



Occurrence Reporting

*Building a Robust Problem Identification
and Resolution Process*

Kenneth R. Rohde

Occurrence Reporting

*Building a Robust Problem Identification
and Resolution Process*

Kenneth R. Rohde

HCPPro

Occurrence Reporting: Building a Robust Problem Identification and Resolution Process is published by HCPro, Inc.

Copyright © 2011 HCPro, Inc.

Cover Image © Variopinta. Used under license from Shutterstock.com.

All rights reserved. Printed in the United States of America. 5 4 3 2 1

Download the additional materials of this book with the purchase of this product.

ISBN: 978-1-60146-754-6

No part of this publication may be reproduced, in any form or by any means, without prior written consent of HCPro, Inc., or the Copyright Clearance Center (978/750-8400). Please notify us immediately if you have received an unauthorized copy.

HCPro, Inc., provides information resources for the healthcare industry. HCPro, Inc., is not affiliated in any way with The Joint Commission, which owns the JCAHO and Joint Commission trademarks.

Kenneth R. Rohde, Author
Tami Swartz, Managing Editor
Elizabeth Petersen, Special Projects Editor
Emily Sheahan, Group Publisher
Mike Mirabello, Senior Graphic Artist
Adam Carroll, Copyeditor
Sada Preisch, Proofreader
Matt Sharpe, Production Supervisor
Shane Katz, Art Director
Jean St. Pierre, Senior Director of Operations

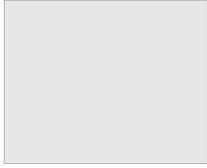
Advice given is general. Readers should consult professional counsel for specific legal, ethical, or clinical questions.

Arrangements can be made for quantity discounts. For more information, contact:

HCPro, Inc.
75 Sylvan Street, Suite A-101
Danvers, MA 01923
Telephone: 800/650-6787 or 781/639-1872
Fax: 800/639-8511
E-mail: customerservice@hcpro.com

Visit HCPro online at: www.hcpro.com and www.hcmarketplace.com

06/2011
21891



Contents

Figure List.....	vii
About the Author	xi
Introduction: Getting It Right the First Time and Every Time	xiii
Why Things Don't Always Go as Planned	xiv
Using the Book	xv
What Is in the Book?	xv
Chapter 1: Rethinking the Occurrence Reporting Process	1
Where Does Healthcare Go Wrong?.....	1
Healthcare Is Not the Only Industry That Does PIR.....	6
Recommendations for an Ideal Process.....	9
Chapter 2: The Problem Identification and Resolution Process	13
Introducing the Problem Identification and Resolution Process	13
Six Steps of the PIR Process	15
Chapter 3: Reporting.....	23
Importance of Managing Reporting.....	24
Volume and Severity Must Dance Together	28
Reporting Thresholds	29
Tips for Normalization	30

CONTENTS

Internal vs. External Identification of Issues	35
Two Simple Goals for Managing Reporting Volume.....	37
Chapter 4: Screening	41
Screening Determines What We Do Next.....	42
Establishing Screening Criteria.....	46
Reporting Severity	48
The Screening Work Flow and Matrix	59
Screening Quality Control.....	66
Chapter 5: Analysis.....	69
A Graded Approach to Problem Analysis.....	70
Individual Analysis for High-Impact Problems	75
Individual Analysis for Moderate-Impact Problems.....	80
Aggregated Analysis for Watch/Trend Problems	81
Aggregated Analysis of Causes: The Big Payoff	82
Five Simple Data Questions	83
Trending and Aggregation Methods	90
A Typical Analysis Session	99
What Do Your Department Managers Really Want to Know?.....	101
Chapter 6: Coding	103
The Vital Process of Coding.....	103
Code Based on Data Utilization.....	110
A Practical Coding Structure.....	112
Coding the Event vs. Coding the Causes	113
Initial Event Codes	115

CONTENTS

Making Coding Practical	135
Code Cleanup Troubleshooting	139
Chapter 7: Causing Change: Implementing Corrective Actions	141
Designing the Right Change	142
Getting Stuff Done	152
Dealing with External Commitments	164
Tips to Improve Implementation	168
Chapter 8: Tracking and Evaluation	171
Tracking Actions	171
Evaluation of Actions	174
Evaluating the Effectiveness of the PIR Process	176
Chapter 9: Taking Your PIR Process to the Next Level	179
Looking Toward the Future	179
Putting It All Together	182

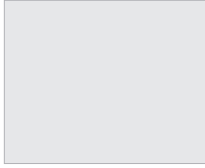


Figure List

Chapter 1

Figure 1.1	Aviation Safety Reporting System incident report excerpt	6
Figure 1.2	National Transportation Safety Board incident report excerpt.....	7
Figure 1.3	FDA adverse event report sample.....	7
Figure 1.4	IAEA initiation report sample	8
Figure 1.5	CPSC incident report.....	9
Figure 1.6	Quick guide to avoiding weaknesses: Build strengths in your PIR process.....	12

Chapter 2

Figure 2.1	Six steps of the PIR process	15
Figure 2.2	Self-assessment questions to evaluate reporting.....	16
Figure 2.3	Self-assessment questions to evaluate screening	17
Figure 2.4	Self-assessment questions to evaluate analysis.....	18
Figure 2.5	Self-assessment questions to evaluate coding	19
Figure 2.6	Self-assessment questions to evaluate implementation.....	20
Figure 2.7	Self-assessment questions to evaluate tracking and evaluation	21

