



Management Case Study: Development of a Collaborative Controlled Substance Diversion Detection Process at a Large

Sarah Cox, PharmD

Roya Tran, PharmD

Disclosures

The program chair and presenters for this continuing education activity have reported no relevant financial relationships.

Learning Objectives

- Describe ways PandoraVIA reports can be used to track diversion
- Discuss methods of collaboration with other disciplines to monitor and prevent diversion
- List resources needed to sustain a prospective monitoring process

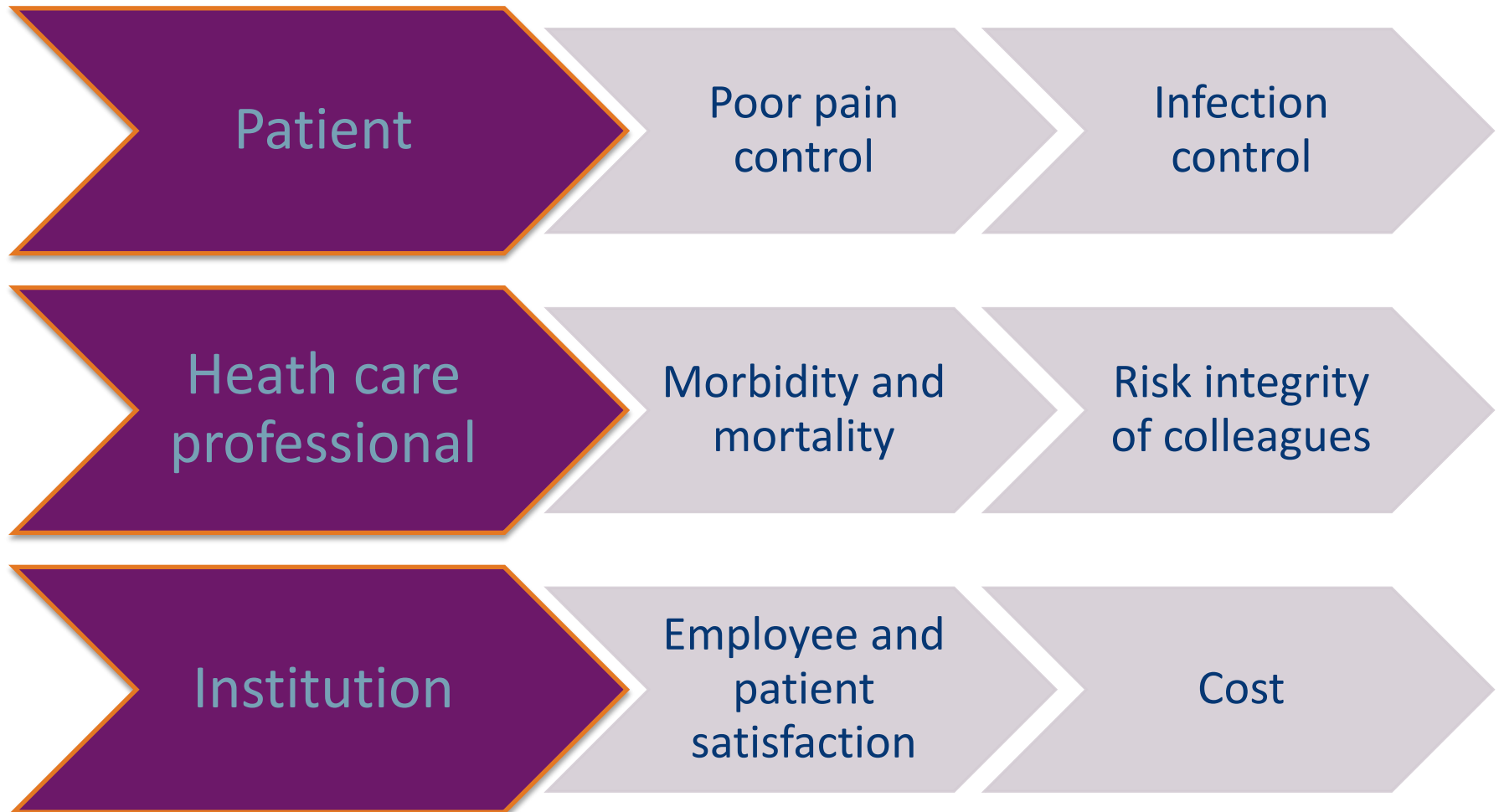
Self-Assessment Questions

- Multidisciplinary collaboration and communication will be required to achieve compliance with appropriate documentation of controlled substance use (T/F).
- A prospective monitoring process will require quick generation of monthly reports (T/F).
- Suspicious activity can be confirmed on a single report(T/F)

