

#### **SCHEDULE:**

#### **SUNDAY, AUGUST 6:**

**3 p.m.** – Welcome and Announcements

**3:15 p.m. to 5:15 p.m. –** Continuing Education ACPE 0205-9999-17-052-L04-P&T



Drug Store Cowboys: Pharmacy Robbery and Burglary
Presented by Tara O'Connor Shelley, PhD Associate Professor
Director of the Institute for Criminal Justice Leadership & Public Policy
Director of the Institute on Violence Against Women and Human Trafficking
School of Criminology, Criminal Justice and Strategic Studies
Tarleton State University-Fort Worth
This is a knowledge based activity for pharmacists and technicians.

5:15 p.m. to 5:45 p.m. AACP Report, David Allen, RPh, PhD, President AACP

5:45 p.m. to 6:15 p.m. NABP Report, Jeanne Waggener, RPh, DPh, President NABP

**6:15 p.m.** – Welcome reception and supper

## **MONDAY, AUGUST 7:**

7 a.m. – 8 a.m. – Provided breakfast

8 a.m. - 9:30 a.m. - Continuing Education ACPE 0205-9999-17-053-L05-P&T



Current Consideration for Conducting Root Cause Analysis: A Case Study
Presented by Karen Ryle, MS, RPh and Donna Horn, RPh, DPh

Associate Chief of Pharmacy Director, Patient Safety-Community Pharmacy

Ambulatory Care ISMP

Massachusetts General Hospital

This is a knowledge based activity for pharmacists and technicians.

9:30 a.m. - 10:00 a.m. - Break

10:00 a.m. - 11:30 a.m. - Continuing Education ACPE 0205-9999-17-054-L03-P&T



Evolution of Pharmacists' Scope of Practice to Support Direct Patient Care Activities Presented by Trish Freeman, RPh, PhD

Associate Professor, Department of Pharmacy Practice & Science Director, Center for the Advancement of Pharmacy Practice University of Kentucky College of Pharmacy This is a knowledge based activity for pharmacists and technicians.

11:30 a.m. - 12:00 p.m. - NABP and AACP Breakout Business Sessions

AFTERNOON FREE - Suggestions of things to do will be provided

#### **TUESDAY, AUGUST 8:**

7 a.m. - 8 a.m. - Provided breakfast

8 a.m. - 10 a.m. - Continuing Education ACPE 0205-9999-17-055-L04-P&T



Lessons Learned From Expanded Scope of Practice in Washington and Other States Presented by Jenny Arnold, PharmD, BCPS

**Director of Practice Development** 

Washington State Pharmacy Association

This is a knowledge based activity for pharmacists and technicians.

10 a.m. - 10:30 a.m. - Break

10:30 a.m. - 11:30 a.m. - NABP and AACP Breakout Business Sessions

11:30 a.m. - Closing



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Participants may earn ACPE-accredited CPE credit for these knowledge-based activities by completing a Statement of Continuing Pharmacy Education Participation online and submitting it electronically to NABP. Full attendance and completion of the program evaluation and learning assessment for each session are required to receive CPE credit and for the credit to be recorded in the CPE Monitor® system. If you do not submit your CPE claim within 60 days of the date you completed the CPE activity you will be unable to receive credit, as this is the maximum amount of time allowed for providers to transmit CPE claims to ACPE for credit. Please submit your claim as soon as possible to ensure that you receive credit.





Presented by:
Dr. Tara O'Connor Shelley
Associate Professor
School of Criminology, Criminal Justice & Strategic Studies
Tarleton State University



### **Speaker Information**

Tara O'Connor Shelley, Ph.D., is an Associate
Professor and Director of the Institute for Criminal
Justice Leadership and Public Policy with the School
of Criminology, Criminal Justice and Strategic
Studies at Tarleton State University. She wishes to
disclose she received a grant from RxPatrol &
Purdue Pharma LLC to support some of the
expenses associated with this research study. She
will present this content in a fair and balanced
manner.



#### **Learning Objectives**

- Explain trends in diverting controlled prescription drugs (CPDs), particularly in the form of pharmacy robbery and burglary
- Identify preventative measures to enhance security of pharmacies and the safety of their staff and customers
- Outline strategies to reduce pharmacy burglaries and robberies for CPDs
- Examine the influence of PDMPs/PMPs on robbery of retail pharmacies for CPDs (if time)

#### Question 1

- □ True or false. Most pharmacy robbers have been to the same pharmacy to fill a prescription at some point prior to the robbery.
  - □True
  - □False

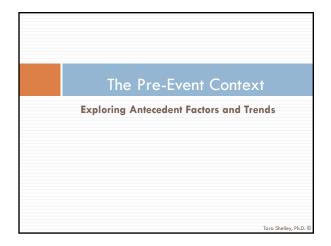
#### **Question 2**

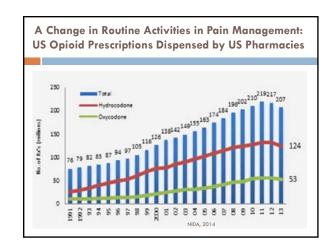
- True or false. Most pharmacy robberies involve an injury to the offender and/or a member of the pharmacy staff.
  - □True
  - □False

#### Question 3

- Which of the following will reduce pharmacy robbery & burglary?
  - ■A=Reduce Target Suitability
  - ■B=Increase Capable Guardianship
  - ■C=Reduce Motivated Offenders
  - D=All of the Above
  - □E=Only A & B

# Question 4 □ Which of the following strategies had the strongest effect on reducing pharmacy robbery? □ A=Bottle tracking □ B=PMPs/PDMPs □ C=Abuse deterrent formulations of controlled prescription drugs □ D=DNA spray security systems





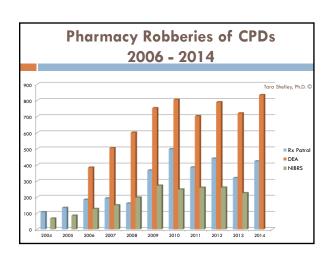
# Definition: When legitimately manufactured controlled substances are diverted from their lawful purpose to an illicit purpose (DEA, 2013). Trend: Diversion of prescription drugs on the rise since

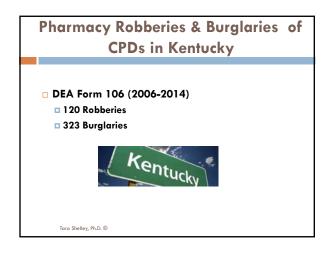
■ Trend: Diversion of prescription drugs on the rise since the 2000's (most common type=pain relievers) (NDIC, 2011)

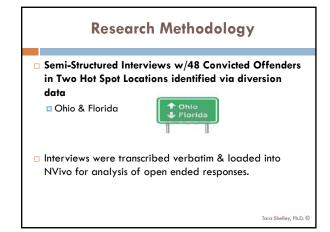
**Diversion** 

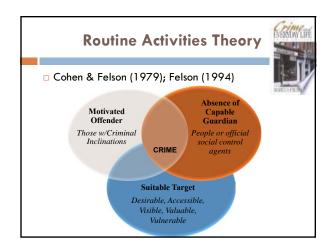
- Examples: Robbery/Burglary of Pharmacies; Fraud;
   Cargo Theft; Pilferage; Giving/Selling Drugs to
   Family/Friends.
- "...data on pharmaceutical abuse and diversion are not reliable, comprehensive or timely." (US GAO, 2003)

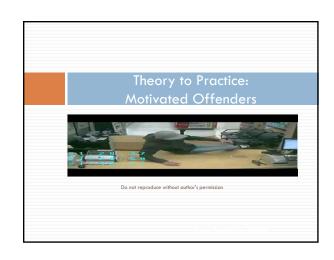
Tara Shelley, Ph.D. ©

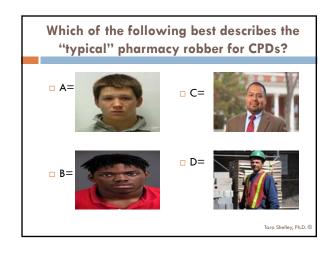












# Criminal History Fraudulent Prescriptions Pharmacy Robbery Before I started robbin' the pharmacies, I started writin' the prescriptions. It was so easy, because I'd seen so many doctors for my health issues, I thought, 'Now, wait a minute. I know these doctors personally, why not make 'em up?' So I went to Kinko's and wow, there's cameras everywhere, but who's gonna watch me do this? Those cameras are for robberies and stuff like that. They're not there to watch people like me printing these prescriptions. And it's so easy."

#### **Rodney & Healthcare Facilities**

- □ Dated/Married Nurses = easy access
  - "My fiancée, she's a nurse. That's all I've ever been married to is
- Targeted patients while in a visitor/volunteer capacity; sold medication for patients
  - "...I went to where my fiancée worked at. She wasn't there at the time, but everybody knew me, 'cause I would come in, the patients loved me to death. I would play guitar, sing to 'em, help 'em do whatever, but I was always high. And some of the patients were alert and young age, they were in there for rehabilitation and stuff like that, and they'd sell me their pills. Literally."
  - Bribed one patient with fast food for pills

Tara Shelley, Ph.D. ©

# Rodney's Desperation/ Escalation Moment

"The doors weren't locked at night, and the staff all knew me, and they said, 'What are you doin' here?' I said, 'Who-all wants pizza?' And I seen that drug cart and I was thinking, 'Hell, if I can get this past these people, it's on.' It was a pretty goodsized drug cart, and I started pushin' it down the aisle. I get it out one door into the courtyard. I looked behind me and I swear to you, this is my right hand of God, I looked behind me and saw these women, two big black girls about 250 pounds apiece, chasin' my dumb ass, comin' after me. 'What the hell are you doin'?' So I pushed the cart and it gets on the big stones and falls over and breaks and the stuff goes everywhere, and I take off...I didn't get nothin."