Chapter 3

Figure 3.1	Reporting stability	25
Figure 3.2	Self-reporting	26
Figure 3.3	Reporting by department (not normalized).....	27
Figure 3.4	Combine volume and severity to get the best picture.....	29
Figure 3.5	Example: Calculating relative activities for use in normalization	34

FIGURE LIST

Figure 3.6	Tips for improving your reporting	38
Figure 3.7	Quick guide to reporting.....	39

Chapter 4

Figure 4.1	Screening helps us know what to do next	44
Figure 4.2	Screening work flow	45
Figure 4.3	Expectations for screening	48
Figure 4.4	Example of converting word severity scales to numerical scales.....	50
Figure 4.5	Prioritizing performance improvement activity and corrective actions.....	51
Figure 4.6	What we need to know to screen an issue.....	53
Figure 4.7	Which issues should we check the severity on?	55
Figure 4.8	NCC MERP Index for Categorizing Medication Errors	57
Figure 4.9	Comparison of severity scales	58
Figure 4.10	Significant event management process	60
Figure 4.11	Model screening matrix.....	61
Figure 4.12	Typical notifications worksheet.....	66

Chapter 5

Figure 5.1	Balance your analysis efforts.....	74
Figure 5.2	Analysis work flow	74
Figure 5.3	Root cause analysis work flow.....	75
Figure 5.4	Expectations for the ideal root cause analysis team	76
Figure 5.5	Expectations for the ideal root cause team sponsor	78
Figure 5.6	Expectations for an ideal apparent cause analysis.....	80
Figure 5.7	Typical fields in a significant event	82
Figure 5.8	Significant event database flow chart	83
Figure 5.9	Five simple questions our data analysis must answer	85
Figure 5.10	Tools to help answer the magnitude question.....	86
Figure 5.11	Tools to help answer the direction question.....	86
Figure 5.12	A tool to help answer the variability question	87

FIGURE LIST

Figure 5.13	Highly variable data set example	88
Figure 5.14	Tools to help answer the rate of change question	89
Figure 5.15	Key considerations for effective time series graphs.....	90
Figure 5.16	Time series analysis of reporting volume and harm events.....	91
Figure 5.17	Data fields for top-level time series graph	92
Figure 5.18	Histogram analysis of events by process (one dimension).....	93
Figure 5.19	Histogram analysis of events by process and event category (two dimensions).....	94
Figure 5.20	Four-quadrant graphs allow you to make easy value decisions	96
Figure 5.21	Comparison/correlation analysis of volume and severity by department.....	97
Figure 5.22	Model agenda for a trend meeting.....	100
Figure 5.23	Key ways to improve your analysis.....	102

Chapter 6

Figure 6.1	Comparison of centralized and distributed coding approaches	105
Figure 6.2	Coding all causes	113
Figure 6.3	A practical coding process includes three major types of codes	114
Figure 6.4	Typical values for “who was impacted”	117
Figure 6.5	Typical role codes	119
Figure 6.6	Typical physical location codes	122
Figure 6.7	Example of a process coding approach	124
Figure 6.8	Example of an activity coding approach.....	125
Figure 6.9	Expectation codes.....	128
Figure 6.10	Culture of safety expectations	129
Figure 6.11	Nature of impact codes.....	131
Figure 6.12	Severity codes.....	132
Figure 6.13	Moral patient harm severity codes.....	133
Figure 6.14	Liability harm severity codes.....	134
Figure 6.15	Process impact severity codes	135
Figure 6.16	When coding is typically performed.....	136
Figure 6.17	Table of codes and possible interventions.....	138

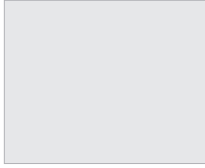
FIGURE LIST

Chapter 7

Figure 7.1	Examples of permanent and transitory corrective actions	144
Figure 7.2	Typical definitions of qualitative benefits	147
Figure 7.3	Relationship of permanence and predictability.....	149
Figure 7.4	Scope and timing characteristics of corrective actions	151
Figure 7.5	Checklist for good corrective actions.....	152
Figure 7.6	Action plan to prevent recurrence form	153
Figure 7.7	Feeding the four outputs of the action plan	156
Figure 7.8	Additional coding to support a basic common cause analysis	157
Figure 7.9	Additional coding to support a basic benefits report.....	158
Figure 7.10	Additional coding to support a corrective actions analysis	158
Figure 7.11	Additional coding to support accountability tracking	159
Figure 7.12	What can you do with the master action list?	161
Figure 7.13	Tips for prioritization	162
Figure 7.14	Why things don't get done	164
Figure 7.15	Alignment of responsibility for the most important corrective actions	166
Figure 7.16	Quick guide to causing change and implementing corrective actions.....	169

Chapter 8

Figure 8.1	When should we consider removing a corrective action?	174
Figure 8.2	Key indicators to evaluate the effectiveness of your PIR process	176
Figure 8.3	Tracking and evaluation	178



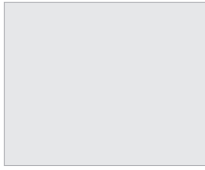
About the Author

KENNETH R. ROHDE

Kenneth R. Rohde is a senior consultant for The Greeley Company, a division of HCPro, Inc., in Danvers, MA. He brings more than 28 years of experience in quality management to his work with hospitals and medical centers across the country. Rohde's roles in performance improvement and project management make him uniquely qualified to assist medical staffs and hospital leaders in developing solutions to their toughest challenges. He instructs, speaks, and consults in the areas of error reduction strategies, root cause analysis, improving performance through process simplification, effective procedure writing, apparent cause analysis, engineering effectiveness and error reduction, failure modes and effects analysis; effective data collection, analysis and trending; and patient safety evaluation and improvement.

