Disclosures

Grant Support
- National Institute on Drug Abuse
- Doris Duke Foundation
- SCDHHS/21st Century Cures (website and Project ECHO)

Committees
- BCBS Pharmacy & Therapeutics Committee

Clinical work
- Work in MUSCs Pain Rehabilitation Program
- **No financial conflicts of interest**
- Will not discuss non-FDA indicated use of medications
This lecture addresses the “prescribing and monitoring of controlled substances”

This lecture will review:
- monitoring procedures (including clinical signs/symptoms and validated scales) to identify opioid use disorder in patients on prescription opioids

- prescribing of buprenorphine and naltrexone for the treatment of opioid use disorder

Outline

I. Identify signs, symptoms, and challenges in identifying Opioid Use Disorder (OUD) in medical settings

II. Discuss Medication-Assisted Treatment (MAT) for OUD, and challenges and opportunities utilizing MAT in medical settings

III. Review pilot initiatives that address barriers to utilizing MAT in medical settings and future directions of such initiatives
Nationwide Opioid Crisis… Continued

Drugs Involved in U.S. Overdose Deaths, 2000 to 2016

- Synthetic Opioids other than Methadone, 20,145
- Heroin, 15,446
- Natural and semi-synthetic opioids, 14,427
- Cocaine, 10,819
- Methamphetamine, 7,863
- Methadone, 3,314

CDC, 2016

Despite decreasing opioid prescriptions…

www.justplainkillers.com
SC Drug Overdose Mortality Data

SC Opioid Overdose Mortality Data
Why Identify and Treat OUD?
To Decrease Mortality

Death rates:

Dupouy et al., 2017
Evans et al., 2015
Sordo et al., 2017
Diagnosing OUD in Medical Settings is Not Easy

How to Identify OUD in Medical Settings

**Clinical Assessment**

- Poor Functioning
  - Emotional
    - Depression/Anxiety
  - Physical
    - Sedation/in bed/ED
  - Social
    - Pt or family concern

- Aberrant Behaviors
  - Running out early
  - Rx from another provider
  - Use of illicits

**Screening scales**

- NIDA Quick Screen
- COMM
- DAST
- SOAPP-R
- ORT
DDX for a Poorly-Functioning Pain Patient

Psychiatric co-morbidity
› Depression
› Anxiety, esp early-life trauma

Psychologic co-morbidity
› “Chemical coping”
› Personality disorders

Opioid Use Disorder (OUD)

Pseudoaddiction
Tolerance/Withdrawal/OIH?

When does a poorly-functioning patient with pain “cross the line” to addiction?
Start opioid
- Pain
- Euphoria

Tolerance
- Doc ↑ mg
- Tolerance
- Pt ↑ mg

Use for stress
- Sleep high

Try to ↓

Run out early

Return to drug

↑ pain
↓ sleep w/d

Change source

RECOGNIZING OUD
Aberrant Behaviors

More clear
- Forging
- Steal/borrowing
- IV use
- Obtained on street
- Abuse other drugs
- Multiple dose ↑
- Recurrent Rx loss

Less clear
- Request ↑ mg
- Hoarding
- Asking specific Rx
  “Doc shopping”*
- 1-2 dose ↑
- Rx another sx
- Psychic effects

(= Passik & Portenoy 1998)
RECOGNIZING OUD

Signs

**Intoxication**
- Euphoria
- Constricted pupils
- Slurred speech
- The “nods”

**Withdrawal**
- Pain/Distress
- Dilated pupils
- GI upset/diarrhea
- Goosebumps

---

Risk Factors for Inadvertent Prescription Opioid Overdose

- Higher doses of opioids
  - 100mg morphine equivalent or higher
- Using with sedatives or alcohol
- Co-morbid mental health or medical issues
- Recent abstinence (recent hospital detox)
- Other substance abuse
- Aberrant behavior (running out early)
- Using alone

Screening Tools (all validated)

**NIDA Single-Question Screener:**

“How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?” (where a response of ≥1 is considered positive).

