Abuse Treatment

Regular article

A comparison of buprenorphine induction strategies: Patient-centered home-based inductions versus standard-of-care office-based inductions

Chinazo O. Cunningham, (M.D., M.S.)[a,b,*], Angela Giovanniello, (Pharm.D.)[a,b],

Retrospective observational data:

Pts chose their own induction: office-based (n= 13) vs home-based (n= 66)

Similar reduction in opioid use between groups

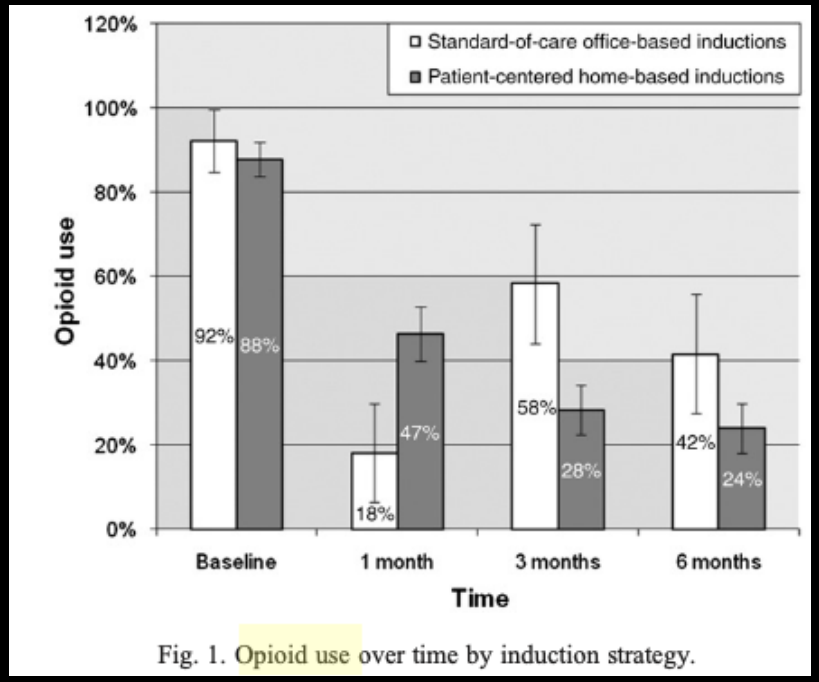


Fig. 1. Opioid use over time by induction strategy.

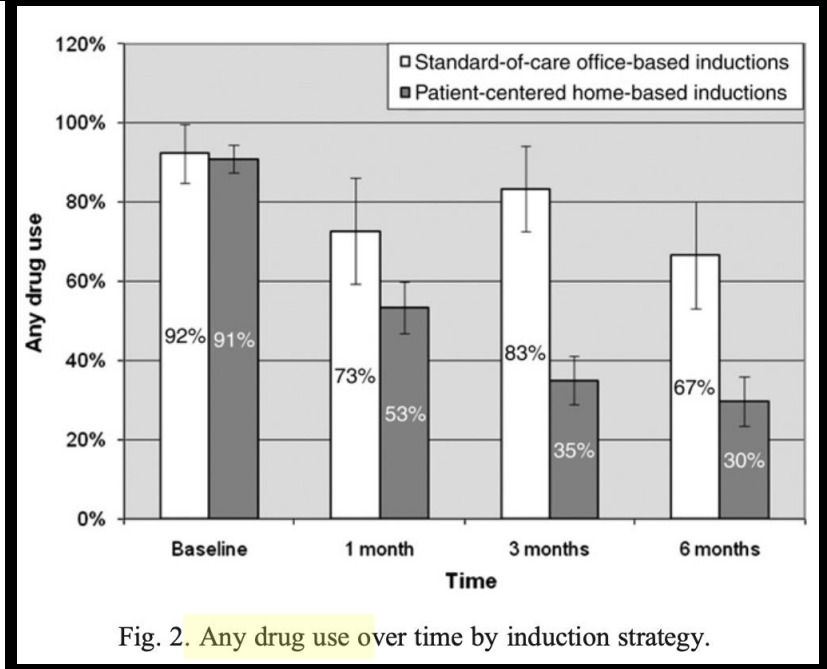


Fig. 2. Any drug use over time by induction strategy.