Tara Shelley, Ph.D. ©

#### **Doctors Seen/Doctor Shopping**

- Of those w/Rx, 73% reported seeing more than 1 doctor/healthcare professional
- □ Reported Range of Doctors seen 1-100
- "I'd go doctor-shopping. Some doctors won't prescribe it at all. I remember times in \_\_\_\_\_County...in the emergency room, they knew me by my first name. "Look, we're not givin' you nothin' at all. Don't ask. Go away."

Tara Shelley, Ph.D. ©

#### Rodney & The ER

#### □ ER Visits

"Oh, yeah, I had several doctors. They don't care.

'What do you want?' You go to an emergency room
and you tell 'em you're passing a kidney stone, which
I've done hundreds of times, and they want to know the
symptoms. That's stupid. I know the symptoms. I've read
up on that stuff before I go in. I feel like the doctor in
House."

Tara Shelley, Ph.D. ©

#### **Rodney's Doctors**

- Q: How many docs do you think you visited?"Fifty."
- □ Q: And how many did you get a prescription from?
  - "Everyone. They don't care about it. They always say money talks and walks. It does, but greed is how I look at it. They have everything in the world, but they want that extra."

Tara Shelley, Ph.D. ©

# Prescription(s) (Legal & Fraudulent) Prescription(s) (Legal & Fraudulent) Prescription(s) (Legal & Fraudulent) Street Purchases & Sales

#### Offender Assessments of Certainty

- What did offenders most often report as their perceived likelihood of getting caught?
  - A. 0%
  - в. 10%
  - c. 50%
  - D. 75%
  - E. 100%

Tara Shelley, Ph.D.

#### **Deterrence: Offender Perceptions**

- □ Perceived likelihood of getting caught:
  - ■44% thought there was 0% chance
  - □17% thought there was a 50% chance
  - ■10% thought 100% chance
- □ 43% knew what their possible sentence might be
  - "I had a rough idea of the penalties because of my prior robbery charges, it's cost versus benefit." Tara Shelley, Ph.D.

# Pre-Event Indicators: Today's Customer Could Be Tomorrow's Offender

#### □ PREPARATION

- ■72% of offenders had been to the targeted pharmacy before...almost all to fill prescriptions
- □ They carefully scout for SITUATIONAL CUES
- "I was still goin' to that pharmacy in between the time I robbed it with legit prescriptions. [laughs]."
- "Typically CVS carries two drug safes, and if you catch 'em right after a delivery, you can get everything in the safe, that's the best time to hit 'em."
- "I'm watching FedEx when they're bringin' all the medications in. You see 'em all the time at every one of these places you go to."

Tara Shelley, Ph.D. ©

# Pre Event: Commuters or Marauders Are most pharmacy robbers commuters or marauders? Commuters Marauders Commuter hypothesis Marauder hypothesis

#### **Crime Tactics**

#### □ Preparation Tactics

- □76% Wore Disguise
- 16% Use Distraction Techniques
- □ The Approach
  - □ 30% Jumped



#### □ The Completion

- ■23% Passed Note
- ■89% Used or Implied a Weapon
  - Gun (56%)
  - Knife (19%)
- Explosive Device (6%)
- 22% Reported Victim Injuries

Tara Shelley, Ph.D. @

## **Typology of Motivated Offenders**

#### □ Pure Addict (46%)

- Few crime skills, don't want to hurt people, unstable; don't consider guardianship & target suitability.
- Hybrids (44%)
  - Criminals who are also abusers (sometimes addicts) and/or dealers, willing to harm as a last resort; do consider guardianship & target suitability.
- □ Entrepreneurs (10%)
  - Pure business, trafficking, rare for abuse, willing to harm; meticulously consider guardianship & target suitability.
    Taro Shelley, Ph

# Motivated Offenders & Differential Effects

- Motivated offenders are not one in the same in their mindset...a case of differential effects.
- Explaining the prevalence of "Don't Matter"
   When Assessing Guardianship and Target
   Hardening.

Tara Shelley, Ph.D. ©

### **Key for Results**

□ Red = Discourager/Deterrent

□ Green = Encourager

□ Blue = Does not Matter

WHY? Too dope sick or will work around it

T---- CL-II--- DL D @



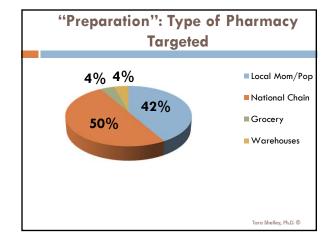
# **Dimensions of Target Suitability**

- Pharmacies are "suitable" targets...they have the property that the offender desires, they are accessible, and have a high value (e.g., relief, financial).
- "...to be honest with you pharmacies are better than banks. They are. They're better than banks. It's the only place of business in today's society that you can go in and steal the product that it offers and get more than what it's worth."





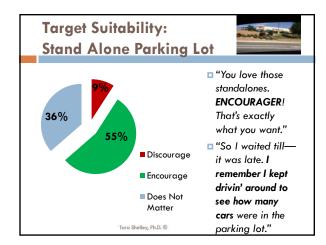
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#### "Preparation": Chain vs. Ma/Pop ■ Ma/Pops Have Less □ "People tend to rob the Walgreens and CVS more Security often than anyone else...it's VERSUS a corporate entity. You are Ma/Pop are Armed, not hurting a single Dangerous, Unpredictable person." "..the mom and pops, "Nobody wants to see little that's their livelihood, and Suzy blown away at apparently they'll fight Walgreens because they you for them. So I found didn't give up some Roxys" out."









# Approaching the Target: Accessibility/Visibility/Open Areas

- □ They were probably the most vulnerable out of all of 'em. They're just askin' for it...you could see all the way—the pharmacy's wide open. You could see in there. The pharmacy part of the store is so small, you could see right in there."
- "I could see right over it. I could see everything he was doin'."

doin'."

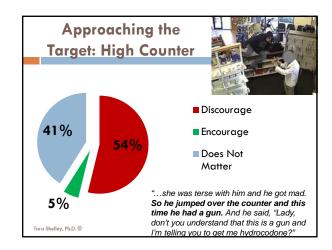
# Approaching the Target: Accessibility/Visibility/Open Areas

- "These drug cabinets are too close for the customers' eyes..."
- "Yeah, [they were] literally right there, **grabbable**. They grabbed 'em and put 'em in the bag."
- "When I seen 'em pull it off the shelf, I thought, Why are these people doing this, as bad as this drug is, keepin' it out in the open like that? They had bottles of it, I seen 10 or 15 bottles, the 20s, the 40s, the 80s. I thought, 'How easy would it be to just jump over there and just grab 'em?'"



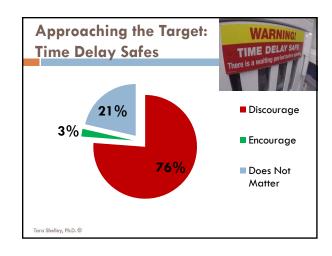
# Approaching the Target: Accessibility/Visibility/Open Areas

- "It was a cabinet by itself that was probably a locking cabinet, and that's where all the stronger narcotic pharmaceuticals were kept. It was <u>unlocked</u>, I just opened it up..."
- "...and they typically keep the safes <u>unlocked</u>, the CVSs do, because they fill so many prescriptions in a day, it's just not efficient to keep dialing them."



#### **Pharmacy Counter in Back** "He had no idea, 'cause I got this trash bag. I jumped over and I got this Discourage trash bag, and he looked 33% right at me, he looked into my face, and I'm like Encourage 'Hey, what's up, man? I got the trash.' So people are just thinkin', 'Oh, he Does Not just works here, he's Matter taking out the trash.' And I "I just walked out, smiled at walk right out the front, gone. Simple as that." the guy at the front and told him to have a nice day. He

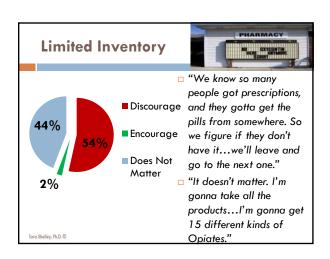
Tara Shelley, Ph.D. ©

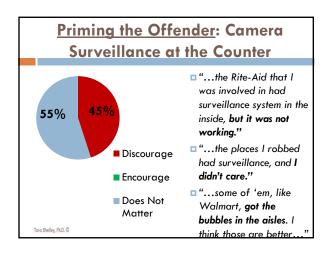


### **Reactions: Time Delay Safes**

had no idea."

