A ROADMAP FOR SUCCESS

Improving release of information (ROI) quality using Six Sigma principles

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INTRODUCTION

Perhaps you've heard the proverb, 'A journey of a thousand miles begins with a single step.' In essence, you're able to promote action by reframing a goal into smaller, more manageable milestones.

When it comes to improving ROI quality, this couldn't be truer. Reducing unauthorized disclosures (UAD) can seem daunting. To improve quality you must understand why errors occur, the frequency with which those errors occur, and how you can prevent them. To complicate matters, there is no industry standard for ROI quality. Does a 95% accuracy rate mean you or your ROI vendor is doing a good job, or might this percentage give you a false sense of security?

The good news is that using Six Sigma principles, it becomes easier to set and achieve reasonable goals for ROI accuracy and quality.

This e-book introduces readers to Six Sigma concepts and provides specific examples of how to use these concepts to reduce errors and boost ROI quality, including insights from Ciox's own journey. Note that this e-book only provides a high-level glimpse into Six Sigma. Consider working with a certified Six Sigma expert to take full advantage of these valuable principles to improve ROI quality within your own organization.

ROI quality is paramount because medical records include highly sensitive information that a UAD could expose. Although you can't completely eliminate human error, what you can do is significantly reduce these errors. Again, the journey starts with a single step. How can you begin the journey toward ROI quality? Start by understanding your current ROI accuracy.

WHAT IS SIX SIGMA?

Six Sigma is a data-driven methodology to improve quality and eliminate defects. It was first introduced by American engineer Bill Smith while he was working at Motorola in 1986. Healthcare organizations can use Six Sigma principles to improve ROI quality by identifying the root cause of UADs and implementing solutions to ensure those defects will not occur again.

CHAPTER 1

DEFECTS PER MILLION OR ACCURACY RATE?

To improve ROI quality, you must first understand your current ROI accuracy. Looking at UADs as an overall percentage of the total number of records released doesn't provide an accurate picture. For example, consider an organization that processes 15 million requests per month with 3,000 UADs. The accuracy rate is 99.98%. Now consider an organization that processes 15 million requests per month with 6,000 UADs. The accuracy rate is 99.96% even though this organization has twice as many UADs.

How do you know where you truly stand with ROI quality when it takes a fairly large numerator to shift the overall percentage? In a high-volume industry like healthcare, organizations need a more detailed measure of accuracy.

That's where defects per million opportunities (DPMO) comes into play. DPMO is a ratio of the number of flaws, or defects, in the process vs the number of defects that can occur. This value provides a good estimation of the process' efficacy. A higher DPMO means your process is more likely to have errors while a lower one indicates you've been able to mitigate the majority of those errors. According to Six Simple principles, a highly capable process is one with fewer than 3.4 DPMO. This means approximately 50 or fewer ROI errors per 15 million requests. Organizations striving to improve ROI quality should aim for this number, though just like anything else, it may take a bit of time to get there.

HOW DO YOU CALCULATE DPMO?

To calculate DPMO, divide the number of defects in a sample by the total number of defect opportunities. Then multiply that number by one million.

CHAPTER 2

MAPPING THE JOURNEY

1. Gather data

Before you can make improvements, you will need to determine your baseline – what is your current DPMO? Gather two important pieces of data of the process; how many times can something happen, and how many times did something happen.

2. Determine where the defect is caused

Identify the type of UAD that occurs most frequently in your own organization. For example, is it wrong patient record? Wrong address? Mixed patient records? Wrong date of service? Something else?
It all goes back to the Pareto Principle, a rule stating that 80% of consequences come from 20% of the causes. In other words, 80% of your UADs occur based on an error that occurs only 20% of the time. By uncovering this error, you can reduce up to 80% of your UADs.

3. Analyze the process in which the defect is found

Now that you've identified your most common type of UAD, start exploring specific incidents by having one-on-one conversations with staff. This step is known as the '5 whys' because it refers to five questions about the process and where it could have gone wrong. Note that 'five' is an arbitrary number. The number and type of questions you ask will depend on the specific type of UAD you're trying to address. What's important here is that you are finding the "why" behind your most common errors.

WHAT IS THE PARETO PRINCIPLE?

A rule stating that 80% of consequences come from 20% of the causes. This means the relationship between inputs and outputs is not balanced.

4. Identify the underlying reason for the defect

This is known as the root cause; what, when, why and how the defect occurred. The root cause analyzes the influences of the programs, people, and protocols of the process. Tools such as a fishbone diagrams are beneficial in determining the influences.