Quick, direct, effective, good for universal screening

**Opioid Risk Tool (ORT)**

Good at baseline for pts on opioids; most factors unchangeable; differentiates gender

<table>
<thead>
<tr>
<th>Family history of substance abuse</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Illegal drugs</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Rx drugs</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Personal history of substance abuse</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Illegal drugs</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Rx drugs</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

| Age between 16–65 years            | 1      | 1    |
| History of preadolescent sexual abuse | 3      | 0    |
| Psychological disease              |        |      |
| ADD, OCD, bipolar, schizophrenia   | 2      | 2    |
| Depression                         | 1      | 1    |

Scoring totals
Screen & Opioid Assessment For Patients With Pain—Revised (SOAPP®-R)

Current Opioid Misuse Measure - COMM

• Longer scales (SOAPP=24, COMM=16 items)
• Ask some common themes, indirect
  • Concern/worry about meds
  • Use pain meds for other symptoms
  • Go to ER/friend for meds
  • Arguments/social discord
  • Other drug/alcohol problems
• Better for a group with some risk and for repeated measures

DSM-V Opioid Use Disorder

**Maladaptive** pattern of use

leading to impairment or distress
- Failure to fulfill major role obligations
- Important social, occupational, or recreational activities are given up

- Tolerance (not with prescribed medications)
- Withdrawal (not with prescribed medications)

- Taken in larger amounts or over a longer period than was intended
- Persistent desire or unsuccessful efforts to cut down or control use
- Great deal of time spent to obtain/use/recover from the substance

- Craving or a strong desire or urge to use a specific substance

- Continued use despite negative consequences
  - Use despite recurrent physical or psychological problem exacerbated by the substance
  - Recurrent use in situations in which it is physically hazardous

Decline in functioning

Loss of control

Continued use despite consequences

PAIN
Half of US Opioids Market is Treatment for Chronic, Non-Cancer Pain

300 million opioid prescriptions/yr (US, 2015)

Pain

Depression/Anxiety

Poor sleep

Opioid use

Trauma

Dual Problem in Medical Settings:

Chronic Pain

Prescription Opioid Use/Disorder

Pain, Opioids, and Gender

➢ Women = 80% of chronic pain populations
  (Croft P, 2002; Fillingim et al., 2009; Gerdle et al., 2008)

➢ Opioids (+ other pain medications) recommended for women > men
  (Wandner et al., 2010; Hirsh et al., 2009, Fillingim 2009)

➢ Women have > rates of co-occurring mood & anxiety disorders
  (Grella et al., 2009)

➢ Women (with OUD) report greater use of opioids to cope with negative emotion and pain
  (McHugh et al., 2013)

➢ Women are more likely to receive benzodiazepine co-prescription with opioids
  (Hwang et al., 2016)
SC females outpace males with opioid prescriptions received

Table: 2017 Number of All Opioid by Age Group and Sex

<table>
<thead>
<tr>
<th>Age Group</th>
<th>South Carolina Female</th>
<th>South Carolina Male</th>
<th>All</th>
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</thead>
<tbody>
<tr>
<td>0-17</td>
<td>40,226</td>
<td>38,500</td>
<td>99,099</td>
</tr>
<tr>
<td>18-24</td>
<td>75,343</td>
<td>46,125</td>
<td>121,468</td>
</tr>
<tr>
<td>25-34</td>
<td>239,371</td>
<td>154,954</td>
<td>394,325</td>
</tr>
<tr>
<td>35-44</td>
<td>321,506</td>
<td>236,045</td>
<td>557,551</td>
</tr>
<tr>
<td>45-54</td>
<td>468,127</td>
<td>358,419</td>
<td>826,546</td>
</tr>
<tr>
<td>55-64</td>
<td>572,895</td>
<td>471,170</td>
<td>1,044,065</td>
</tr>
<tr>
<td>65+</td>
<td>726,853</td>
<td>498,829</td>
<td>1,225,682</td>
</tr>
<tr>
<td>All Ages</td>
<td>2,444,321</td>
<td>1,804,042</td>
<td>4,248,363</td>
</tr>
</tbody>
</table>