Background

- National Crisis
 - 16,651 opioid-related deaths in 2010
 - Centers for Disease Control and Prevention (CDC) Five Health Threats for 2014 includes prescription drug abuse and overdose

Risks



Background



CS Auditing Software

Omnicell®

PandoraVIA

Medacist

RxAuditor
TM

CareFusion

Knowledge
Portal

Identifying a Solution

- Phase I
 - Three confirmed diverters
 - Controlled substance auditing software
 - Controlled substance auditing reports manual

PandoraVIA Reports

Activity Report

Anomalous Usage Report

User Watch List – Anomalous Usage

User Watch List – Compliance

User Watch List – Discrepancy

Witness Buddy Report

Patient Safety Report



Identifying a Solution

- Phase II
 - APPE student investigators

Group 1	Group 2
Provided a name for the students to investigate	Provided the patient safety report for the students to investigate

PandoraVIA Reports

Activity Report

Anomalous Usage Report

User Watch List – Anomalous Usage

User Watch List – Compliance

User Watch List – Discrepancy

Witness Buddy Report

Patient Safety Report

Anomalous Usage

User name	TransC nt	Qty	Wtd Qty	Pop	Mean	UIF	UOF	SDev
	Hydromorphone 1Mg 1Ml Disp Syrin			33	5	17.0	26.0	4.94
	27	27						
	12	12						
	9	9						
	9	9						
	9	9						
	9	9						

Watch List – Anomalous Usage

User name	Extreme Outliers from Withdrawn for Narcotics (Site)	Mild Outliers from Withdrawn for Narcotics (Site)	Extreme Outliers from Withdrawn for Narcotics (NursingUnit)	Mild Outliers from Withdrawn for Narcotics (NursingUnit)	ExtremeOutliers from Withdrawn Narcotics (Station)
	<u>3</u>	0	<u>3</u>	0	<u>2</u>
	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>
	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>
	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	0
	<u>1</u>	0	<u>1</u>	0	0