CLINICAL CASE CONFERENCE

(*J Addict Med* 2014;8: 309–314)

Clinical Case Conference: Unobserved "Home" Induction Onto Buprenorphine

Joshua D. Lee, MD, MSc, Jennifer McNeely, MD, MS, Ellie Grossman, MD, Frank Vocci, PhD, and David A. Fiellin, MD

Summary of one case with opinions…

Unobserved induction is now grounded in a growing body of literature demonstrating feasibility, wide adoption, and reasonable and acceptable level of safety compared with that of observed induction, although definitive data on comparative effectiveness are lacking. The choice of unobserved versus observed induction methods is currently made along practical lines, taking into account patient and provider preference, levels of ancillary support, practice logistics, and overall treatment goals.

REVIEW (*J Addict Med* 2014;8: 299–308)

Unobserved "Home" Induction Onto Buprenorphine

Joshua D. Lee, MD, MSc, Frank Vocci, PhD, and David A. Fiellin, MD

Semi-systematic Review: Home vs observed induction

- n= 10 studies (1 RCT, 3 prospective, 6 retrospective)
    - No difference in adverse event rates (weak evidence)
    - Insufficient data for evaluating efficacy

Research Letter

Home Induction of Buprenorphine for Treatment of Opioid Use Disorder in Pregnancy

Jeannie C. Kelly, MD, MS, Nandini Raghuraman, MD, MS, Molly J. Stout, MD, MSCI, Sharman Russell, MD,

VOL. 138, NO. 4, OCTOBER 2021 OBSTETRICS & GYNECOLOGY

Retrospective observational data:

- Home induction + pregnancy
- *First dose in clinic*
- n= 63 home induction, n= 8 observed induction
- Induction: 4 mg up to 12 mg

- No cases of precipitated withdrawal
- 96% retention at 1 week
- 87% retention at 3 months

Case Vignettes

Case 1

Demographic Information

36 y/o male

- Single, no children
- Resides in recovery house
- High school education
- Unemployed

Background Information

- No Past Medical/Surgical History
- Psychiatric Hx: Anxiety and Depression
  - Buspirone, fluoxetine
- Substance Use History
  - Overdoses: Naloxone 7x
  - Hospitalizations: 2
  - Opioids: heroin and fentanyl- mainly IN, past IV w/ shared needles
  - Stimulants: frequently with heroin
  - Tobacco: 1/2ppd

ED Presentation

ED CC: wants medication for OUD

- Presents with opiate cravings
- No use x 1 month
- No longer having physical withdrawal symptoms
- Severe cravings
- MOTIVATE clinic next month but feels like he needs to be seen today to consider medications
- COWS: 0

ABC Presentation
Virtual Telehealth

- Reviewed OUD history
- No withdrawal reported, however having severe cravings
- DSM-5 criteria met: Severe use disorder (6+)
- No current data on PMP

Home Induction

- Sig:
  - 4 mg SL day 1
    - may take additional 4 mg
  - 12 mg SL day 2
  - 16 mg SL day 3

- Rx for naloxone

MOTIVATE Clinic Follow Up

- Since ABC visit, patient mood is happy, and glad that he is in recovery
- Currently taking buprenorphine 8/2 mg daily
- Working well with no cravings, withdrawal or return to use
- He is active with (AOG) Atlantic Outreach Group where he receives behavioral counseling, modification and recovery.
- Urine drug screen results:
  - Pos for BUP only

Case 2

Demographics

43 y/o Male

- Lives in house in RVA with SA and 4 children
- Self contractor

Background Information

- Medical/Surgical History: HTN, Hernia Repair
- Psychiatric Hx: PTSD, Anxiety, Depression, Insomnia
  - Psychiatric hospitalizations: Tuckers
  - Suicide attempts: x 1 tuckers
- Substance Use History
  - Overdoses: x 1
  - Opioids: heroin and fentanyl
  - Alcohol: weekends only
  - Stimulants: crack cocaine
  - Cannabis: daily
  - Tobacco: daily