- SOCIAL EDUCATION/MARKETING: "...if you don't advertise it and no one knows about it, there's no sense havin' it, cause then you're just puttin' people's lives at risk."
- "Someone that wants a big shot of dope and you're telling 'em no, that's a dangerous son of a bitch...lt would piss them off, but see, that's a buffer, you're goin' Hold on, hold on, hold on. You've only got to wait two minutes. They start sweatin and 99% of 'em are gonna say, Fuck it. Let's get the hell out."
- "4"d probably panic. That would probably cause some people to panic, and then when they panic, it ain't good. Sometimes a person will get scared and run away, but some people start getting' frustrated and start hurtin' people."
  Tora Shelley, Ph.D. ©

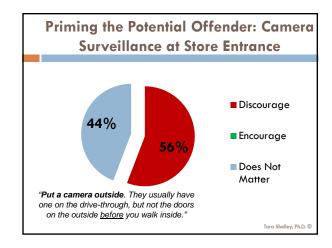


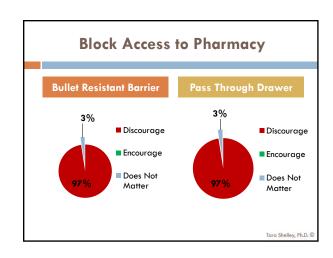


#### **Rodney & Cameras**

- □ Robbed multiple pharmacies and never photographed
  - "Because eight of 10 times they don't work...You can tell what cameras work and which don't, sometimes you'll see a light, you'll see a lens dirty."
- □ His suggestions:
  - □ INVEST: "...they need to invest, again, it's money, but they make billions of dollars anyway."
  - "I think another thing that would help is a TV monitor in the pharmacy. When you walk up, you're seeing yourself walk up, and it's being recorded from the time you walk up, everybody. You're seein' yourself walk up. Wow! Shit!"

Tara Shelley, Ph.D.

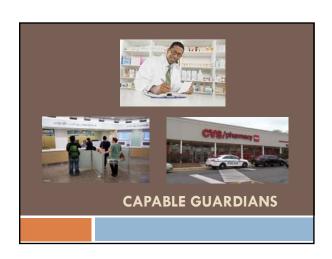


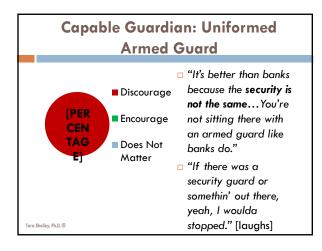


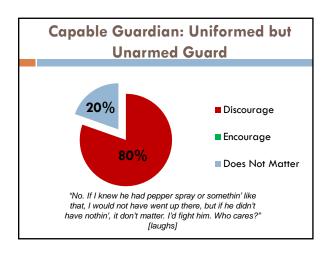
# Reactions: Bullet Proof Enclosure /Sliding Pass Through Drawers

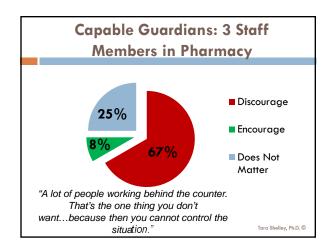


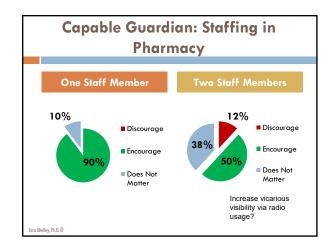
- "But I think they need to go to the way of the gas stations in the ghettos, ya know what I mean? In the hood, fucking like the bullet proof glass in the front so that way you can't just run in, jump over the counter, and force anybody to get 'em."
- "The biggest thing is a turnstile for the money and the drugs and bullet proof glass. With that, then you have no way of robbin' it. The only way would be if your slipped in a note and put a shoebox up there and said, "This is a bomb, I'm gonna blow you all to fuckin' hell." Or if you literally grabbed someone in the store and put a gun to their head. You'd have to go to drastic measures."

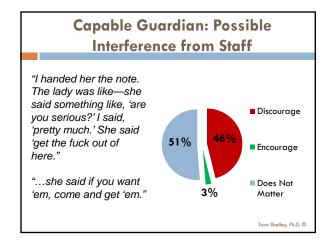


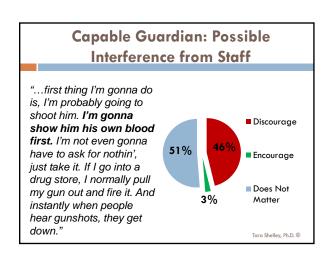












#### Capable Guardian: Presence of Customers "Cops get their ■ Discourage prescriptions filled too and Encourage that was my biggest fear." Does Not "I would probably pistol-Matter whip somebody. Generally a loaded weapon in someone's face, it terrorizes...That's why we carried the pistols, was for the hero...

# Offender Profiling & Applications of Key Concepts Offender Typology Refresher Apply profiles using offender views about guardianship and target "suitability."

# Offender Typology: Addict, Hybrid, Entrepreneur?

- General View: "I've dealt (and used) other drugs, so I was like, 'That's good lookin' money."
- □ Target Suitability: "I stumbled upon a pharmacy one day while picking up a script with a brother of an ex girlfriend. While waiting in the lobby, I noticed 9 or 10 bottles spread out on the front counter labeled "Hydrocodone." Being that I know 90% of the pill heads in \_\_\_\_\_\_, I found my next lick. As we left the pharmacy, I told my buddy—Hey did you see all those on the service desk? He stated, That's not even the best part, they leave those pills there over night after they close. To myself, I said 'Is that right?'...So began my habit of pharmacy burglary."
- Guardianship: "You go to like a pain management clinic...and you don't rob them because the security's so much tighter there."

Tara Shelley, Ph.D. ©

# Offender Typology: Addict, Hybrid, Entrepreneur?

- General View: "Why would anyone rob a gas station when you're facing the exact same time for robbin' a pharmacy, and you could make \$20,000 off of the pills instead of getting' \$200 out of a cash register? Stuff like that would go through my mind."
- Target Suitability: "...they (community drug stores) don't carry as many drugs, usually. They're usually a smaller operation...if I'm gonna go down for it, I want to get as much as I can...It wasn't worth it to me."
- □ Guardianship: "You can't teach the street life to pharmacists. [Laughs] You can walk into a pawn shop and you can look someone in the eye and you can see they know what time it is. But a pharmacist is dumb. They're lost, and you see it all over their faces. [Laughs] When you go in there, you know what you're looking at. You got you a lame duck, and you're gonna do what you do. That's it. That's the problem. You can't teach that part to people. You have to live it."

  Tara Sheller, Ph.D. ©

# Offender Typology: Addict, Hybrid, Entrepreneur?

- General View: "I was the first victim in this crime...! was overmedicated by these doctors."
- Target Suitability
  - "So I said, The first pharmacy I come to, I'm just gonna rob it and get the OxyContin, eat 'em, and that's it."
  - "I was freakin' out, cause I was out of pills and I was gonna get sick, and I didn't know what to do. So I'm drivin' home, and I get to the corner...and there's a CVS."
- Guardianship
- "I'm more fearful of the customers than I am anybody else."
- "I had already made the decision that if they decided not to give me it, I was just gonna leave anyway. I've never stabbed anybody or hurt anybody in my life..."

#### Question 1

- True or false. Most pharmacy robbers have been to the same pharmacy to fill a prescription at some point prior to the robbery.
  - □True
  - □False

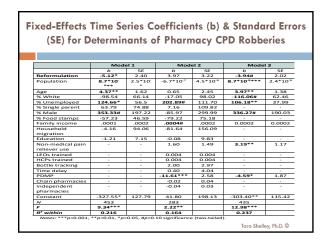
#### Question 2

- True or false. Most pharmacy robberies involve an injury to the offender and/or a member of the pharmacy staff.
  - □True
  - □False

#### **Question 3**

- □ Which of the following will reduce pharmacy robbery & burglary?
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  - D=All of the Above
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# Exploring Deterrence A Fixed Effect Time Series Analysis for Determinants of CPD Robberies Reported to the DEA (via Form 106) for 2006-2014.



#### **Question 4**

- Which of the following strategies had the strongest effect on reducing pharmacy robbery?
  - A=Bottle tracking
  - B=PMPs/PDMPs
  - C=Abuse deterrent formulations of controlled prescription drugs
  - D=DNA spray security systems

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### **Concluding Remarks**

- Reduce Target Suitability, Increase
   Guardianship, Decrease Motivated Offenders\*
  - Diminish by getting offenders to NOTICE reduced target suitability/increased guardianship & UNDERSTAND how this adversely impacts facilitation of crime...but this is NOT a silver bullet solution due to...DIFFERENTIAL EFFECTS.
  - "It's a shame that a pharmacist would have to attend classes or do things to prevent crime from happening or even to turn him from wantin' to even enter that profession. It's a twisted situation."

## Thank you!

#### Tara O'Connor Shelley, Ph.D.

Associate Professor & Director of the Institute for Criminal Justice Leadership & Public Policy School of Criminology, Criminal Justice and Strategic Studies

> Tarleton State University Shelley@Tarleton.Edu

#### "You're Gonna Get 'Em"

- "If the drugs are on hand, there's nothing, if you're determined, whether you have to put a gun to someone's head or shoot 'em to get a key or a combination or blow a safe—whatever you want to do, if you're determined you're gonna get 'em."
- "Really, this is gonna go down, this is gonna happen no matter what security you've got. And until they figure out a way to fight the drug addiction totally and completely, it'll never go away."
- "If the drugs are addictive and euphoric, people are going to go for them. It doesn't matter."