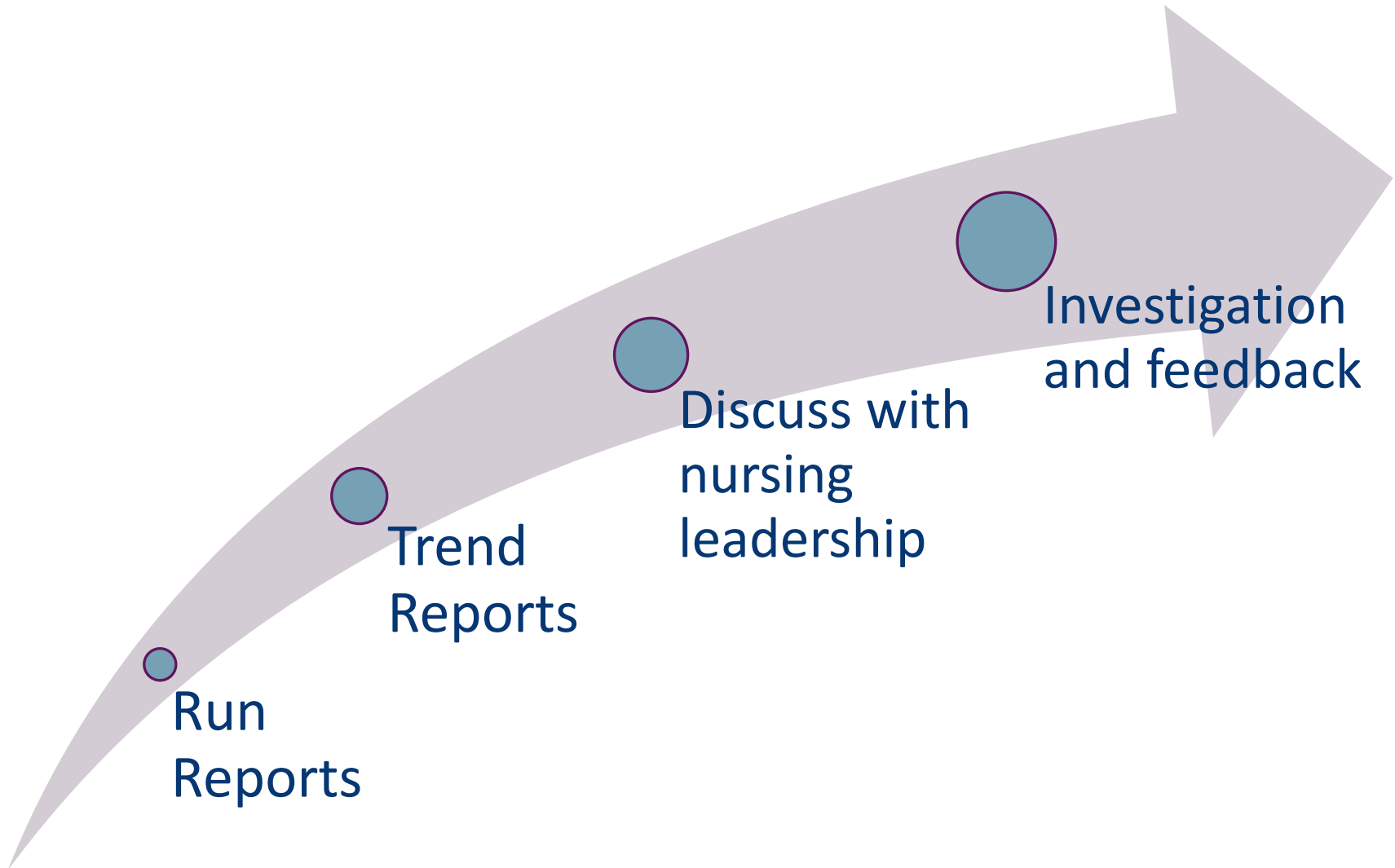
Watch List - Compliance

User name	Cancelled %	Cancelled Count	Override % for Narcotics	Override Count for Narcotics
	0	0	24	<u>7</u>
	0	0	100	<u>6</u>
	0	0	100	<u>4</u>
	0	0	100	<u>4</u>
	2	<u>1</u>	3	<u>2</u>
	3	<u>2</u>	3	<u>2</u>

Watch List - Discrepancy

User name	Discrepancy Count for Narcotics	Unresolved Discrepancy % for Narcotics	Unresolved Discrepancy Count for Narcotics	Resolved Discrepancy % for Narcotics	Resolved Discrepancy Count for Narcotics
	3	0	0	100	3
	3	0	0	100	3
	1	0	0	100	1
	1	0	0	100	1
	1	0	0	100	1

Solution



Results

Nursing Collaboration

**Emailed
Excel®
reports**

**Met unit
leaders**

**Requested
follow up**

Nursing Perspective

- What we did not expect
 - Spreadsheets were overwhelming
 - Needed guidance to interpret data
 - Some had skepticism in the process
 - Requested follow up investigation lagged
- What we learned
 - Identify flex nurses and charge nurses
 - Need nursing managers to support investigation

Pilot Investigation

- Objective
 - Estimate time needed to conduct chart review of activity flagged in reports
- Methods
 - Allocated 100 student hours
 - Investigated monthly activity for 8 users
 - Investigated patient safety reports for 3 units

Documentation Compliance



- Conclusion
 - Need accurate documentation practices to improve diversion monitoring and workplace safety
 - Need nursing support with investigation

Resource Estimate

Task	Unit
Total time per nursing unit	3.5 hours
<input type="checkbox"/> Generating and trending reports	1 hour
<input type="checkbox"/> Meeting with nursing unit leaders	1 hour
<input type="checkbox"/> Providing ad hoc reports	1 hour
<input type="checkbox"/> Administrative coordination	0.5 hour
Technician hourly wage	\$15-20
Cost per unit	\$60

$\$60/\text{unit} \times 52 \text{ units} \times 4 \text{ quarters/year} = \mathbf{\$12,480 \text{ per year}}$

Case of Confirmed Diverter

Extreme anomalous usage ranking in one month

AU Extreme Outliers from Withdrawn for Narcotics (Site)	AU Mild Outliers from Withdrawn for Narcotics (Site)	AU Extreme Outliers from Withdrawn for Narcotics(NursingU nit)	AU Mild Outliers from Withdrawn for Narcotics (NursingUnit)	AU ExtremeOutliers from Withdrawn for Narcotics (Station)	AU Mild Outliers from Withdrawn for Narcotics (Station)
<u>5</u>	<u>2</u>	<u>5</u>	<u>2</u>	<u>5</u>	<u>2</u>
<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>
<u>2</u>	0	<u>2</u>	0	<u>2</u>	0
<u>2</u>	0	<u>2</u>	0	<u>2</u>	0
<u>2</u>	0	<u>2</u>	0	<u>2</u>	0
<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>