ED Presentation

- Found unresponsive in his car
- To ED via EMS as a CRITICAL MEDICAL suspected drug overdose
- 4 mg naloxone IN: no improvement of mental or respiratory status
- En route, EMS bagging pt on arrival
- On arrival to the VCU ED, pt is unresponsive
- Pt became responsive after 0.4 mg of naloxone IV in the ED and admitted to fentanyl and cocaine use earlier

ABC Presentation
Virtual Telehealth

- Substance use history reviewed
- DSM-5 criteria: Severe (6+) use disorder for OUD and CUD

Home Induction

- Sig:
  - 4 mg SL day 1
    - may take additional 4 mg
  - 12 mg SL day 2
  - 16 mg SL day 3
- Has naloxone available, and knows how to use it

MOTIVATE Clinic Follow Up

- Pt feels buprenorphine is working well, and is surprised how well it is working Would like to continue, and engage in 1:1 counseling
  - Cravings: Yes- ococaine
  - Withdrawal symptoms: No
  - Constipation: No
- OUD- Buprenorphine to be continued at 16/4 mg daily
- CUD-Topiramate 25mg BID for cravings, pt agreed to start therapy
- Toxicology results:
  - Pos BUP, Pos Cocaine, Pos Cannabinoids

Comments?

Summary

Buprenorphine Home Induction:

- Minimal evidence to guide decision-making
  - Probably similar in retention
  - Possibly similar in efficacy
  - No clear signal of harm

COMMENTS?
QUESTIONS?

Questions?

Case Presentation
Kate DiPasquale Seelig, MD

- 1:00-1:30 [20 min]
  - 5 min: Presentation
  - 2 min: Clarifying questions- Spokes
  - 2 min: Clarifying questions – Hub
  - 2 min: Recommendations – Spokes
  - 2 min: Recommendations – Hub
  - 5 min: Summary - Hub

Reminder: Mute and Unmute to talk
*6 for phone audio
Use chat function for questions

Main Question

I would like to discuss the risks and benefits of continuing a inappropriately prescribed stimulant during our work up for ADHD.

Demographic Information

32-year-old white female, employed as a bartender, recently married. Currently uninsured, but will be able to get on spouse's plan in January.

Background Information

History of heavy alcohol use from age 15 to 29, stopped use abruptly after month-long hospitalization for necrotic alcoholic pancreatitis complicated by sepsis, AKI and pulmonary embolism. After hospital discharge she struggled with difficulty concentrating and memory loss. Because she did not have health insurance she did not have any clinical follow-up. She tried taking some of her boyfriend's Adderall, and found it to be helpful for her symptoms. A friend of her boyfriend's family who is a physician saw her for free because she had no health insurance and prescribed Adderall 10 mg short acting daily, which she has been taking daily until about 2 months ago when the physician lost his license due to inappropriate prescribing of controlled substances.

Previous Interventions

She scheduled a new patient appointment with me, and requested a refill on the Adderall. She reports she ran out about 2 weeks ago and has been experiencing fatigue and difficulty concentrating drive then. She denies any difficulty sleeping while taking Adderall in the past and pharmacy record review reviews she filled her prescription at monthly intervals.

Plans for Future Treatment/ Patient's Goal

After our first visit I reviewed her hospital records, and realized just how sick she had been. I felt that I needed to get a current renal function, thyroid level, and CBC to evaluate other causes of fatigue, and EKG given the history of PE. I had hoped to order the labs and review results prior to our next visit at which time I would administer a validated ADHD screening tool, and then make a decision about whether to continue Adderall or try a non-stimulant option. However she declined stating she would prefer to wait until she has insurance to complete the work up.

Other Relevant Information

In in many ways this is a cut and dry case of a patient with history of substance abuse seeking a controlled substance without wanting to go through an adequate workup. However, this is also a patient who is now going on her third year of abstinence from alcohol, which almost killed her. I am struggling with whether or not a harm reduction model of thinking could be employed here to her ultimate benefit, i e continue the Adderall prescription for a predetermined period of time while she gets her health insurance straightened out. I realize this is not an opioid related case, but was interested in feedback from the addiction medicine community.