### **Displacement: Pharmacy Staff Home Invasion**

- "You're sought-after. They need to take more precautions. I think all of 'em should carry pistols. They should. That's what's comin next. The home invasions, that's what's comin next on the pharmacies."
- □ "If I was desperate enough or that evil enough, I could see your name, and I could watch when you leave and be like, 'Oh, she's the manager,' and then just follow you home...break into your house at night, tie the family up. 'You're gonna come. We're gonna go open that up. You're gonna take the alarm off. We're gonna walk in the back. You're gonna give me the fuckin' drugs and we're gonna

#### **Bottle Tracking**

bottles, fake bottles with the dye packs. When they come, give 'em them bottles and let 'em go. That is the best thing. They think they got somethin', and then once they get out of the parkin' lot or whatever, it blows up and they are marked."

"They should have dummy "If they could design some kind of sensor on the pharmaceutical bottles, that would be like On-Star in the car...and once they left that store, that sensor would go off, that would discourage just about everybody, once they knew about that. I don't see where that would be much of a problem doin' it with all the technology they've got out there now."

# Current Consideration for Conducting a Root Cause Analysis: a case study

Donna Horn, M.S., R.Ph., D.Ph. Karen Ryle M.S., R.Ph., D.Ph

#### **Disclosures**

 Donna Horn and Karen Ryle declare no conflicts of interest.

## **Learning Objectives**

- Describe how to analyze a medication error using a specific set of steps and associated tools to identify the contributing factors and root causes of the event.
- Prepare an action plan from the Root Cause Analysis (RCA) which includes risk-reduction strategies, communication, and implementation strategies as well as ways to measure effectiveness.
- Identify common pitfalls that may occur when conducting an RCA.

## **Self Assessment Question 1**

- What is the first step for conducting a Root Cause Analysis?
- . Create a flow chart
- B. Formulate a team
- c. Develop an Action Plan
- . Identify root cause reduction strategies

# **Self-Assessment Question 2**

- All adverse events that occur at the pharmacy must be investigated using the RCA method.
- A. True
- B. False

# **Self-Assessment Question 3**

- Which statement is false in regards to a successful RCA?
- Continuously asks "why" until all root causes have been identified
- B. Focuses primarily on individual performance
- c. Identifies changes to reduce the risk of recurrences or close calls
- The RCA team includes organization's leadership and individuals closely involved in the incident

## **Self-Assessment Question 4**

- All of the following basic questions must be asked during the RCA process, but which is the most critical to answer?
- A. What happened?
- B. What normally happens?
- c. What do the policies and procedures require?
- D. Why did it happen?

## **Self-Assessment Question 5**

- When an event involves staff who cut corners, breach a policy, or did not follow a procedure, the RCA process can be stopped since the root cause leading to the error event has been discovered.
- . True
- B. False

Case Study

# It's the System...Not the People

"Incompetent people are, at most, 1% of the problem. The other 99% are good people trying to do a good job who make very simple mistakes and it's the processes that set them up to make these mistakes."

Dr. Lucian Leape Harvard School of Public Health

- "Shannon" is a 15 year old
- Prescribed Amitriptyline 10 mg for prophylaxis of migraines
- ▶ Directions to take 2 tablets at bedtime
- Rx was for #60 with 5 refills
- Original Rx was dispensed correctly
- ▶ She is currently a junior residing in a boarding school
- Currently studying in an advanced program

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# **Case Study**

- On the 1<sup>st</sup> refill, she received Amitriptyline 100 mg
- Directions to take 2 tablets at bedtime
- Her daily medication was distributed every morning by the school nurse
- > Shannon notices the pills looked different
- > Shannon sends an e-mail to the school nurse
- "Thank you for being so diligent"
- Nurse responded that it was a new batch and it is the same medication, different company
- Shannon takes the medication for 7 days

#### **Amitriptyline**

- Amitriptyline is a Tricyclic Antidepressant
- Used for the treatment of depression
- Off label use for migraines
- ▶ FDA boxed warning:
  - Increased risk of suicidal thinking and behavior in children, adolescents and young adults
  - Need close observation for suicidality or unusual changes in behavior
- Shannon experiences dizziness, syncope, cardiac issues, hypotension and abnormal heart rate
- Admitted to the hospital for suspected seizures
- Adverse Outcome -- short term memory loss -- can no longer attend college and become a research scientist as was her dream

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### **Case Study**

- ▶ Shannon is discharged from the hospital
- Following day, she boards a plane to Ireland to visit her grandmother
- Shannon's mother noticed the different color pill when packing her medicine
- Shannon's mother looks up the medicine in WebMD and discovers that the medication in the bottle is Amitriptyline 100 mg
- The label indicates 10 mg
- She notifies her daughter to stop the medication and contacts the pharmacy

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### **The Pharmacy**

- "Home Town Pharmacy" filled Shannon's refill with Amitriptyline 100 mg instead of 10 mg
- Home Town Pharmacy provides a wide variety of pharmacy services
  - Specialty Pharmacy Services
  - Medication Therapy Management
  - · Disease State Management
  - Long Term Care Facilities
  - Compliance packaging

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### **The Pharmacy**

- The pharmacy did have appropriate safeguards in place including appropriate technology
  - Prescription scanning
  - Pill imaging
  - Bar code scanning
- The pharmacy system does have an appropriate drug dictionary with drug utilization review screening
  - High dose
  - Drug-drug interactions
  - Drug-disease interactions
  - Drug-allergy interactions
  - Drug-age appropriateness
     High dose alerts

#### The Technician

- Home Town pharmacy did have appropriate training and policies and procedures in place
- The pharmacy technician "Rob" has been working for Home Town for 8 months
- ▶ He was going through a messy divorce
- ▶ He had 20 years experience using the pharmacy system
- ▶ He prepared the refill
- He pulled the wrong bottle off the shelf

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#### The Technician

- ▶ He overrode the bar code scanning
- When a mismatch occurs a red X appears on the screen that states "QA scan failed", to move to the next step, he has to hit override
- ▶ He does not recall the incident
- Store policy is to alert the pharmacist when you override the bar code scan
- Rob knows he is not allowed to override on QA scan without notifying the pharmacist
- > Rob was terminated after the incident was discovered

The Pharmacist

- ▶ The pharmacist "Mary" verified the medication
- Her routine is to always open and look inside the bottle and match the pills with the pill image
- The pharmacy system does have an alert warning her that there was a bad QA scan override
- She acknowledges that this message appears on the screen
- She did not "see" the message and also recognizes that there is "so much stuff on the computer screen"
- She completed the scanning function by hitting the enter button
- No "hard stop"

#### The Pharmacist

- Mary would not intentionally ignore a warning of a bad
- > She looked at the stock bottle of 100 mg and then looked at the tablets inside, they matched
- > She failed to notice that the label indicated 10 mg rather than 100 mg
- Look at the label first, then the bottle?
- ▶ Confirmation Bias?
- Human Error?

#### The School Nurse

- What role did the nurse have in this error?
- Shannon did alert the nurse that the medication looked different
- The nurse now has "special knowledge" in the difference in the appearance of the medication
- > She claims to have called the pharmacy and was told the medication was a different manufacturer
- Pharmacy does not acknowledge speaking with anyone from the school regarding Shannon's medication
- > Phone records do not indicate that a call took place

#### **Definitions**

- Confirmation Bias is the tendency to search for, interpret, favor, and recall information in a way that confirms one's preexisting beliefs or hypotheses
- Human Error is defined as an inadvertent action; inadvertently doing other than what should have been done; slip, lapse, mistake

What Type of Behavior? <u>Human Error</u>: mistakes, slips, lapses, and unintentional

- deviations from accuracy and correctness
- Most errors are in this category
- Action: Console
- At-Risk Behavior: Behavioral choices that increase risk where risk is not recognized, or is mistakenly believed to be justified
- Increase situational awareness
- Action: Coach
- Reckless Behavior: Conscious disregard of a risk of causing
  - Remedial and punitive action
- Action: Punish

Patient Safety and the "Just Culture" David Marx JD

**Human Error** 



At Risk Behavior



#### **Reckless Behavior**





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#### What is RCA?

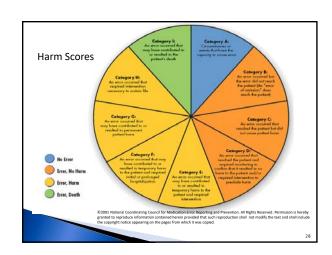
- A systematic <u>process</u> to identify the causal factors contributing to the occurrence of a sentinel event
- Goal find out what happened, why it happened and what to do to prevent it from happening again
- Focus on pharmacy systems and processes not individuals; does not assign blame
- ▶ Conducted by team of interdisciplinary individuals
- Recognizes the underlying and fundamental conditions that increase the risk of adverse events
- Implements effective strategies that target root causes

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## When is RCA Necessary?

- Not every adverse event
- Organizations should specify/define "require RCA?" or "investigate through case reviews or investigative techniques?"\*
- NOTE: If the event is thought to be the result of a criminal or purposefully unsafe act or related to alcohol or substance abuse, stop the RCA process and report individual(s) to organization leader
- \* http://www.ismp.org/Tools/Community\_AssessERR/default.asp

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Root Cause Analysis Workbook for Community/ Ambulatory Pharmacy



- Describe the root cause analysis (RCA) process
- Prompt users to create an action plan from the RCA, including implementation strategies
- Describe common pitfalls when conducting RCA
- Provide examples of RCA with actual errors

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# **Basic Questions**

#### **Basic Questions to Answer During RCA**

- 1. What happened?
- 2. What normally happens?
- 3. What do policies/procedures require?
- 4. Why did it happen?
- 5. How was the organization managing the risk before the event?