Prior to joining The Greeley Company, Rohde served as director for Performance Improvement International and director of corrective actions processes at Westinghouse Electric Company. He has also participated in or managed projects to improve business effectiveness and business development for healthcare, nuclear power, and manufacturing facilities around the globe.

Rohde is the author of *Effective Process Management: Improving Your Healthcare Delivery*; *Failure Modes and Effects Analysis: Templates and Tools to Improve Patient Safety*; *Making Your Data Work: Tools and Templates for Effective Analysis*; *Building Your Culture of Safety: Six Keys to Preventing Medical Errors*; and the *FMEA Reference Toolkit: Essential Templates and Charts for Your Hospital*, all published by HCPro, Inc.



Getting It Right the First Time and Every Time

In this chapter

- Why Things Don't Always Go as Planned
- Using the Book
- What Is in the Book?

*“The patient received a threefold overdose of radiation,”
said the newscaster.*

*“There has been an ongoing increase in our number of falls
with injury—what are we doing about it?”
asked the board member.*

*“I keep entering reports, but I don’t know if they go
anywhere—probably just into a black hole,”
complained the nurse.*

Every day in healthcare we have about 12 million employees going to work and doing thousands of things with millions of patients. Our collective goal is to do all these individual activities in a safe, efficient, and coordinated fashion. Our fundamental quality and risk reduction premise is that if we “get it right the first time and every time,” we will achieve our goal of optimum safety, efficiency, and cost.

But do we always get it right? Unfortunately, we don't. Every day we see new statistics related to the number of medical errors and the cost of harm that is being absorbed in the healthcare process. Reimbursements are tied to preventing problems, and some preventable problems are becoming “no-pay” events.

INTRODUCTION

So within our facilities there is a strong focus on “getting it right.” This strong focus comes from implementing safe behaviors, good processes, proven methods, and good leadership. Those are all the proactive things we do to prevent problems before they happen.

But even in the best organizations, things don’t always go as planned.

WHY THINGS DON’T ALWAYS GO AS PLANNED

If you are a risk manager, your daily life is all about dealing with things that didn’t go as planned. If you are on a falls team, or perhaps the patient safety committee, every month you look at the data that identifies all the things that didn’t go as planned. If you are a senior leader, you keep asking, “Why did that happen? I thought we had that under control.”

Typically, when things don’t go as planned, there was a breakdown in part of our plan. Perhaps there was a breakdown in the way our staff or physicians behaved. Maybe it was a weakness in one of our processes that we did not know about or chose to ignore. It could have been a breakdown in a piece of our equipment or a problem with part of our brick-and-mortar facilities. Most likely it was a breakdown that resulted from some combination of these factors.

So are we talking just a few isolated problems every month? No. Typically we can assume that there will be thousands or tens of thousands of problems every year. Our patients, the regulators, the insurance carriers, and our employees expect that we as an organization can identify all these problems, and they are counting on us to resolve them.

Even if we have a team of dedicated risk and quality professionals, managing all these problems effectively won’t happen unless we have a strong process to assist us. That process and the subject of this book is the Problem Identification and Resolution (PIR) process.

USING THE BOOK

If you are involved in risk or quality, you probably deal with PIR on a daily basis. We dump data from our system, prepare charts for departments and the board, and read a never-ending number of reports. Sometimes in the midst of all that work and data, we can lose sight of the big picture of what we are trying to accomplish.

If you are a risk or quality professional, the purpose of this book is to allow you to step back and take a look at the whole process. Ideally, you will find that you are doing many of the tasks discussed here, but hopefully you will find additional guidance that will help you improve the efficiency and benefits of your efforts.

If the PIR process is new to you or you are adding it to your responsibilities, we hope that this book will provide a “quick start” so you can develop a foundation of the most important concepts.

Either way, the PIR process is one of the most important and certainly one of the more interesting processes in our facilities. If we do it well, we not only can improve patient and employee safety and satisfaction, but we also can have a tremendous positive impact on the bottom line and the future success of our organization.

WHAT IS IN THE BOOK?

After the introductory chapters, the book is organized based on the PIR work flow, moving from reporting to screening, analysis, coding, implementation, and tracking and evaluation. In addition, Chapter 9 is designed to assist you in preparing for the future and putting together a strategic plan for the PIR process.