The South Carolina Department of Health and Environmental Control (DHEC) made reasonable efforts to ensure that the information represented is up-to-date, accurate, and complete at the time of access. The information provided reflects the data as reported to DHEC. The user bears all responsibility for its subsequent use/revision in any further analyses or comparisons. DHEC does not assume liability to the recipient, consumer or third person, nor will DHEC indemnify the recipient/consumer for its liability due to any losses resulting in any way from the use of this data.

www.justplainkillers.com

Dual Problem:

Women are more likely to start opioid use in medical settings.

Chronic Pain  Prescription Opioid Use/ Disorder

Women are less likely to enter traditional substance use treatment programs.
Outline

I. Identify signs, symptoms, and challenges in identifying Opioid Use Disorder (OUD) in medical settings
   - Men more likely to have OUD and OD but women more likely to present in medical setting
   - Major challenge is PAIN, pts treatment-seeking for pain are more likely to attribute symptoms to pain vs OUD, esp among women

II. Discuss Medication-Assisted Treatment (MAT) for OUD
    - Challenges and opportunities utilizing MAT in medical settings (focusing on primary care, ED and inpatient)

II. Review pilot initiatives that address barriers to utilizing MAT in medical settings and future directions of such initiatives

CHALLENGE # 1:
HAVING THE CONVERSATION WITH A PATIENT WITH SUSPECTED OUD

Empathy (pt is suffering)

Focus = safety & functioning

Professionally set boundary

Lifesaving tx available!
Approach to the Patient With Addiction + Pain

• Express Concern + Provide Feedback
  – “I am concerned about your health and safety.”
  – “This is the 3rd time you have run out of pain medications early.”
  – “You have been to the ED 6 times in the past 3 months.”
  – “I am concerned that you are showing several signs of addiction.”

• Validate Pain + Set Boundary
  – “I believe you are suffering/in pain. I can Rx non-opioid pain meds.”
  – “I cannot safely prescribe you opioids at this time.”

• Provide Education + Support
  – “I want you to know that there is excellent medication for opioid addiction that can help with pain and prevent withdrawal. We can try this.”
  – “I hope we can continue to work together to get you feeling better.”

LIFESAVING TREATMENTS

Naltrexone  Buprenorphine  Methadone
Antagonist  Partial Agonist  Agonist
Medications for the treatment of opioid use disorder (MAT)

<table>
<thead>
<tr>
<th></th>
<th>Naltrexone (Vivitrol®, ReVia®)</th>
<th>Buprenorphine/Naloxone (Suboxone®)</th>
<th>Methadone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanism</td>
<td>Opioid antagonist</td>
<td>Opioid partial agonist/partial antagonist</td>
<td>Opioid agonist</td>
</tr>
<tr>
<td>Availability</td>
<td>Extended-release injection, tablet</td>
<td>Sublingual, Buccal, Implant, Injection</td>
<td>For treatment of OUD in a methadone clinic, usually in syrup form</td>
</tr>
<tr>
<td>Prescribing Restrictions</td>
<td>None – any prescriber can prescribe</td>
<td>Must receive a waiver to prescribe (MD/DO/NP/PA); 8-24 hours of training</td>
<td>Patients must obtain from a methadone clinic</td>
</tr>
<tr>
<td>Initiation</td>
<td>Must wait to initiate until patient has been free of opioids for 7 to 10 days</td>
<td>Must wait to initiate until after withdrawal symptoms have started to appear</td>
<td>May initiate immediately to avoid withdrawal</td>
</tr>
<tr>
<td>Abuse Potential</td>
<td>No abuse potential</td>
<td>Less likely than methadone: only a partial agonist; dissolution and injection may induce withdrawal</td>
<td>Low compared to other opiates Very low within methadone clinic</td>
</tr>
<tr>
<td>Patient Population/ Other</td>
<td>–Concomitant alcohol dependence –Highly motivated pts –Patients with mandated use (medical boards, etc)</td>
<td>–Improving insurance coverage –Can requires pre-authorization –Decreases mortality in heroin users</td>
<td>–Not yet covered by insurance in SC (~$15/day) –Decreases mortality in heroin users</td>
</tr>
</tbody>
</table>

How can identification and treatment look in medical settings?