#### **Definitions**

- Root Cause: Most fundamental reason an event has occurred
- Contributing Factor: Additional reasons, not necessarily the most basic reason that an event has occurred

#### **Definitions**

- Sentinel Event: an unexpected occurrence involving death or serious physical or psychological injury or risk thereof
- Medication Error: any <u>preventable</u> event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer

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## **Case Study: the Error**

- Patient received Amitriptyline 100 mg instead of the 10 mg
- Experiences dizziness, syncope, cardiac issues, hypotension and abnormal heart rate
- Admitted to the hospital for suspected seizures
- Adverse Outcome -- short term memory loss -- can no longer attend college and become a research scientist as was her dream

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#### **Sentinel Event?**

Yes

. No

.

# **Step 1 Formulate a Team**

#### Step 1 - RCA Name: Amitriptyline 100 mg dispensed in error

Date of Event: 11/14/2016

**Problem Statement:** Patient ingested the incorrect medication and suffers from permanent short term memory loss as a result

#### **Team Members**

Team Leader: Ross Geller, Director of Pharmacy

Event expert (person involved in event): Chandler Bing, CPhT

Front line worker familiar with process: Rachel Green, RN

Non-pharmacy personnel: Joseph Tribianni

Technical RCA expert (optional): Phoebe Buffay

# Step 2 Determine What Happened

- Review documentation
- · Interview pharmacy staff involved in incident

Which is why termination should not be the preventative action

#### **Review Documentation**

- Prescription for Amitriptyline 10 mg filled with Amitriptyline 100 mg at Home Town Pharmacy
- Stock bottles
- Tablet imaging
- Patient counseling log; counseling not offered (delivery)
- ▶ Computer records: barcode scan was overridden
- Review of previous incident reports shows 3 out of 10 errors involved bar code scanning overrides
- No records of CQI meetings taking place (CQI is required by Board regulations)

CQI= Continuous Quality Improvement

# **Amitriptyline Image**



Amitriptyline 100 mg NDC 00781-1490-01 Manufacturer- Sandoz GG461



Amitriptyline 10 mg NDC 00781-1486-01 Manufacturer- Sandoz GG40

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## **Amitriptyline Stock Bottles**



#### **Interview Staff**

- Use proper interviewing techniques without assessing blame
  - Seek system issues; do not judge or interrupt
  - Make staff comfortable
- · Active listening: reflect, restate, summarize
- Body posture, eye contact, nod appropriately
- Use interview to create timeline of events
  - Broad open-ended questions
  - o If recall issues, ask to describe what they usually do
- Create workflow chart

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## **Interview Staff: Tech**

- It was a busy Monday morning
- Knows that he is not supposed to override the bar code scan
- Knows he is to notify the pharmacist if there was a bar code scan override
- He did override the bar code scan but he did not notify Mary

Questions for RCA: why does the system allow overrides if the policy is not to override and why does the policy say not to, but then says "however if you do...."

#### **Interview Staff: Tech**

- Mismatch in the bar code scan of the label and the bottle, a red X appeared on the screen that states "QA scan failed"
- ▶ To move to the next step, he hit "O" for override
- ▶ He did not document the reason for the override
- ▶ He does not recall any part of the process
- He did not consciously override the scan knowing it was going to bring harm to Shannon
- He was not aware of previous incident reports showing 3 out of 10 errors involved bar code scanning overrides; two errors occurred on his shift

#### **Interview Staff: RPh**

- Mary received a message in the upper right hand corner on the screen alerting her to a warning of a bad QA scan override
- ▶ She did not "see" this message
- She stated there is "so much stuff on the computer screen"
- She verified and completed the scanning function by hitting the enter button, deposited the medication in the bag and prepared the bag for delivery

Step 2 (cont.) Details of Event Question Finding Wrong stock bottle selected Mismatch in the bar code scan of the label and the bottle, a red X appeared on the hat are the detail of the event? screen that states "QA scan failed" (i.e., event System allows user to hit "O" for override
Policy requires pharmacist be notified of override; pharmacist not notified
System does not require documenting the reason for the override lescription) A message appears in the upper right hand corner on the pharmacist verification A message appears in the upper right hall come on the pin screen with a warning of a bad QA scan override The pharmacist is not required to acknowledge the message Previous incidents not discussed with staff Medication was refilled and dispensed on a busy Monday morning in November ccur?(e.g., date, day Patient took the wrong dose for 7 days then admitted to the hospital for seizures of week, time)

# Step 3 Flow Chart Step 3 - Flowchart Steps in the Process

In this step, describe how the event happened using a flowchart to illustrate.

Tip: When developing the flow chart of events, don't jump to conclusions. It is essential to stay focused on what actually happened – not what the team thinks happened; construct a basic "time series" of the facts leading up to and including the adverse outcome.

Question	Finding
	Attach process flow chart to template
(complete a flowchart)	
Why did it happen?	2
What events were involved in	ſ
(contributed to) the event?	

# Step 3 (cont.) Flow Chart

- Diagram the flow of events
  - Describe how the event happened using a flowchart to illustrate
  - · Attach flow chart to RCA

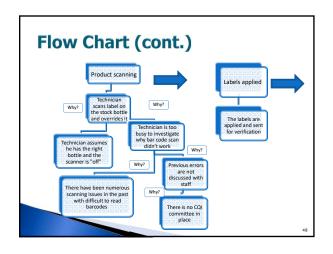
Remember: When developing the flow chart of events, don't jump to conclusions. It is essential to stay focused on what <u>actually</u> happened – not what the team **thinks** happened; construct a basic "time series" of the facts leading up to and including the adverse outcome

http://www.ismp.org/communityRx/aroc/

Review of the Event: Flow Chart

Stock

Technician retrieves 100 mg of amitripslyling instead of 10 mg insplaced incorrect into executive in the stock bottles and incorrectly information incorrectly information incorrectly information incorrectly incorrectly information information



#### From the Interview

- Mary testified that she would not intentionally ignore a warning of a bad scan
- She failed to see the warning on the HBS system alerting her to the QA scan override

Pharmacist
Verification

Pharmacist
Verification

The Pharmacist does not
"see" the QA Scan Fail
message

Why?

Why?

Why?

Why?

Why?

The screen has too much on it too much on it too much on it too much on it with the order

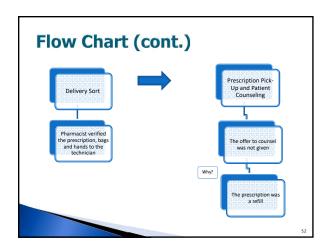
Why?

Policy to provide the stock bottle if everifies is not emphasized enough

#### **Inattentional Blindness**

- The person performing the task fails to see what should have been plainly visible, and later, they cannot explain the lapse
- In many cases, people involved in the errors have been labeled as careless and negligent
- But these types of accidents are common—even with intelligent, vigilant, and attentive people

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# **Step 3 Flow Chart**

#### Step 3 – Flowchart Steps in the Process

In this step, describe how the event happened using a flowchart to illustrate.

Tip: When developing the flow chart of events, don't jump to conclusions. It is essential to stay focused on what actually happened – not what the team thinks happened; construct a basic "time series" of the facts leading up to and including the adverse outcome.

Question	Finding
What are the steps in the process? (complete a flowchart)	Attach process flow chart to template
Why did it happen? What events were involved in (contributed to) the event?	Wrong drug selected for refill Barcode scan overridden Override not detected

# **Key Elements of Medication**

- . Patient information
- 2. Drug information
- Communication of drug information
- 4. Labeling, packaging, and nomenclature
- Drug storage, stock, standardization, and distribution
- Device acquisition, use, and monitoring
- **Environmental factors**
- Staff competency and education
- 9. Patient education
- Quality and risk management issues

# Which Key Elements?

- Drug information (2) and Environmental factors (7)
- b. Staff competency (8) and Labeling/packaging (4)
- c. Patient information (1) and Patient Education (9)
- Drug information (2), Labeling/packaging (4), Environmental factors (7), and Quality and risk management issues (10)

# **Step 4 Identify Root Causes**

- > Study the problem
  - Identify which elements/systems are involved from flow chart (2, 4, 7 and 10)
  - Review key element #2, 4, 7, and 10 and contributing factors charts
- > Complete Step 4 (1-10 key elements)
  - Indicate if "contributing factor" or "root cause" and check "take action" if root cause

http://www.ismp.org/communityRx/aroc

#### Step 4 – Identify Proximate (Contributing) Factors and Root Causes

As an aid to avoiding "loose ends," the last three columns on the right are provided to be checked off for later reference:

- \* "Root cause?" should be answered "Yes" or "No" for each finding. Each finding that is identified as a root cause should be considered for an action and addressed in the action plan. Number each finding that is identified as a root cause.
- "Contributing factor?" should be answered "Yes" or "No" for each finding.
   "Take action?" should be checked off for each finding that can reasonably be considered for a risk reduction strategy. Each item checked in this column should be addressed later in the action plan.

Tip: Contributing factor statements must clearly address why something has occurred and there must be a clear focus on process and system vulnerabilities, never on individuals.