INTRODUCTION

Chapter	Key Content & Messages
Chapter 1: Rethinking the Occurrence Reporting Process	<ul style="list-style-type: none"> • Where did the PIR process come from? • What do other industries do? • What would an ideal process look like?
Chapter 2: The Problem Identification and Resolution Process	<ul style="list-style-type: none"> • Why PIR is one of your organization’s most important processes • Six steps of an effective PIR process • Self-assessment tools for each of the steps
Chapter 3: Reporting	<ul style="list-style-type: none"> • How many reports are enough? • Why we have drop-offs in reporting • Making sure you know the ratio of internally reported events
Chapter 4: Screening	<ul style="list-style-type: none"> • Understanding severity and severity scales • What you might include in the screening • A simple screening work flow • Measuring screening quality
Chapter 5: Analysis	<ul style="list-style-type: none"> • The need for a graded approach to analysis • Understanding individual analysis and aggregated analysis • What vs. why • Setting expectations for root cause analysis and apparent cause analysis • Doing aggregated analysis—trending and common cause analysis • Tools for graphical analysis
Chapter 6: Coding	<ul style="list-style-type: none"> • Who should do your coding? • Using your codes effectively • Code cleanup
Chapter 7: Causing Change: Implementing Corrective Actions	<ul style="list-style-type: none"> • Understanding permanence in your corrective actions • Ensuring that the actions are well defined • Communicating the benefits • Developing good action plans—and what to do with them
Chapter 8: Tracking and Evaluation	<ul style="list-style-type: none"> • Is it getting done? • Was it effective? • How to evaluate the effectiveness of your PIR process
Chapter 9: Taking Your PIR Process to the Next Level	<ul style="list-style-type: none"> • What is coming in the future? • Moving from voluntary reporting to automatic reporting • Integrating multiple systems • Integration with your organizational strategy

INTRODUCTION

Tips

Throughout the book, we have identified key tips that help reinforce the practical application of the concepts.

Key indicators

In addition to the tips, we have highlighted key indicators that you may want to consider to assist you in measuring the effectiveness of your process.

Self-assessments

Chapter 2 includes a series of quick self-assessments for each of the key steps in the reporting process. You may want to consider using these on an annual basis or as a special report to your leadership or the board. They are also useful when developing budgets for significant changes in your process.



DOWNLOAD YOUR MATERIALS NOW

All figures from this book are available online at the website listed below. This is an additional service provided by HCPPro, Inc.

Website available upon the purchase of this product.



Thank you for purchasing this product!

HCPPro

Rethinking the Occurrence Reporting Process

In this chapter

- Where Does Healthcare Go Wrong?
- Healthcare Is Not the Only Industry That Does PIR
- Recommendations for an Ideal Process

“I’m not going to write that down—it will just be used against me,” said the physician.

“I can’t release that data to you—it’s protected by attorney-client privilege!” exclaimed the risk manager.

“If it is not required by The Joint Commission or the state, don’t write it down—it will just be discoverable,” said the outside legal counsel.

WHERE DOES HEALTHCARE GO WRONG?

In healthcare, where virtually every process and activity can have a direct impact on the well-being of our patients and their families, our staff, and our business as a whole, you would think that we would be a leader in reporting and managing breakdowns and problems. Unfortunately, that is not the case. While virtually every healthcare facility has an occurrence reporting process of some kind, these processes are not uniformly effective, and even some of the most sophisticated facilities are not getting real value from the effort that goes into occurrence reporting. This is unfortunate because not only are we wasting resources, we are also missing an opportunity for our facilities to improve and proactively increase safety and effectiveness. So why isn’t healthcare

a leader in problem management? Like so many things, there is a long history that has led us to where we are today.

It is always important for us to understand how we got where we are so we can plan a productive path forward. In this chapter, we will examine the areas that have held back more effective occurrence reporting, look at what other industries are doing, and conclude with some recommendations for an ideal Problem Identification and Resolution (PIR) process.

Healthcare reporting systems typically evolved from a 'legal' or 'risk' system

One of the first things we need to recognize is that the PIR systems in healthcare have largely evolved from systems that were put into place for legal or risk management reasons—to identify whether the organization needed to prepare for a defense against a major suit, claim, or settlement that would have economic ramifications. This ancestry leaves its mark on our present systems by fostering a lack of sharing and keeping alive the remnants of a punitive culture.

Weakness: Lack of sharing

Typically, in healthcare, a problem identification system has to serve two masters. It needs to support the risk management and legal functions in identification and management of claims and suits, and it needs to assist the process management and improvement functions in improving safety, quality, and overall business effectiveness. Cooperative management and sharing of occurrence information would ideally benefit both functions.

Unfortunately, because the PIR systems initially evolved from the risk management and legal functions, this information often gets restricted and retained. There are still many facilities that are reluctant to share occurrence data outside of the risk management function within their own departments, let alone with other facilities in the system. Recent advances in the development of Patient Safety Organizations (PSO) are starting to provide paths to share de-identified information outside of our facilities, but that is just starting to change a long-standing culture of restricting information about the breakdowns that occur in our processes.

TIP

Ensure that risk and quality work closely together and share event and problem data. Consider joining a PSO to both increase your protections and prepare for future large-scale aggregation.

RETHINKING THE OCCURRENCE REPORTING PROCESS

Weakness: Remnants of a punitive culture

The next weaknesses in healthcare's approach are the remnants of a punitive culture. In manufacturing, if there is a process breakdown, typically the worst outcome is that the product needs to be pulled from the line and perhaps recycled. In healthcare, not only is there a direct connection between a breakdown and potential harm to a patient, there is the ever-present concern of liability and lawsuits. This has led to a culture of "let's not discuss this unless we really have to." In some cases, there is direct blame of an individual, even if the event was the result of a more general breakdown in the process.