Main Question (repeated)

I would like to discuss the risks and benefits of continuing a inappropriately prescribed stimulant during our work up for ADHD.

Case Studies

- Case studies
  - Submit: www.vcuhealth.org/echo
  - Receive feedback from participants and content experts
  - Earn **$100** for presenting

Thank You

The success of our telehealth program depends on our participants and those who submit case studies to be discussed during clinics. We recognize the following providers for their contributions:

- **Ademola Adetunji, NP** from Fairfax County CSB
- **Tara Belfast-Hurd, MBA-PA** from Department of Behavioral Health and Developmental Services
- **Michael Bohan, MD** from Meridian Psychotherapy
- **Ramona Boyd, NP** from Health Wagon
- **Diane Boyer, DNP** from Region Ten CSB
- **Melissa Bradner, MD** from VCU Health
- **Kayla Brandt, B.S.** from Crossroads Community Service Board
- **Candace Fletcher, PharmD Candidate** from Hopkins Medical Association
- **Susan Cecere, LPN** from Hampton Newport News
- **Kimberly Dexter, DNP** from Hampton Newport News CSB
- **Shokoufeh Dianat, DO, MAS** from Virginia League from Planned Parenthood
- **Candace Fletcher, PharmD** from Hopkins Medical Association
- **Michael Fox, DO** from VCU Health
- **Shannon Garrett, FNP** from West Grace Health Center
- **LaShawna Giles, MSW** from Hampton Newport News CSB
- **Sharon Hardy, BSW, CSAC** from Hampton-Newport News CSB
- **Kara Howard, NP** from Southwest Montana Community Health Center
- **Sunny Kim, NP** from VCU Health
- **Heidi Kulberg, MD** from Meridian Health
- **Thokozeni Lipato, MD** from VCU Health
- **Caitlin Martin, MD** from VCU Health
- **Jennifer Melilo, FNP** from Chesapeake Integrated Behavioral Health