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Proximate Factor Questions	Findings/Proximate Factors	Root Cause? (If yes, assign #)	Contributing	Take Action?
1. Was critical				
patient information				
missing?				
(e.g., age; sex;				
weight, allergies;				
pregnancy; patient				
identity; address;				
indication for use or				
health conditions)				
		·		58

Proximate Factor Questions	Findings/Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor?	Take Action?
1. Was critical		No	No	
patient information				
missing?				
(e.g., age; sex;				
weight, allergies;				
pregnancy; patient				
identity; address;				
indication for use or				
health conditions)				

Proximate Factor Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor?	Take Action?
2. Was critical drug	Override			
information missing?	alert appears			
(e.g., <mark>inadequate</mark>	but does not			
computer alerts; typical	require action			
dose; maximum dose;				
route; contraindications;				
precautions; special				
warnings; drug				
interactions; cross				
allergies; outdated or				
absent references)				

Proximate Factor Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor?	Take Action?
2. Was critical drug	Override	Yes 1		Yes
information missing?	alert appears			
(e.g., <mark>inadequate</mark>	but does not			
computer alerts; typical	require action			
dose; maximum dose;				
route; contraindications;				
precautions; special				
warnings; drug				
interactions; cross				
allergies; outdated or absent references)				

Findings/ Proximate Factors	Cause? (If yes, assign #)	Contributing Factor?	Take Action ?
		Factors (If yes,	Factors (If yes, Factor?

Proximate Factor Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor?	Take Action ?
3. Miscommunication of		No	No	
drug order?				
(e.g., illegible;				
ambiguous; incomplete;				
misheard or				
misunderstood spoken				
prescription; poor fax				
quality; unable to clarify				
with prescriber; teamwork				
issues; warnings				
bypassed; error-prone				
abbreviations or dose				
expressions)				63

Proximate Factor Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor?	Take Action?
4. Drug name, label, packaging problem? (e.g., look- and sound-alike names; look-alike packaging; no drug image; pharmacy labeling issue; label that obscures information; label not visible; warning labels missing or inconsistently applied; NDC or barcode not available or not used; faulty drug identification)	Look-alike packaging from same manufacturer Tablets similar color and strength			

Proximate Factor Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor?	Take Action?
4. Drug name, label, packaging problem? (e.g., look- and sound-alike names; look-alike packaging; no drug image; pharmacy labeling issue; label that obscures information; label not visible; warning labels missing or inconsistently applied; NDC or barcode not available or not used; faulty drug identification)	Look-alike packaging from same manufacturer Tablets similar color and strength		Yes	Yes

Proximate Factor Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor?	Take Action ?
5. Drug storage or delivery problem? (e.g., drug stocked incorrectly; crowded shelves; look-alike products stored next to each other; adult dosage forms for neonatal or pediatric patients)	The bottles are often misplaced in the reverse order on the shelf (the 100 mg is often on the left of 10 mg bottle)			

Proximate Factor Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor?	Take Actio ?
5. Drug storage or delivery problem? (e.g., drug stocked incorrectly; crowded shelves; look-alike products stored next to each other; adult dosage forms for neonatal or pediatric patients)	The bottles are often misplaced in the reverse order on the shelf (the 100 mg is often on the left of 10 mg bottle)		Yes	Yes

Proximate Factor Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor?	Take Action ?
6. Drug delivery				
device				
problem?				
(e.g., automated				
dispensing				
devices not				
calibrated or				
maintained; oral				
measuring				
device not				
dispensed)				
measuring device not				

Proximate Factor Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor?	Take Action ?
6. Drug delivery		No	No	
device				
problem?				
(e.g., automated				
dispensing				
devices not				
calibrated or				
maintained; oral				
measuring				
device not				
dispensed)				

Proximate Factor Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor?	Take Action ?
7. Environmental, staffing or workflow	Busy Monday morning			
problems? (e.g., poor lighting; excessive noise; clutter; foot traffic interruptions; human factors; workload; inefficient workflow; breaks not scheduled; staffing levels and skills; work schedules; inadequate supervision)	The order was rushed because the deliveries needed to get out			

Proximate Factor  Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor?	Take Action ?
7. Environmental, staffing or workflow problems?	Busy Monday morning		Yes	No
(e.g., poor lighting; excessive noise; clutter; foot traffic interruptions; human factors; workload; inefficient workflow; breaks not scheduled; staffing levels and skills; work schedules; inadequate supervision)	The order was rushed because the deliveries needed to get out		Yes	No

Proximate Factor Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor?	Take Action ?
8. Lack of staff education?				
(e.g., competency validation;				
new or unfamiliar drugs or				
devices; orientation process;				
feedback about errors and				
prevention; inexperience;				
orientation; low compliance				
with mandatory education;				
required certification; support				
for advanced certification and				
education)				
				72

Proximate Factor Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor?	Take Action ?
8. Lack of staff education?		No	No	
(e.g., competency validation;				
new or unfamiliar drugs or				
devices; orientation process;				
feedback about errors and				
prevention; inexperience;				
orientation; low compliance				
with mandatory education;				
required certification; support				
for advanced certification and				
education)				
				73

Proximate Factor Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor ?	Take Action ?
9. Patient education problem?	Patient's			
(e.g., lack of information; non-	issues not			
adherence; not encouraged to ask	addressed			
questions <mark>; lack of investigating</mark>	adequately			
patient inquiries; patient barriers;	by school			
complex drug regimen; medication	nurse			
reconciliation problem; health				
literacy; language barrier or other				
communication problem;				
intimidated by staff; mental health				
issue)				
7900				74

Proximate Factor Questions	Findings/ Proximate Factors	Root Cause? (If yes, assign #)	Contributing Factor ?	Take Action ?
9. Patient education problem?	Patient's		Yes	No
(e.g., lack of information; non-	issues not			
adherence; not encouraged to ask	addressed			
questions; <mark>lack of investigating</mark>	adequately			
patient inquiries; patient barriers;	by school			
complex drug regimen; medication reconciliation problem; health	nurse			
literacy; language barrier or other communication problem;				
intimidated by staff; mental health				
issue)				
	Proces			75

Proximate Factor Questions	Findii Proxi Facto	mate	Root Cause (If yes assign	,	ributing actor ?	Take Action ?
10. Quality process and risk managem (e.g., no culture of sofety; fear of error reporting; system-based causes not and lack of equipment quality control check focus on productivity and volume; finar resources or constraints; organizationa structure and priorities conflict; technoworkaround and/or malfunction; designetenhology user error; technology and devices not meeting needs) (human factors issues: task and inforn complexity; ergonomics; time urgency; familiarity with task, product, or equipmental and physical health of staff; fat. fitness for duty; stress; motivation)	alyzed; ss; ncial l logy n flaw; nation	Technic "allowe bypass barcod and stil medica moved next st. Previou scan overrid resultir errors i investig	ed" to e scan Il have tition to ation; us			
						76

Proximate Factor Questions	Pro	dings/ eximate tors	Cau (If	oot ise? yes, gn #)	Contributing Factor ?	Take Actio
10. Quality process and risk managem (e.g., no culture of safety; fear of error reporting; system-based causes not and lack of equipment quality control checks; focus on productivity, and volume; financ resources or constraints; organizational structure and priorities conflict; technolog workaround and/or malfunction; design, technology user error; technology and denot meeting needs) (human factors issues: tosk and information complexity; ergonomics; time urgency; familiarity with task, product, or equipm mental and physical health of staff; fatig fitness for duty; stress; motivation)	yzed; ial  gy flaw; evices ation ent;	Technicial "allowed" bypass barcode s and still h medicatic moved to next static Previous s overrides resulting errors not investigat	to can lave on scan	Yes 2		Yes

# Step 5 Write Root Cause Statements

- Focus on system-level vulnerabilities
- Read and apply the five rules of causation
- Causal Statements must clearly show the "cause and effect" relationship
   "Technician was overwhelmed" is deficient without description of how and why this led to a mistake
- 2. Negative descriptors (e.g., poorly, inadequate) are not used in causal statements
  - Broad, negative judgments that do little to describe the actual conditions or behaviors that led to the error
  - Wrong: The technician was careless in overriding the bar code scan
  - Right: Barcode scanning technology can easily be overridden resulting in wrong drug being dispensed

# Step 5 Write Root Cause Statements

3. Each human error must have a preceding cause

- · Investigate to determine WHY the human error occurred
- · System-induced error (e.g., step not included in procedure)
- · At-risk behavior (doing task by memory, instead of a checklist)
- Wrong: The technician overrode the barcode scan
- Right: Since barcode scanning frequently needs to be overridden and had never resulted in an error, the technician was in the practice of overriding barcode scans
- Workarounds and violations are outcomes of human error -- not causes

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# Step 5 Write Root Cause Statements

4. Each procedural deviation must have a preceding cause

- It is the cause of the procedural violation that we can manage
- If a technician is missing steps in a procedure because he is not aware of the safety value, work on education
- Wrong: The technician failed to alert the pharmacist of the barcode scan override
- · Right: The written procedure to alert the pharmacist was not enforced

5. Failure to act is only causal when there was a pre-existing duty to act

- The duty to perform may arise from standards and guidelines for practice
- · Pharmacist is required to acknowledge alert messages during verification
- Wrong: The pharmacist did not see the alert message
- Right: The system does not require alert messages be acknowledged resulting in messages being "missed" during verification

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#### **Root Cause Statements**

#### Step 5 - Root Cause Statements

Using the findings identified as root causes in Step 4 above, write concise descriptions of the cause-and-effect relationship. Ensure that the team has not focused on the actions of individuals or in any way placed blame.