Case of Confirmed Diverter

Extreme counts of override activity in six months

Cancelled %	Cancelled Count	Override % for Narcotics	Override Count for Narcotics
3	<u>82</u>	51	<u>797</u>
2	<u>45</u>	4	<u>31</u>
3	<u>49</u>	5	<u>27</u>
2	<u>31</u>	5	<u>27</u>

Diversion Cost Estimate

Product	AWP	Quantity	Total Charge
Hydromorphone 1mg/ml	\$1.64	749	\$1,228.36
Lorazepam 2mg/ml	\$2.08	28	\$58.24
Morphine 2 mg/ml	\$2.63	12	\$31.56
Hydrocodone/APAP 10/325	\$0.96	5	\$4.78
Lorazepam 2 mg/ml	\$0.90	2	\$1.80
Tramadol 50mg	\$1.67	1	\$1.67
Total	\$9.89	797	\$1,326.41

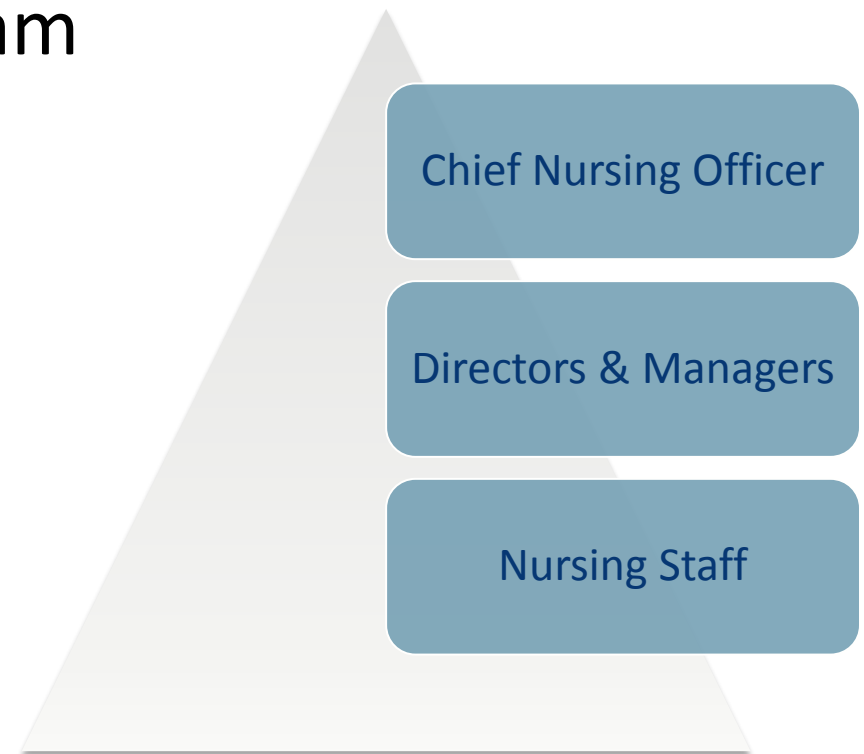
Cost estimate for a single user based on six month data

Vigilance & Perception

In a survey conducted by Trinkoff et al., “nurses who reported a *perception of easier availability* were determined to be almost *twice as likely* as others to divert and use a controlled substance; nurses employed by institutions *perceived to have poor workplace control* of controlled substances were *1.5 times more likely* to use a controlled substance.”

Other Key Resources

- Software with automated reports
- Dedicated compliance personnel
- Diversion response team
- Technicians
- Residents/interns
- Nurses



2015 First Quarter Summary

- Developed a reporting process
 - Generated reports for 7 nursing units
 - Identified 19 users for investigation
 - Confirmed one diverter
- Identified gaps in practice with documentation
- Gained commitment to staff re-education
- Initiated collaboration with nursing leaders

Future Areas for Investigation

- Witness buddies
- Flex nurses
- Procedural areas
- Pharmacy vault
- System hospitals

Self-Assessment Question 1

- Multidisciplinary collaboration and communication will be required to achieve compliance with appropriate documentation of controlled substance use (T/F).

Answer: True

Self-Assessment Question 2

- A prospective monitoring process will require quick generation of monthly reports (T/F).

Answer: False

Self-Assessment Question 3

- Suspicious activity can be confirmed on a single report (T/F).

Answer: False

Key Takeaways

- Garner executive leadership support
- Enforce proper documentation
- It's all about delivery