No one wants to hurt a patient, and it is painful when such an event needs to be revealed, put on paper, and perhaps discussed with others. The implementation of "just culture" and increased focus on process breakdowns rather than just individual behaviors is making some headway in changing the culture. However, when organizations perform their culture of safety surveys, there are still some larger weaknesses identified, such as a lack of willingness to report and the presence of a punitive attitude.

TIP

Work to eliminate residual punitive culture. Implement a just culture approach and motivate by driving an increase in reporting coupled with a decrease in severity. Make sure your board doesn't say, "We don't want to see that many falls next month!" People will comply—by not reporting!

Weakness: Too focused on required external reporting

Most industries need to work in concert with some regulatory or accrediting organization, but in healthcare problem reporting there often seems to be a major imbalance between what we do because it is the right thing for our business and what we do because we are required to. If in your organization, you hear "Are we required to report this?" or "We collect that data on a quarterly basis because that is when we have to send it to the state," you might be concerned about whether you are controlling your own destiny.

TIP

Just because the state or the board wants to see the data once per quarter, don't assume that such a frequency will be the most beneficial choice for your organization. You may need to provide event data to your departments on a weekly or monthly basis.

Weakness: Driven by sentinel event reporting

Another weakness in healthcare is the excessive focus on sentinel events. The Joint Commission established these events as an early warning for bigger issues. The idea was a sound one, and the aggregation of sentinel events is very useful to share learning. Unfortunately, at the individual facility level, regardless of whether you share your sentinel events, these events have taken on lives of their own. They are often seen by senior leadership and the board as a primary quality indicator. The real difficulty with this view comes when internal policies and procedures are written in a fashion that couples actions directly with the definition of “sentinel event.” For example, some policies only provide for a root cause analysis for events specifically labeled as sentinel events. This sometimes leads a physician or department director to fight against that label so that he or she does not have to do a root cause analysis for it. Often, there is substantial learning that could be gained from examining that event, but by limiting examination to “sentinel events,” the organization has boxed itself in. The department director might feel as if he or she has successfully defended the honor of the organization by eliminating a “sentinel event,” but in reality he or she has weakened the culture related to dealing with problems.

TIP

Keep the concept of sentinel events, but remember that it is an external concept. If you eliminated the words “sentinel event” from all your procedures, would your organization still be doing the right thing because it wanted to?

Weakness: Poor analysis of why things happen

Electronic reporting systems have made reporting more efficient and increased our ability to collect data, but they have also shifted the focus from understanding why problems happen to collecting more data related to what happened. Two decades ago, the lack of large collections of event data forced us to focus on the more significant events; those events would usually receive some form of causal analysis to determine why they occurred, and this analysis would help focus our attention on the underlying causes. Today, we can get a tremendous number of reports, but we don’t have the resources to analyze all of them and determine why things happened. It’s human nature to see data related to a problem and immediately begin to chart and graph it. While that is fundamentally good, it often distracts from what we are really trying to do: resolve the most important problems so we can make the biggest improvements in our organization.

RETHINKING THE OCCURRENCE REPORTING PROCESS

TIP

Keep your organization focused on the value of “why.” Remember, you can’t fix a “what”—you can only fix a “why.” Getting to a good “why” requires a good cause analysis program.

Weakness: Lack of permanent corrections

Even if we manage to keep our organization focused on fixing the most important problems, we frequently rely on the performance improvement team or the root cause analysis team to develop a series of corrective actions—often in the last 15 minutes of the meeting! This results in poorly defined and often transitory corrective actions. If we invest all this effort and the corrective action fails to deliver or fades away after six months, we are not being very successful.

TIP

Spend much more time on the design and development of the corrective actions. Make sure that they are well defined, permanent, and fit with the overall organizational strategy.

Weakness: Lack of prioritization and action management

Our facilities usually do a good job of managing all the complexities that come with building a new medical tower or a new parking structure. In those cases, we need to monitor thousands of individual tasks and keep them all on track. Conversely, very few healthcare facilities have an effective, formal process to manage the limited number (hundreds) of action items that we produce from our cause analyses, failure modes and effects analyses, and performance improvement teams. Without a good process that starts with a master list, we can’t prioritize or make sure that the most critical areas are being completed.

TIP

Track your quality and risk reduction actions as if you were running a construction project. Be careful of only using “monthly minutes” to status and track. Make sure you are looking at all of your actions when you prioritize.

With all these challenges in healthcare, we might ask the following questions: “Is it really possible for us to implement effective PIR processes?” “Is healthcare starting from scratch?” “Does anyone else do PIR?”

HEALTHCARE IS NOT THE ONLY INDUSTRY THAT DOES PIR

Healthcare is a relative latecomer to the world of PIR. Aviation, manufacturing, pharmaceuticals, medical equipment, trucking, pipelines, railroads, and many others have been doing equivalent data collection and analysis for many years. Healthcare is learning from these industries, but perhaps not as quickly as it could.

Figures 1.1–1.5 are just a few examples of other industries that are doing the same kind of work.

FIGURE 1.1

AVIATION SAFETY REPORTING SYSTEM INCIDENT REPORT EXCERPT

NASA collects aviation problems from pilots, maintenance workers, and flight attendants.