**Tip:** To determine whether a statement is effective, ask, "If this is corrected, will it reduce the likelihood of another adverse event?" The answer should be yes.

Root	Statement of Cause
Cause #	Statement of Cause

- The system does not require alert messages be acknowledged resulting in messages being "missed" during verification
- Barcode scanning technology can easily be overridden resulting in wrong drug being dispensed
- 3 Previous incidents not discussed with staff, resulting in errors repeated

# **Step 6A Develop Actions**

- Formulate improvement actions for each identified root cause in Step 5
- Consider quality improvement actions for identified contributing factors
- Review key elements and suggested risk-reduction strategy charts (AROC)
  - http://www.ismp.org/communityRx/aroc/
- Employ a mix of higher- and lower-leverage strategies that focus on system issues and address human issues

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# Rank Order of Error Reduction Strategies

Forcing Functions and Constraints

**Automation and Computerization** 

Standardization and Protocols

Checklists and Double Checks

Rules and Policies

Education and Information

Select high-leverage error prevention tools that are designed to fix the system, not just people, whenever possible

# Brainstorming Action Plan, RCA Team asks:

- How can we decrease the chance of the event occurring again?
- How can we decrease the degree of harm if the event were to occur again?
- When considering changing procedures or rules, ask: What is best practice?
- How can devices, software, work processes, or workspace be redesigned using a human factors approach?
- How can we reduce reliance on memory and vigilance by improving processes in the workplace?

Does the organization have resources for the proposals?

# **Step 6B Establish Outcome Measures**

- Establish a way to measure effectiveness of action plan over time
- Record methods to measure effectiveness over time

**Tip:** Discuss the proposed risk reduction strategies with the person who reported the incident to see if they believe that the RCA team is on the right track.

Ask: If these recommendations were in place at the time of the incident, do you think it likely that the incident may have been prevented from occurring?

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	Action Plan - Root Causes						
Step	Step 6 – Action Plan						
Root Cau	ises						
For eac	ch of the root causes identified in Step 5 above as needing	an action, complete the					
followi	ng table. Check to be sure the selected measure will provi	de data that will permit					
assessi	ment of effectiveness over time.						
Root Cause#	Risk-reduction Strategy	Measure of Effectiveness					
1	Create a hard stop requiring alert messages	Run and review scan					
	for barcode scan overrides be acknowledged	override reports					
	(forcing function)						
2	Remove overriding functionality of bar code	Look for "wrong					
	scanning at tech station (constraint)	selection drug" error					
		incidents to decrease					
3	Create a CQI team leader and committee to	Review CQI meeting					
	analyze and communicate error reduction	notes					
	strategies (policy, education)						

Action Plan		
Contributing Factors		
For each of the contributing factors identified in Step 4 above as needing an action, complete the following table.		
Contributing factor	Risk-reduction Strategy	Measure of Effectiveness
The use of same manufacturers for amitriptyline 10 mg and 100 mg caused the wrong stock bottle to be grabbed	Buy same named drugs with different strengths from different manufacturers and provide shelf dividers/ talkers (standardization, protocol)	Ask pharmacy manager to fulfill this as soon as possible and then monitor patterns of effectiveness
The reversal of order of the amitriptyline 10 mg and 100 mg caused the wrong stock bottle to be grabbed	Check for right locations of stock bottle during down time (procedure, education)	Daily to weekly checks

## Almost Done! Review Common Errors in RCA

- Avoid Common Pitfalls
  - Start with accurate sequence of events and timeline to help uncover all gaps
- Don't rely on policies and procedures; illustrate what actually happens
- Investigate <u>why</u> staff skipped steps
- · Uncover more deep-seated latent failures in the system
- Uncover how human errors get through the system

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# Review Common Errors in RCA (cont.)

- Seek outside knowledge
  - Professional literature, regulations, standards, professional guidelines
- Each intervention should be clearly linked to one or more causative factors
- Effective risk-reduction strategies involve redesigning systems; don't rely on:
  - Developing new rules, educating staff, double checks, "be more careful"
- Have realistic plans and measure outcomes
- Resist punitive action

**Step 7 Communicate the Results** 

- Provide leadership recommendations for improvement and preventative action plan
- Share with the entire organization as a learning tool and to get buy-in to changes

# **Key Takeaway #1**

- RCA is intended to determine three things:
  - What happened?
  - Why did it happen?
- What can be done to reduce the likelihood of a reoccurrence?

## **Key Takeaway #2**

- ▶ The RCA framework manageable steps:
- Form a team
- Review all documentation (written prescription, data entry, logs, policies, etc.)
- Review physical environment
- Review product labeling and packaging
- Interview those involved in the incident
- Determine sequence of events through flow charting on the medication use system
- Ask "why?"
- Determine contributing factors and root causes
- Develop an action plan for each identified root cause
- Communicate results
- Measure effectiveness of action plan over time

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### **Key Takeaway #3**

- RCA does not assign blame
- RCA is an outcome-directed process emphasizing specific, high-leverage actions that take into account the need to integrate safeguards into system design and the need to consider human capabilities and limitations

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# **Self Assessment Question 1**

- What is the first step for conducting a Root Cause Analysis?
- . Create a flow chart
- B. Formulate a team
- c. Develop an Action Plan
- . Identify root cause reduction strategies

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# **Self-Assessment Question 2**

- All adverse events that occur at the pharmacy must be investigated using the RCA method.
- A. True
- B. False

Self-Assessment Question 3

- Which statement is false in regards to a successful RCA?
- A. Continuously asks "why" until all root causes have been identified
- B. Focuses primarily on individual performance
- Identifies changes to reduce the risk of recurrences or close calls
- The RCA team includes organization's leadership and individuals closely involved in the incident

# **Self-Assessment Question 4**

- All of the following basic questions must be asked during the RCA process, but which is the most critical to answer?
- A. What happened?
- B. What normally happens?
- c. What do the policies and procedures require?
- D. Why did it happen?

# **Self-Assessment Question 5**

- When an event involves staff who cut corners, breach a policy, or did not follow a procedure; the RCA process can be stopped since the root cause leading to the error event has been discovered.
- A. True
- B. False

# Evolution of Pharmacists' Scope of Practice to Support Direct Patient Care Activities

AACP-NABP District III Meeting August 7, 2017

Patricia R. Freeman, RPh, PhD
Clinical Associate Professor
Director, Center for the Advancement of Pharmacy
Practice



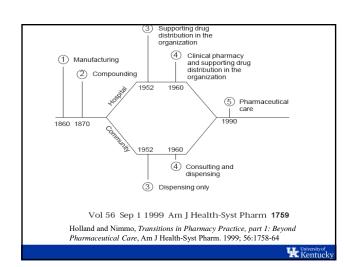
#### **Learning Objectives**

- At the end of the session, the participant will be able to:
  - Describe the evolution of pharmacists' scope of practice from product-focused to patient care
  - Discuss regulatory approaches taken by states to support this evolution
  - Identify barriers and challenges to full utilization of pharmacists as healthcare providers



# **Historical Perspective**

- 1820 1940: Pharmacist as compounder of prescriptions; rise of the classic American drugstore
- 1940 1965: Initial development of hospital pharmacy specialty; movement from compounder to dispenser, development of the chain drug industry
- 1965 1990: Clinical pharmacy era with significant diversification of the profession; focus begins to shift to patient care in hospitals but remains product-focused in community pharmacies
- 1990 2005: Pharmaceutical care era; initial focus on the pharmacist as direct care provider in all settings; pharmacists must assume responsibility for patient outcomes of drug therapy
- 2005 Present: Medication therapy management era; focus on need for provider status to assure pharmacists role as direct care providers <a href="https://pharmacy.wise.edu/wp-content/uploads/AIIIPTeachingGuidelines.pdf">https://pharmacy.wise.edu/wp-content/uploads/AIIIPTeachingGuidelines.pdf</a>





#### Hepler and Strand: 1990

#### Opportunities and Responsibilities in Pharmaceutical Care

"Pharmacists must abandon factionalism and adopt patient-centered pharmaceutical care as their philosophy of practice.

"Pharmacy's re-professionalization will be completed only when all pharmacists accept their social mandate to ensure the safe and effective drug therapy of the individual patient."

American Journal of Health-System Pharmacy March 1990, 47 (3) 533-543;

## **National Influence on Practice** Change

- ASHP
  - Historical support of clinical pharmacy services in hospitals; 50 years of residency accreditation Pharmacy practice model initiative (PMMI) summit (2010) Ambulatory Care summit (2014)

  - Together these led to what is now known as the Practice Advancement Initiative (PAI).
- Partnered w ASHP to establish accreditation standards for community pharmacy residencies in 1999
   Collaborated w NACDS to develop Core Elements of MTM (2005)
- Led development of the Pharmacist Patient Care Process with other pharmacy organizations (2014)
- - ACCP

    White Paper: A vision of Pharmacy's Future Roles, Responsibilities, and Manpower Needs in the US (2000)

    "The time has come to unify the profession in pursuit of its patient care mission. Pharmacy is maluring as a clinical profession and presently is well position to transform itself form a product-oriented or a patient-oriented profession





## **National Influence on Practice** Change

- ACPE/AACP
  - Adopted accreditation Standards and Guidelines for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree (1997)
    - Last student graduates from BSPharm program in 2005
  - Adopted updated accreditation standards and guidelines "to ensure development of students who can contribute to the care of patients and to the profession by practicing with competence and confidence in collaboration with other health care providers" (2006)
- Council on Credentialing in Pharmacy
  - Resource Paper Scope of Contemporary Pharmacy Practice: Roles, Responsibilities and Functions of Pharmacists and Pharmacy Technicians (2009)



**Improving Patient** and Health System **Outcomes through** Advanced **Pharmacy Practice** 

A Report to the U.S. Surgeon General 2011

Office of the Chief Pharmacist



# Joint Commission of Pharmacy Practitioners Vision for Pharmacists' Practice

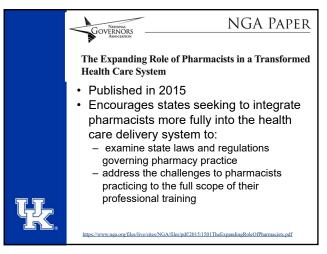
(adopted by JCPP November 2013)

Patients achieve optimal health and medication outcomes with pharmacists as essential and accountable providers within patient-centered, team-based healthcare.