- 54 yo F with PTSD & ETOH dependence in long-standing remission, very involved with AA
- S/P total pancreatectomy with auto-islet cell transplant for non-alcoholic pancreatitis, 2009
- Poor pain control, slowly escalating opioids (MEQ 320)
  - Oxycodeone ER 80 MG q 12h #60
  - Oxycodeone 10 mg 1-2 tabs q4 prn #180
  - COMM=high, poorly-controlled pain
- High medical user, poorly-functioning:
  - 2014: 19 ED/hospital admissions (DKA, pain)
  - 1/21/15: took #115 oxycodone 10mg in 6 days after a break-up; went to ER in pain, received dilaudid
  - Started buprenorphine/naloxone the following week
ED/Inpatient Utilization

Challenge # 2: Access to Care

- Mortality rate of those with OUD in a large university health system:
  - crude mortality rate: 48.6 per 1000 person-years
  - standardized mortality ratio: 10.3

- Effective, life-saving treatments for OUD exist

- Treatment capacity is lacking
  - Nearly 80% of Americans with OUD don’t receive treatment
  - There are just > 3000 addiction specialists (ASAM)
  - Only 16% of 52,000 active psychiatrists had a waiver for buprenorphine in 2015
  - 60% of U.S. counties have no psychiatrists
  - Most methadone treatment programs are already operating at 80% of capacity or greater

- Training enough addiction medicine or psychiatric specialists would take years

- “To have any hope of stemming the overdose tide, we have to make it easier to obtain buprenorphine and naltrexone than to get heroin and fentanyl.”
Options for improving access to care for OUD

- **Emergency Departments**
  - High rate of opioid-related ED encounters: 178/100k visits, 5 million/yr
  - ED is often the first point of health care contact for pts with OUD
  - Over 8k discharged from SC EDs/year without immediate access to treatment

- **Inpatient Hospitals**
  - Higher rate of inpatient opioid-related hospitalizations: 225/100k stays
  - Rates have doubled in past decade; estimated annual cost of $700 million
  - related to ↑ opioid OD, opioid-related infectious endocarditis, skin/soft tissue infections, viral hepatitis

- **Primary Care Practices**
  - More than 320,000 PCPs (Kaiser, 2017)
  - Plus a broad workforce of primary care NPs and PAs
  - "Mobilizing the PCP workforce to offer office-based buprenorphine treatment is a plausible, practical, and scalable intervention that could be implemented immediately."

- 329 OUD pts in ED (mostly heroin)
- 1:1:1: RCT with primary outcome 30d treatment retention
  - Screening + treatment referral (SRT): 38/102 (37%)
  - SBIRT: 50/111 (45%)
  - SBIT with bup/nlx and “fast track” follow-up: 89/114 (78%)
  - P<.0001
Barriers to MAT use in Emergency Department
MUSC ED Focus Groups (n=9)

- Most commonly reported barrier to using MAT in ED:
  - Lack of hospital/institution endorsement
    - Addressed during pilot
  - Fears of being “flooded” with patients
    - Addressed before pilot with Grand Rounds + champion

- Most frequently cited facilitators to using MAT:
  - Receiving paid time off for training
    - Unnecessary for one-time dosing
  - Having availability of outpatient follow-up
    - Addressed during pilot – established “fast track providers”
    - Also, peer navigator is key player for follow-up