- **Dawn Merritt, QMHP** from Eastern Shore CSB
- **Maureen Murphy-Ryan, MD** from AppleGate Recovery
- **Faisal Mohsin, MD** from Hampton-Newport News CSB
- **Jeromy Mullins, PharmD Candidate** from Hopkins Medical Association
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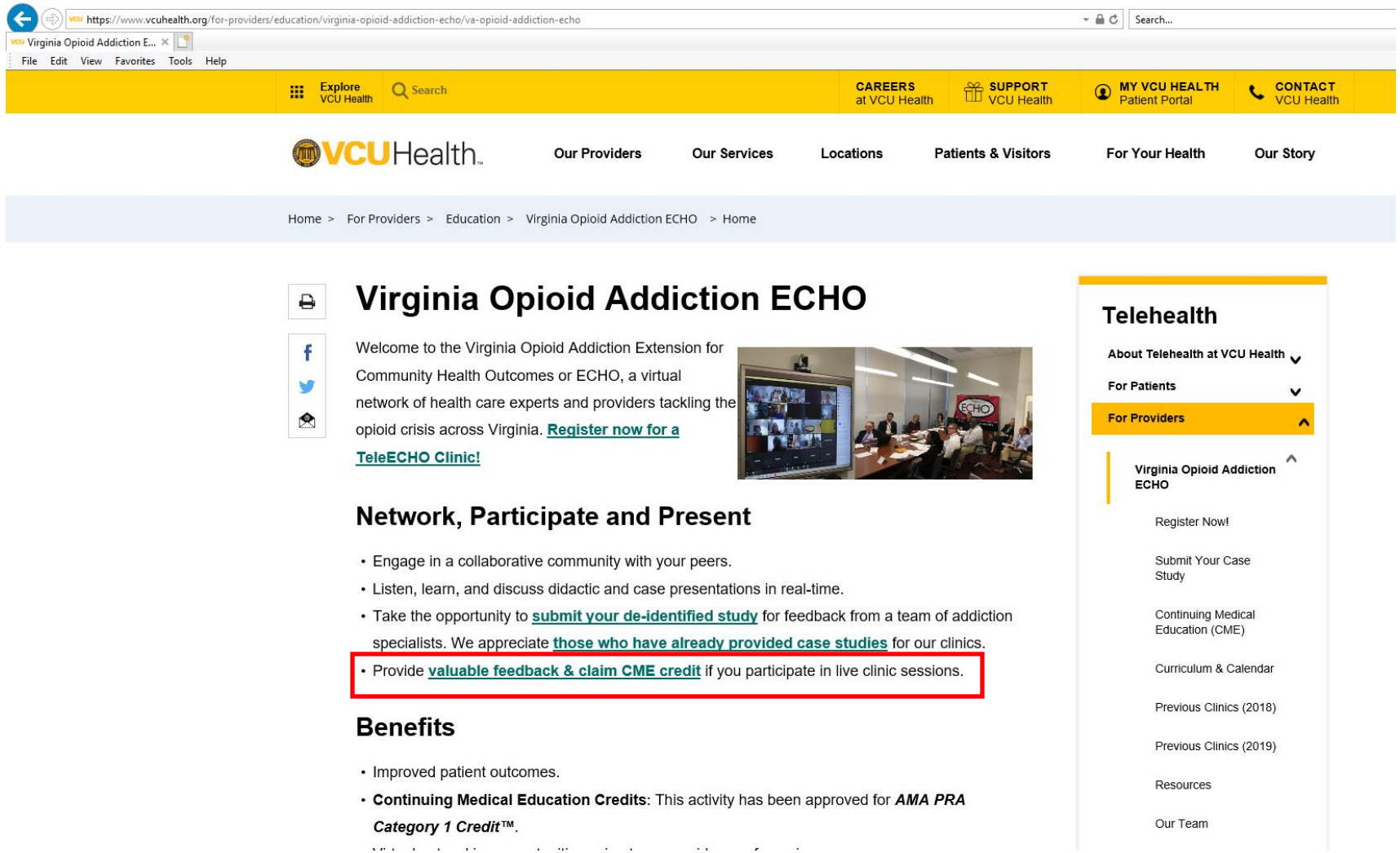
- **Davina Pavie, QMHP** from Hanover County CSB
- **Winona Pearson, LMSW** from Middle Peninsula Northern Neck CSB
- **Jennifer Phelps, BS, LPN** from Horizons Behavioral Health
- **Crystal Phillips, PharmD** from Appalachian College of Pharmacy
- **Jashanda Poe, MA** from Rappahannock Area CSB
- **Tierra Ruffin, LPC** from Hampton-Newport News CSB
- **Manhal Saleeby, MD** from VCU Health Community Memorial Hospital
- **Jenny Sear-Cockram, NP** from Chesterfield County Mental Health Support Services
- **Elizabeth Signorelli-Moore, LPC** from Region 1 CSB
- **Amber Sission, QMHP** from Eastern Shore CSB
- **Daniel Spencer, MD** from Children's Hospital of the King's Daughters
- **Linda Southall, QMHP** from Alleghany Highlands CSB
- **Heather Stone, PhD, LCSW** from Central Virginia Health Services of Petersburg
- **Cynthia Straub, FNP-C, ACHPN** from Memorial Regional Medical Center
- **Saba Suhail, MD** from Ballad Health
- **Michelle Tanner, LPC** from Hanover County CSB
- **Barbara Trandel, MD** from Colonial Behavioral Health
- **Bill Trost, MD** from Danville-Pittsylvania Community Service
- **Art Van Zee, MD** from Stone Mountain Health Services
- **Ashley Wilson, MD** from VCU Health
- **Sarah Woodhouse, MD** from Chesterfield Mental Health
- **Susan Mayorga, BA, CBIS** from Community Health Center of the New River Valley
- **Jordan Siebert, Peer Recovery Specialist** from Daily Planet Health Services