PLEASE FILL IN APPROPRIATE SPACES AND CHECK ALL ITEMS WHICH APPLY TO THIS EVENT OR SITUATION.

REPORTER <input type="button" value="Reset"/>		EXPERIENCE	
<input type="radio"/> Flight Attendant (FA)	Total years as Flight Attendant		<input type="text"/>
<input type="radio"/> FA in charge	Total years as FA with your current airline		<input type="text"/>
<input type="radio"/> Off-Duty FA	Number of aircraft types currently qualified to work on		<input type="text"/>
<input type="radio"/> Other: <input type="text"/>	Percent of duty time in past year on aircraft type involved		<input type="text"/> %
FLIGHT INFORMATION			
Type of Aircraft	Make / Model: <input type="text"/> (e.g., B737) NOT *100, F100, etc.		
	Number of seats <input type="text"/>	Number of exits: Floor level <input type="text"/>	
	Number of pax on board <input type="text"/>	Window <input type="text"/>	
	Number in cabin crew <input type="text"/>	Tailcone <input type="text"/>	
Flight Segment	Flight origin <input type="text"/>	Time since takeoff <input type="text"/> hrs / mins	
	Destination <input type="text"/>	Nearest city & state (if known) <input type="text"/>	
	Departure time <input type="text"/> HH:MM (Local Time)		
Cabin Activity (check all that apply)	<input type="checkbox"/> Boarding	<input type="checkbox"/> Beverage service	<input type="checkbox"/> Cart service
	<input type="checkbox"/> Deplaning	<input type="checkbox"/> Meal service	<input type="checkbox"/> Tray service
	<input type="checkbox"/> Other: <input type="text"/>		
	<input type="checkbox"/> Safety related duties, specify: <input type="text"/>		
OPERATOR	FLIGHT PHASE	WEATHER	LIGHTING <input type="button" value="Reset"/>
[Select Operator] v	[Select Phase] v	<input type="checkbox"/> Clear	CABIN
Other: <input type="text"/>	Other: <input type="text"/>	<input type="checkbox"/> Rain	<input type="radio"/> High
		<input type="checkbox"/> Turbulence	<input type="radio"/> Medium
		<input type="checkbox"/> Thunderstorm	<input type="radio"/> Low
		<input type="checkbox"/> Unknown	<input type="radio"/> Off
		<input type="checkbox"/> Cloudy	OUTSIDE
		<input type="checkbox"/> Fog	<input type="radio"/> Daylight
		<input type="checkbox"/> Snow	<input type="radio"/> Night
		<input type="checkbox"/> Ice	
EVENT CHARACTERISTICS <input type="button" value="Reset"/>			

Source: <http://asrs.arc.nasa.gov/index.html>.

RETHINKING THE OCCURRENCE REPORTING PROCESS

FIGURE 1.2

NATIONAL TRANSPORTATION SAFETY BOARD INCIDENT REPORT EXCERPT

The National Transportation Safety Board collects event data from truckers, railroads, pipelines, and aircraft.

NATIONAL TRANSPORTATION SAFETY BOARD PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT This form to be used for reporting civil and public use aircraft accidents and incidents			
BASIC INFORMATION			
Accident/Incident Location Nearest City/Place: _____ State: _____ ZIP: _____ Country: _____ Latitude: _____ (dd:mm:ss N/S) Longitude: _____ (ddd:mm:ss E/W)		Date/Time Date: <u>mm/dd/yyyy</u> Local Time: _____ Time Zone: _____	
Phase of Operation <input type="checkbox"/> Standing <input type="checkbox"/> Takeoff (incl. initial climb) <input type="checkbox"/> Cruise <input type="checkbox"/> Hover <input type="checkbox"/> Taxi <input type="checkbox"/> Climb <input type="checkbox"/> Maneuvering <input type="checkbox"/> Other <input type="checkbox"/> Descent <input type="checkbox"/> Landing <input type="checkbox"/> Approach <input type="checkbox"/> Unknown		Collision with Other Aircraft <input type="checkbox"/> Midair <input type="checkbox"/> On-ground <input type="checkbox"/> None	Altitude of In-Flight Occurrence _____ ft MSL
AIRCRAFT INFORMATION			
Manufacturer: _____ Model: _____ Serial Number: _____ Registration Number: _____ Amateur-built: <input type="checkbox"/> Yes <input type="checkbox"/> No		Max Gross Weight: _____ lbs Weight at Time of Accident/Incident: _____ lbs Location of Center of Gravity at Time of Accident/Incident: _____ inches from <input type="checkbox"/> nose or <input type="checkbox"/> datum -or- _____ Percent Mean Aerodynamic Cord (% MAC)	
Category of Aircraft <input type="checkbox"/> Airplane <input type="checkbox"/> Balloon <input type="checkbox"/> Blimp/Dirigible <input type="checkbox"/> Glider <input type="checkbox"/> Gyrocraft <input type="checkbox"/> Helicopter <input type="checkbox"/> Powered lift <input type="checkbox"/> Ultralight <input type="checkbox"/> Unknown	Type of Airworthiness Certificate (Check all that apply) Standard <input type="checkbox"/> Normal <input type="checkbox"/> Utility <input type="checkbox"/> Acrobatic <input type="checkbox"/> Transport Special <input type="checkbox"/> Restricted <input type="checkbox"/> Limited <input type="checkbox"/> Provisional <input type="checkbox"/> Experimental <input type="checkbox"/> Special Flight <input type="checkbox"/> Light Sport	Number of Seats: _____ If Large Aircraft, how many seats for: Flight Crew: _____ Cabin Crew: _____ Passengers: _____	Landing Gear <input type="checkbox"/> Retractable Check any additional landing gear configuration that applies: <input type="checkbox"/> Tricycle <input type="checkbox"/> Tailwheel <input type="checkbox"/> Amphibian <input type="checkbox"/> High Skid <input type="checkbox"/> Emergency Float <input type="checkbox"/> Skid <input type="checkbox"/> Float <input type="checkbox"/> Ski <input type="checkbox"/> Hull <input type="checkbox"/> Ski/Wheel <input type="checkbox"/> Unknown