\*JCPP was established in 1977 and serves as a forum on matters of common interest and concern to national organizations of pharmacy practitioners and invited liaison members. JCPP Members are: AMCP, AACP, ACA, ACCP, ACPE, APhA, ASCP, ASHP, NABP, NCPA, and NASPA.







### **Regulatory Approaches**

- · Advanced practice designations
- Collaborate practice agreements
- Protocols
  - Statewide protocols
  - Prescriber-approved protocols



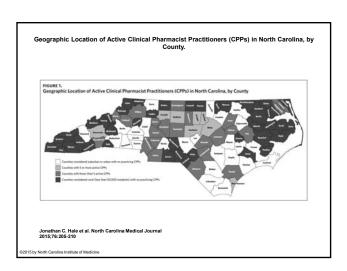
# Advanced Practice Designations

- · New Mexico
  - Pharmacist Prescriptive Authority Act (1993)
    - Creates Pharmacist Clinicians (PhC)
    - Recognizes pharmacists as mid-level practitioners who can manage primary care patients independently in written collaboration with a physician
    - Can prescribe and dispense medications under the CPA



# Advanced Practice Designations

- · North Carolina
  - Clinical Pharmacist Practitioner Act (2000)
    - Authorizes a CPP to implement predetermined drug therapies as outlined by a CDTM agreement
    - CPPs are in essentially the same position as a physician assistant or nurse practitioner
      - Same supervision and consulting w physician as required for APRNs and Pas (2016)
    - Medical acts which can be performed include prescribing and CPPs who have controlled substances in their prefection an





## Advanced Practice Designations

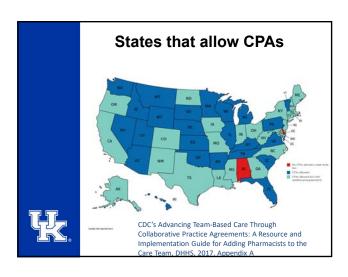
- · California
  - Advanced practice pharmacist (2013)
    - Authorizes expanded scope of practice through CPAs, including authority to perform patient assessments, order and interpret all drug therapy-related tests, refer patients to other healthcare providers, participate in the evaluation and management of disease and health conditions in collaboration with other healthcare providers, and initiate, adjust/modify, and discontinue drug

http://www.epapym/Advocacy/Expanding-Pharmacist-Services

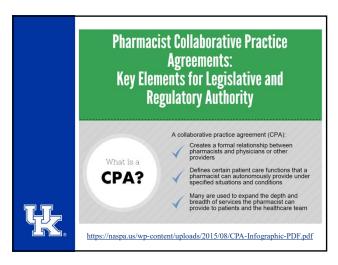
# Collaborative Practice Agreements

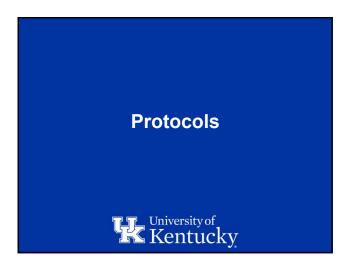










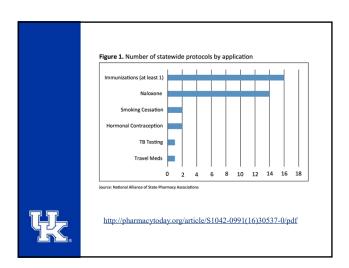


### **Statewide Protocols**

- Authorize pharmacist prescribing/administration of select medications to address public health
  - Codified in statute or refer to BoP as authorizing source

    Over half of states authorize some type of
  - statewide protocol
- Examples include:
  - Tobacco cessation products
  - Naloxone
  - Immunizations

  - ContraceptionTravel medication



### **Prescriber-approved Protocols** delegate

- · Authorize pharmacist to act as prescriber
- KY example
  - Immunizations (2004)
  - Naloxone (SB 192, 2015)
- KY BoP recently filed regulations to for "board authorized protocols" (201 KAR
  - Modeled after CCA and naloxone statutes/regulations
  - Would not require referral from MD as CCAs do
  - Do not specify what therapy can be initiated under protocol

What's Happening in Your State Regarding CPAs and/or **Protocols?** 



### **Barriers and Challenges**

- Payment for pharmacist care services
- Variability in state law governing CPAs and protocols
- Culture within the profession, the pharmacy and the broader community
- Workflow/use of ancillary help
  - Access to health information technology systems



## Payment for Pharmacist Care Services

- National push for provider status to address
- Some states already have 'provider status' in state law, but no mandat results state unique state and provider pr



# Examples of State Provider Status Laws that Facilitate Payment for Pharmacist Services

- Washington will hear details from Jenny Arnold tomorrow
- Oregon HB 2028 "permits health insurers to provide payment or reimbursement for services provided by pharmacist[s] through [the] practice of clinical pharmacy or pursuant to statewide drug therapy management protocol"



Center for Medicard & Medicaid Services
7:00 Security Bullerurds, Mail Stop 83-26-12
Ballamone, Mo 2124-18:00

CMCS Informational Bulletin

DATE: January 17, 2017

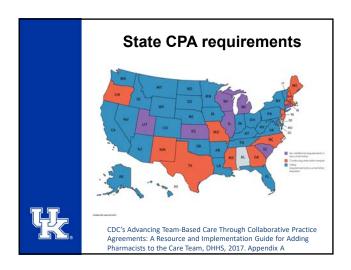
FROM: Vikki Wachino, Director
Center for Medicaid and CHIP Services (CMCS)

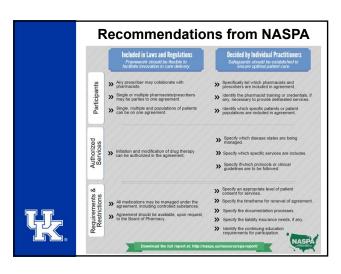
SUBJECT: State Flexibility to Facilitate Timely Access to Drug Therapy by Expanding the Scope of Pharmacy Practice using Collaborative Practice Agreements,
Standing Orders or Other Predetermined Protocols.

This guidance addresses flexibilities that states may have to a facilitate timely access to specific drugs by expanding the scope of practice and services that can be provided by pharmacists, and the provided protocols. The provided protocols of the provided protocols. The practice agreements (CPA) with other licensed prescribing healthcare providers like physicians, "Standing orders" issued by the state, or other predetermined protocols. These practices can facilitate easier access to medically necessary and time-sensitive drugs for Medicaid beneficiaries.

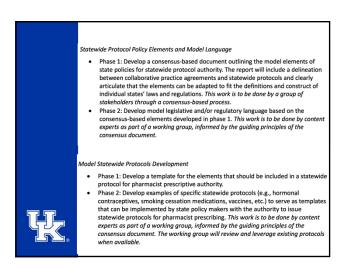
Variability in State Law

University of Kentucky













#### Culture

- Acceptance by other healthcare providers
  - Survey of advanced practice pharmacists in NM and NC
  - Over 40% perceive lack of provider 'buy in' as barrier to implementing advanced practice



Murawski M, et al. Am J Health-Syst Pharm 2011;68:2341-50

Workflow and HIT Access

University of Kentucky

### Workflow

- · Can be significant barrier, especially in community pharmacy practices
- · Optimize use of technicians and other ancillary staff to support pharmacists' direct patient care activity
  - Regulatory changes likely necessary to optimize use of technicians/interns

### **HIT Access**

- · Must have access to patient information to safely provide patient
  - Universal access to patients' labs, medication lists, etc
- · Many current dispensing systems lack ability to interface seamlessly with state health information exchanges
  - Often limited to immunization registry





What do you see as barriers and challenges in your state?

How are you addressing them?



### Patient Access to **Pharmacist-Prescribed** Medications 2017 Policy Statement adopted at APhA Annual Meeting

- APhA asserts that pharmacists' patient care services and related prescribing by pharmacists help improve patient access to care, patient outcomes, and community health, and they align with coordinated, team-based care.

  ACL:

  ACL
- 2. APhA supports increased patient access to care through pharmacist prescriptive authority models.
- 3. APhA opposes requirements and restrictions that impede patient access to pharmacist-prescribed medications and related services.
- 4. APhA urges prescribing pharmacists to coordinate care with patients' other health care providers through appropriate documentation, communication, and referral.
- 5. APhA advocates that medications and services associated with prescribing by pharmacists must be covered and compensated in the same manner as for
- 6. APhA supports the right of patients to receive pharmacist-prescribed medications at the pharmacy of