Claim Your CME and Provide Feedback

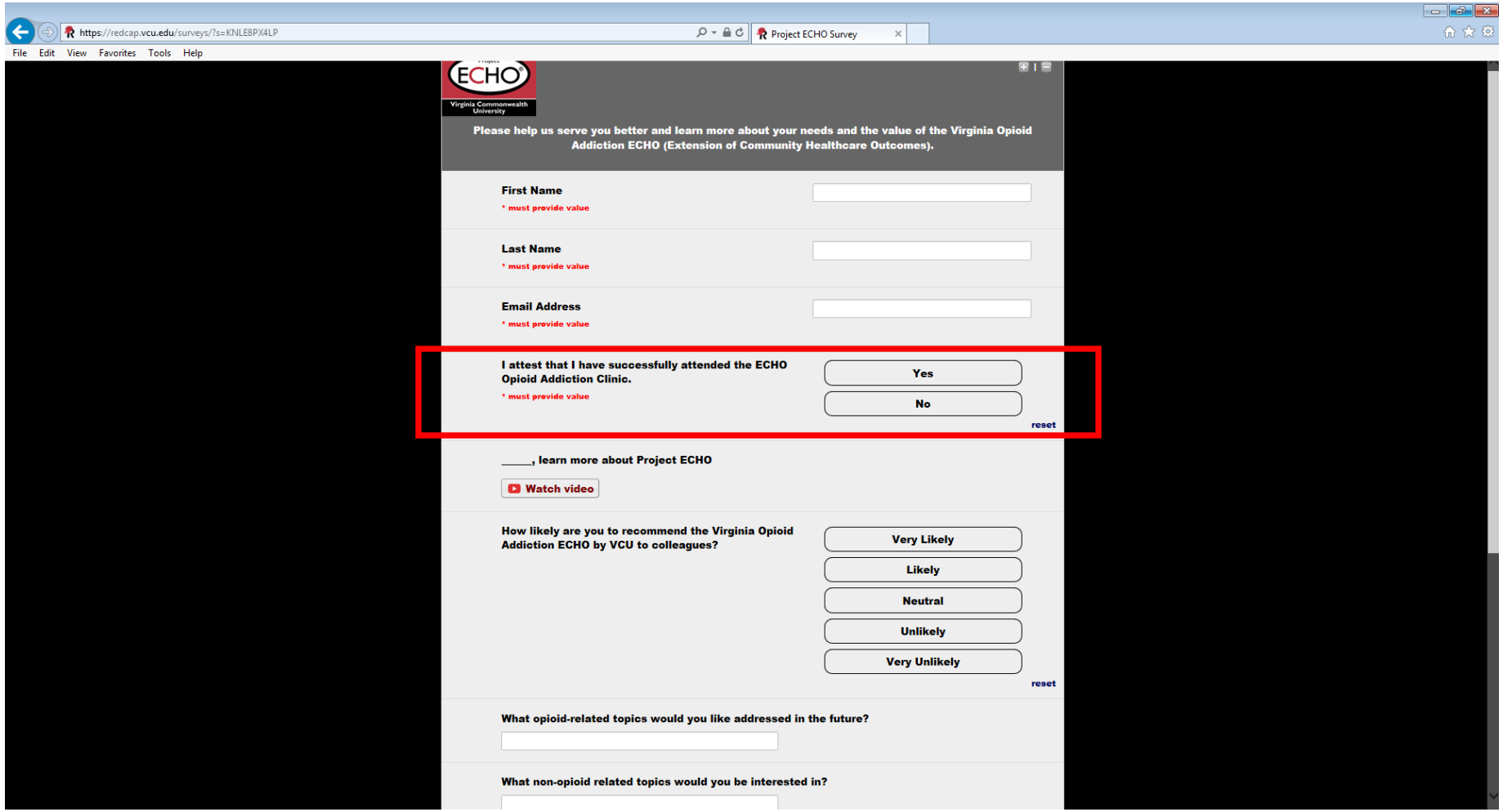
- www.vcuhealth.org/echo

- To claim CME credit for today's session
- Feedback
  - Overall feedback related to session content and flow?
  - Ideas for guest speakers?