Source: www.nts.gov.

FIGURE 1.3

FDA ADVERSE EVENT REPORT SAMPLE

The FDA runs MedWatch, where adverse medical events or problems with medical equipment can be reported.

MEDWATCH

The FDA Safety Information and Adverse Event Reporting Program

For VOLUNTARY reporting of adverse events, product problems and product use errors

Form Approved: OMB No. 0910-0201, Expires: 12/31/2011
See CMBI statement on reverse.

Page 1 of _____

A. PATIENT INFORMATION Section A - Help		2. Dose or Amount Frequency Route	
1. Patient Identifier	2. Age at Time of Event or Date of Birth:	3. Sex <input type="checkbox"/> Female <input type="checkbox"/> Male	4. Weight _____ lb or _____ kg
B. ADVERSE EVENT, PRODUCT PROBLEM OR ERROR Section B - Help		3. Dates of Use (if unknown, give duration) from/to (or best estimate)	
Check all that apply: <input type="checkbox"/> Adverse Event <input type="checkbox"/> Product Problem (e.g., defects/malfunctions) <input type="checkbox"/> Product Use Error <input type="checkbox"/> Problem with Different Manufacturer of Same Medicine		5. Event Abated After Use Stopped or Dose Reduced? #1 <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Doesn't Apply #2 <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Doesn't Apply	
2. Outcomes Attributed to Adverse Event (Check all that apply) <input type="checkbox"/> Death: _____ (mm/dd/yyyy) <input type="checkbox"/> Disability or Permanent Damage <input type="checkbox"/> Life-threatening <input type="checkbox"/> Congenital Anomaly/Birth Defect <input type="checkbox"/> Hospitalization - initial or prolonged <input type="checkbox"/> Other Serious (Important Medical Events) <input type="checkbox"/> Required Intervention to Prevent Permanent Impairment/Damage (Devices)		4. Diagnosis or Reason for Use (Indication) #1 _____ #2 _____	
3. Date of Event (mm/dd/yyyy)	4. Date of this Report (mm/dd/yyyy)	6. Lot # #1 _____ #2 _____	7. Expiration Date #1 _____ #2 _____
5. Describe Event, Problem or Product Use Error		E. SUSPECT MEDICAL DEVICE Section E - Help	
		1. Brand Name	
		2. Common Device Name	
		3. Manufacturer Name, City and State	

Source: www.fda.gov/safety/medwatch/default.htm.

CHAPTER 1

FIGURE 1.4

IAEA INITIATION REPORT SAMPLE

The International Atomic Energy Agency (IAEA) provides guidance for the development and use of Problem Identification and Resolution processes in nuclear power plants. In addition, the Institute for Nuclear Power Operations collects and shares event data throughout the nuclear power plants in the United States.

APPENDIX III: EXAMPLE OF AN INITIATION REPORT			
INITIATION REPORT			Page 1/2
			Plant:
			Unit:
Part 1. To be completed by the initiator			
Initiator:	Organization identifying Condition:	System:	Event date:
Date:	Person Identifying Condition:	Location:	Event time:
		Plant status:	
Condition description:			
Potential operability, reliability, or reportability concern:		<input type="checkbox"/> Correction <input type="checkbox"/> Improvement <input type="checkbox"/> Organization issue <input type="checkbox"/> Human Performance	
<input type="checkbox"/> Yes: promptly notify immediate Supervisor and Ops Manager — Shift Supervisor <input type="checkbox"/> No			
Part 2. To be completed by Supervisor:			
Condition valid:	Potential operability, reliability, or reportability concern:		
<input type="checkbox"/> Yes <input type="checkbox"/> No : provide basis in comment block	<input type="checkbox"/> Yes: promptly notify Ops Manager — Shift Supervisor <input type="checkbox"/> No		

Source: www-pub.iaea.org/MTCD/publications/PDF/TE_1581_web.pdf.

RETHINKING THE OCCURRENCE REPORTING PROCESS

FIGURE 1.5

CPSC INCIDENT REPORT

The Consumer Product Safety Commission (CPSC) collects event information about a wide range of consumer products, from toasters that have electrical shorts to pajamas that catch on fire.

Tell Us About the Product

In order to investigate your report, CPSC needs to know about the product. Product identification found on labels or manuals is especially important. We ask that you fill in as much information as you can about the product.