ED MAT Project:
Treatment & Retention
Outcomes
for 3 SC EDs

<table>
<thead>
<tr>
<th></th>
<th>Total since 12/17</th>
<th>Pilot Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td># ED patients screened for substance abuse/misuse</td>
<td>4314</td>
<td>500</td>
</tr>
<tr>
<td># ED patients screened positive for substance abuse/misuse</td>
<td>1444 (33%)</td>
<td></td>
</tr>
<tr>
<td># ED patients screened positive for OUD</td>
<td>476 (11%)</td>
<td></td>
</tr>
<tr>
<td># ED patients provided with naloxone kits</td>
<td>103</td>
<td>150</td>
</tr>
<tr>
<td># ED patients determined eligible for buprenorphine</td>
<td>329</td>
<td>150</td>
</tr>
<tr>
<td># ED patients inducted on buprenorphine</td>
<td>150</td>
<td>100</td>
</tr>
<tr>
<td># % ED patients inducted that arrived to first appointment</td>
<td>121 (81%)</td>
<td></td>
</tr>
<tr>
<td># retained at thirty-day mark</td>
<td>65/106 (61%)</td>
<td></td>
</tr>
</tbody>
</table>
• Patients with opioid-related hospitalizations rarely receive effective OUD treatment

• Similar barriers to ED initiation (need for follow-up care)

• Delayed OUD treatment in acute medical settings:
  • AMA discharges
  • Behavioral issues requiring added staff support and monitoring
  • Incomplete medical treatments
  • Increased risk for 30-day hospital readmission (50% more likely)

• Hospitalization represents a reachable moment for patients with OUD

• Brief 2-month pilot evaluation
  • Gen Med Service, funded pts
  • 3 induced on buprenorphine: 2 heroin, 2 Rx opioids
    • 2 followed-up (66%)
  • Reasons for admission: Suicide attempt/bacteremia, Acute respiratory failure, Endocarditis, Intractable N/V/D
Opportunities for Inpatient OUD Treatment

- Established relationship with patient
  - If the inpatient provider is waivered, do not need next day follow-up, can write a bridging prescription
  - We already have a number of waivered inpatient providers
- Opportunity for detox + naltrexone induction for pts with length of stay 7+ days
- Also opportunity for quick induction for patients on high MEQ who destabilize while undergoing taper
- Need resources for unfunded patients
- These are high risk and expensive hospitalizations
  - If prevent one endocarditis readmission, can have huge impact
- Multiple opportunities as a site for upcoming RCTs
Barriers to MAT use in Primary Care
MUSC PCP Focus Groups (n=46)

• Need for education and training
  • “I’m trying to understand how these are prescribed. What’s the 8-hour training? Why does it take 8 hours? How involved is it? It sounds risky itself. Naltrexone sounded like it wasn’t as risky. Is it a shot a month?”

• Need for specialty support
  • “So where is that specialist? Where are those systems to support us?”

• Emotional challenge
  • “…the vast majority of patients we’re treating have chronic pain and that’s why they are on opioids anyway, this conversation introduces an emotionally charged element that can halt your entire day and be very disruptive to practice as well. So just getting into that conversation there can be barriers there too.”

Provide Training for Primary Care

• In the past year, we’ve provided the official 8-hour training course to prescribe buprenorphine to 227 providers in SC
  • Free of charge
  • 8 hours CME
Addressing Need for Specialty Support & Emotional Challenge

Project ECHO Opioid Use Disorder in South Carolina: Amplifying Capacity for Evidence-Based Treatment
Rachael Grater, MFA, MA, Caitlin Kratz, MSW, LSW-C-P, Carolyn Boggs, MSN, FNP-BC, Suzanne Lane, MSNI, Kelly Barth, DO, (1)
Department of Psychiatry & Behavioral Sciences, Charleston County Department of Alcohol & Other Drug Abuse Services, Department of Internal Medicine, Medical University of South Carolina

• 20 sessions to date
• 436 participants
• Average 22 participants/session
• One hour over lunch
• CME provided
• Website support

What about Chronic Pain?