Access Your Evaluation and Claim Your CME



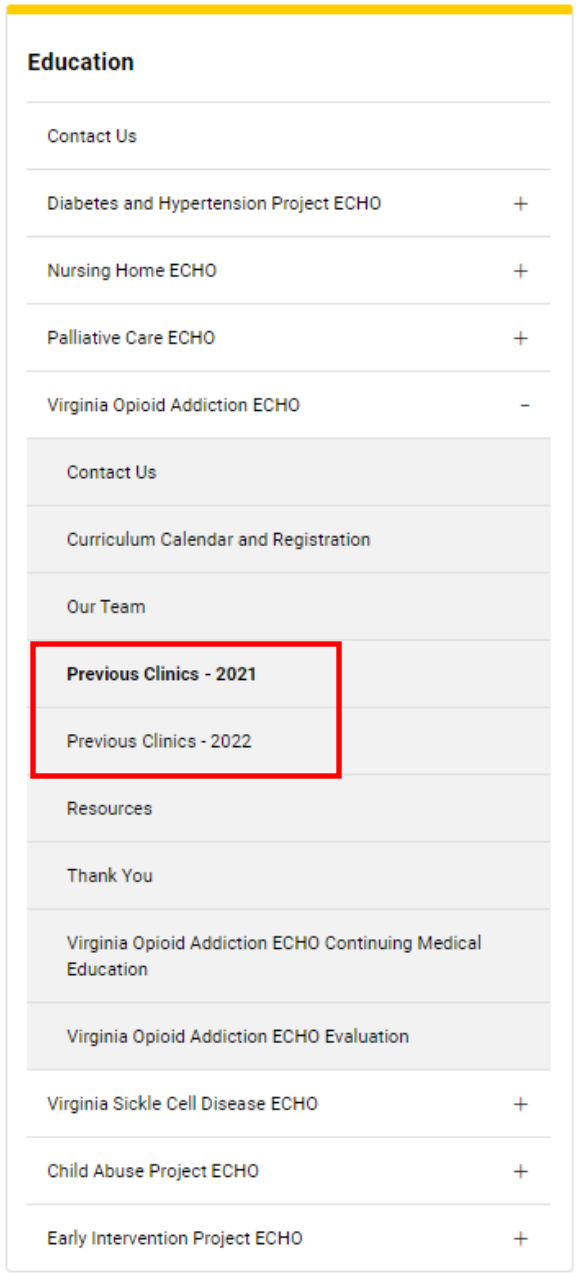
Access Your Evaluation and Claim Your CME



Access Your Evaluation and Claim Your CME

- www.vcuhealth.org/echo
  - To view previously recorded clinics and claim credit

Access Your Evaluation and Claim Your CME



Previous Clinics - 2021

Review topics we covered in previous Virginia Opioid Addiction ECHO clinics.

January 15, Buprenorphine Taper
Presented by Masaru Nishiaoki, MD

- View Presentation
- View Video

January 29, Panel Discussion: COVID and Chronic Conditions
Panelists: Albert Arias, MD, Alex Krist, MD and Katherine Rose, MD

- View Presentation
- View Video

February 12, Grief Impacting Recovery
Presented by Courtney Holmes, PhD

- View Presentation
- Video Video

February 26, Virginia Drug Court System
Presented by Melanie Meadows

- View Presentation
- View Video

March 12, COVID and Recovery: Panel Discussion
Presented by Tom Bannard, MBA Omri Morris, CPRS Raymond Barnes, CPRS Erin Trinh, CPRS

- View Presentation
- View Video

March 26, Effects of Pharmacology on Cognitive Function
Presented by Gerry Moeller, MD

- View Presentation
- View Video
- View Resource

April 9, PropER Clinic and SUD Virtual Bridge Clinic: Linking Patients from ED to PCP and SUD Care
Presented by Taruna Aurora, MD and Brandon Wills, MD

- View Presentation

VCU Virginia Opioid Addiction TeleECHO Clinics

Bi-Weekly Fridays - 12:00 - 1:00PM

Mark Your Calendar --- Upcoming Sessions

We will resume sessions later this Fall!

Please refer and register at vcuhealth.org/echo

THANK YOU!

Reminder: Mute and Unmute to talk
*6 for phone audio
Use chat function for questions