※Product Category (select one):

<input type="checkbox"/> Clothing & Accessories	<input type="checkbox"/> Hobby	<input type="checkbox"/> Sports & Recreation
<input type="checkbox"/> Containers & Packaging	<input type="checkbox"/> Home Maintenance & Structures	<input type="checkbox"/> Toys, Kids, & Baby
<input type="checkbox"/> Drywall	<input type="checkbox"/> Kitchen	<input type="checkbox"/> Yard & Garden
<input type="checkbox"/> Electronics	<input type="checkbox"/> Personal Care	<input type="checkbox"/> None of these
<input type="checkbox"/> Fuel, Lighters & Fireworks	<input type="checkbox"/> Products at Public Facilities	
<input type="checkbox"/> Furniture, Furnishings & Decorations		

※Product Description:
Important: Please write a description of the product, including the product name and any other information that will help us identify the product and purpose for which it is used.

Brand Name:

Model Name or Number: Serial Number:

Manufacturer/Private Labeler Name:

Date Manufactured (mm/dd/yyyy):

Source: www.cpsc.gov.

RECOMMENDATIONS FOR AN IDEAL PROCESS

So what can we do to overcome the historical issues associated with problem identification and resolution in healthcare? Let's start with defining what characteristics an ideal PIR system might have. In this section we will look at eight top-level goals we should set for our PIR processes.

Low-threshold, low-burden reporting

Presently we are relying on voluntary reporting, which means that if it is too hard to report, people won't do it. We need to make reporting as easy as possible. One of the first ways to do

CHAPTER 1

this is to reduce the pressure on making that first decision: “Should I report it?” If people agonize over whether they should report a specific issue, it is likely that many will decide not to bother. Set a very low threshold for reporting. If someone is even considering it, encourage him or her to go ahead and report. If people are still asking “Should I report it?” in your organization, your threshold is not low enough!

In addition to reducing the threshold, we need to reduce the burden. For example, if a person needs to click 20 times to complete a report, he or she will probably get fed up and be less likely to report. In this situation, consider counting the number of clicks—that is a good indication of how much burden is placed on the reporter. While we are tempted to keep asking for more information so we can do a better analysis, remember to balance this desire with the burden on the reporter. Consider leaning toward low burden rather than more information.

Rapid, simple screening

The more reports we get and the lower the threshold, the more effective we need to be in screening. We need to quickly identify issues that are potentially significant and jump on them. This can't happen with an inefficient or slow screening process. Screening on a daily basis takes resources, but you should strive for it.

Graded analysis

Big problems deserve individualized analysis; smaller problems can probably wait until a larger number of them can be examined together. Make sure that your process provides for different levels of analysis so you can assign the right amount of effort to each event. If the only options in your process are root cause analysis or nothing, you will be missing a lot of learning and probably overburdening your root cause analysis team.

Simple, effective coding directly connected to interventions

The more reports we get, the harder it will be to find what we are looking for without good buckets or codes. Spend the time to make sure your taxonomy makes sense and is useful. Ensure that you can connect each code to a potential intervention or action. If you don't know what you will do if a particular code spikes, it may not be worth collecting.

Cost-effective, permanent corrective actions

Focus on the real payoff, which is making changes. We do the screening and analysis so we can develop good actions. Make sure that actions don't take a back seat to analysis. Judge the effectiveness of your entire PIR process by the success of the actions. The process is there either to develop a corrective action for a cause or to trigger future analysis so we can find other causes and develop actions. Make sure that you can approximate how much you are spending to develop your actions and then share the benefits of all the great things the PIR process has delivered.

Effective action management

Ensure that you manage actions effectively. Differentiate between recommended actions that come from analysis and committed actions that have the full support of the organization, including resources and budget.

Automate as much as you can

If you can fill in a field automatically, try to do that. If you can listen to the HL7 or ICD-9 stream and find events without manually entering them, do that as well. Anything that you can do automatically will allow you to reap the benefits with lower burden.

Integrate with other systems

Remember that your PIR process crosses over all your other processes. Work to integrate it into strategy, finance, employee safety, satisfaction, claims, and regulatory compliance. The more the PIR process is integrated into your overall organization, the more powerful it becomes.

See Figure 1.6 for a quick guide to avoiding PIR weaknesses and building PIR strengths.

FIGURE 1.6

QUICK GUIDE TO AVOIDING WEAKNESSES: BUILD STRENGTHS IN YOUR PIR PROCESS

Weaknesses to avoid	Strengths to build
Lack of sharing occurrence data	Ensure that all key players have access to the data they need to improve the organization.
Remnants of a punitive culture	Strive for an increase in reporting with a reduction in severity. Reward higher reporting.
Doing it because external powers require it	Make Problem Identification and Resolution (PIR) a normal part of your management toolbox, just like budgeting.
Too much focus on what happened instead of why it happened	Do good cause analysis and aggregate all the “whys” that are discovered. Focus on fixing the underlying common causes.
Quick “shoot from the hip” corrective actions just because we have to do something—lots of transitory and poorly defined actions	Specify the corrective actions as though you are buying them from a vendor—in many cases you are. Make sure they are well designed, well defined, and will continue to provide benefits for a long time.
Treating actions on an individual basis and managing them in committee meeting minutes or individually by owner	Manage the actions like you would build a building. Maintain a master list, prioritize it, make sure that there is accountability, and notice when things get done or don’t get done.