Seeking Treatment for Addiction
70% Male
Life-saving treatment is available!
Connect patient to addiction treatment (MAT)

Seeking Treatment for Pain
SBIRT +
65-80% Female

SBIRT -

7 million chronic opioid users with no exit plan

2 million
MUSC Outcomes – Pain Rehabilitation

- Operationalization
  - Funded through Duke Endowment
  - Ribbon cutting March 5, 2018

- Our Model
  - 3 week intensive outpatient program, group setting
  - Incorporates PT, OT, medical management, psychotherapy
  - Psychotherapy is Acceptance-based
  - Opioid discontinuation is mandatory
  - Childcare & travel scholarships available
  - Epic Referral

- Feasibility of Recruitment/Demonstration of Need
  - 154 referrals (no formal advertising)
    - 76% female
    - Averaging 22 referrals/month
    - 17 counties
    - Payor mix: BCBS, Medicaid, Medicare – Now Covered by BCBS

Decrease in Pain and Disability While Coming off Opioids
Gender differences in Pain Rehab Outcomes

<table>
<thead>
<tr>
<th>Drug</th>
<th>Pain</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Magnitude of Effect</td>
<td>Strength of Evidence</td>
</tr>
<tr>
<td>NSAIDs</td>
<td>Small-Moderate*</td>
<td>Moderate</td>
</tr>
<tr>
<td>Opioids (full)</td>
<td>Small*</td>
<td>Moderate</td>
</tr>
<tr>
<td>Buprenorphine</td>
<td>Small*</td>
<td>Low</td>
</tr>
<tr>
<td>Tramadol</td>
<td>Moderate*</td>
<td>Moderate</td>
</tr>
<tr>
<td>Duloxetine</td>
<td>Small*</td>
<td>Moderate</td>
</tr>
<tr>
<td>Pain Rehab</td>
<td>Moderate-Large</td>
<td>Low-Mod</td>
</tr>
</tbody>
</table>

- *Mean effect = 1 point or less on 0-10 pain scale across medications
- #Clinically meaningful (for women)
Summary

- The opioid crisis is ongoing and evolving – and affecting SC
- Treating OUD decreases overdose mortality
- Medications for OUD include both opioid and non-opioid treatments
- Identifying and treating OUD with MAT is the most evidence-based intervention for those with chronic pain (most common presentation in medical settings)
- Addressing the evolving crisis requires multiple adaptable approaches, including addressing barriers and improving access to OUD care
- Mobilizing the ED, hospital and PCP workforce to treat OUD effectively is a plausible, practical, and scalable intervention that can be implemented immediately
- Providing training/education + support through tele-mentoring/ECHO are approaches that can be implemented now and be fluid/adaptable as the crisis evolves
- There are multiple SC initiatives to improve access to OUD care for patients in medical settings
- Free training and support is available for SC providers to treat OUD
- Pain rehabilitation is a highly effective treatment for poorly-functional patients with chronic pain, especially effective in females

Acknowledgments
Upcoming topics for Project ECHO Opioid Use Disorder

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/21</td>
<td>Co-morbidities: Personality Disorders</td>
<td>Dr. Kelly Barth</td>
</tr>
<tr>
<td>10/5</td>
<td>Treatment of Perinatal Opioid Disorder</td>
<td>Dr. Constance Guille</td>
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<tr>
<td>10/19</td>
<td>Medication Update: Alpha agonists (clonidine, lofexidine) for opioid withdrawal</td>
<td>Dr. Dan McGraw</td>
</tr>
<tr>
<td>11/2</td>
<td>Methadone Maintenance Treatment</td>
<td>Caitlyn Kratz, MSW, LSW-CP, CAC-I</td>
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<tr>
<td>11/16</td>
<td>Urine Drug Testing</td>
<td>Dr. Kelly Barth</td>
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<tr>
<td>11/30</td>
<td>Counseling Techniques for Primary Care: Motivational Enhancement</td>
<td>Dr. Joe Schacht</td>
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<tr>
<td>12/14</td>
<td>Brain Stimulation Techniques for Pain and Opioid Use</td>
<td>Dr. Colleen Hanlon</td>
</tr>
</tbody>
</table>

For more information and/or to register, contact:

Rachel Grater, Program Coordinator
at grater@musc.edu

Questions?

Slides, scales, and other practice tools are available on our website:

www.scmataccess.org

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(843) 792-5380