5. Devise a solution to ensure the defect will not occur again

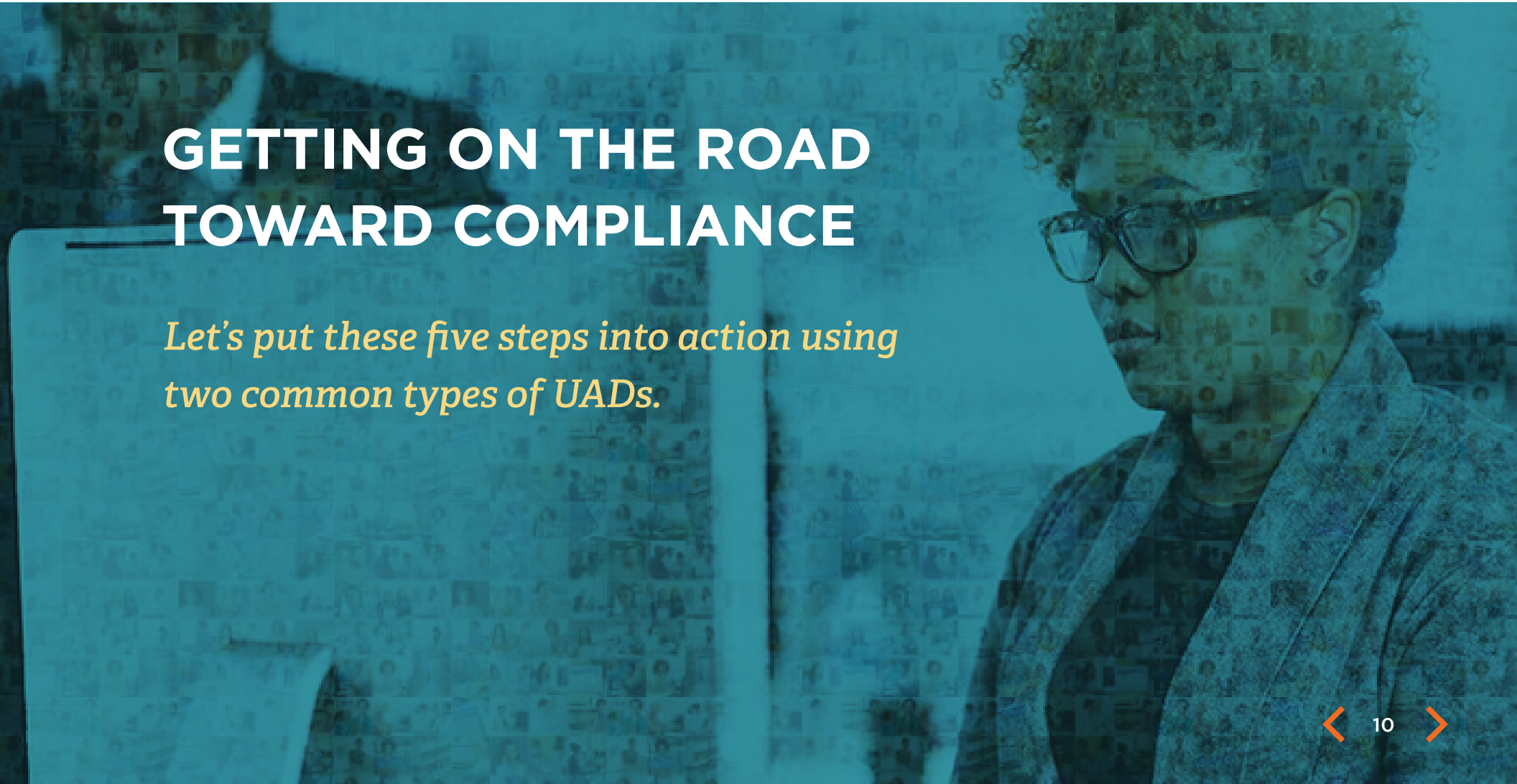
Now that you've identified the root cause of the UAD, how will you address it? This is called Poka Yoke, a lean manufacturing concept that refers to error proofing a process. Poka Yoke is not for finding mistakes, it's about putting measures in place to prevent them from being made in the first place. Think about spell check. Yes, it finds the error, but the value of spell check is it prevents the error from being made before you send a document out.

Keep in mind that devising a solution is not a 'one and done' deal. It's all about continually reassessing the process to see whether defects are occurring. If they are, you'll once again need to apply the Pareto Principle, ask the 5 whys, identify the root cause, and devise a solution.

WHAT IS POKE YOKE?

Poka Yoke is a lean manufacturing tool that refers to error proofing a process. It was originally coined in Japan during the 1960s by Shigeo Shingo, an industrial engineer at Toyota.

CHAPTER 3



GETTING ON THE ROAD TOWARD COMPLIANCE

Let's put these five steps into action using two common types of UADs.

1. Wrong Patient Record

Problem

A healthcare organization's written ROI policy states that employees who print patient records must perform a quality assurance (QA) check on those records before releasing them to the patient. Yet the organization's DPMO continues to increase despite the written policy. The biggest source of UADs? Releasing records to the wrong patient.

5 whys

A sample one-on-one conversation with staff (Note: In this case, there are three):

Auditor: *Why didn't the QA happen?*

Employee: *The employee printed the record at the end of the day and was going to perform a QA check first thing in the morning before the patient arrived.*

Auditor: *Why didn't this happen?*

Employee: *The patient arrived early in the morning before the QA check occurred.*

Auditor: *Why didn't the front desk staff person know not to release the record to the patient?*

Employee: *She assumed it was done and didn't have a chance to double check because the phones were ringing off the hook.*

Root cause

Lack of communication between ROI and front-desk staff regarding whether records are ready for release.

Solution (Poka Yoke)

Ask employees who print the records to QA those records immediately upon printing. Then ask them to put the records in an envelope and initial the envelope so front-desk staff can release accurate records with confidence.

2. Wrong Address

Problem

A healthcare organization continues to see an increase in DPMO largely due to staff sending records to the wrong address.

5 whys

A sample one-on-one conversation with staff (Note: In this case, there are four):

Auditor: *Why are records being sent to the wrong address?*

Employee: *It's not the wrong address but mainly the wrong suite number.*

Auditor: *Why is the suite number frequently wrong?*

Employee: *ROI staff don't always see the suite number when entering a request.*

Auditor: *Why don't they see it?*

Employee: *They use a split monitor. This means they view the request letter in one system and enter information into another—all on one screen.*

Auditor: *Why is that a problem?*

Employee: *The suite number often doesn't display properly because of the split screen.*

Root cause

Inability to view the suite number on a split screen monitor.

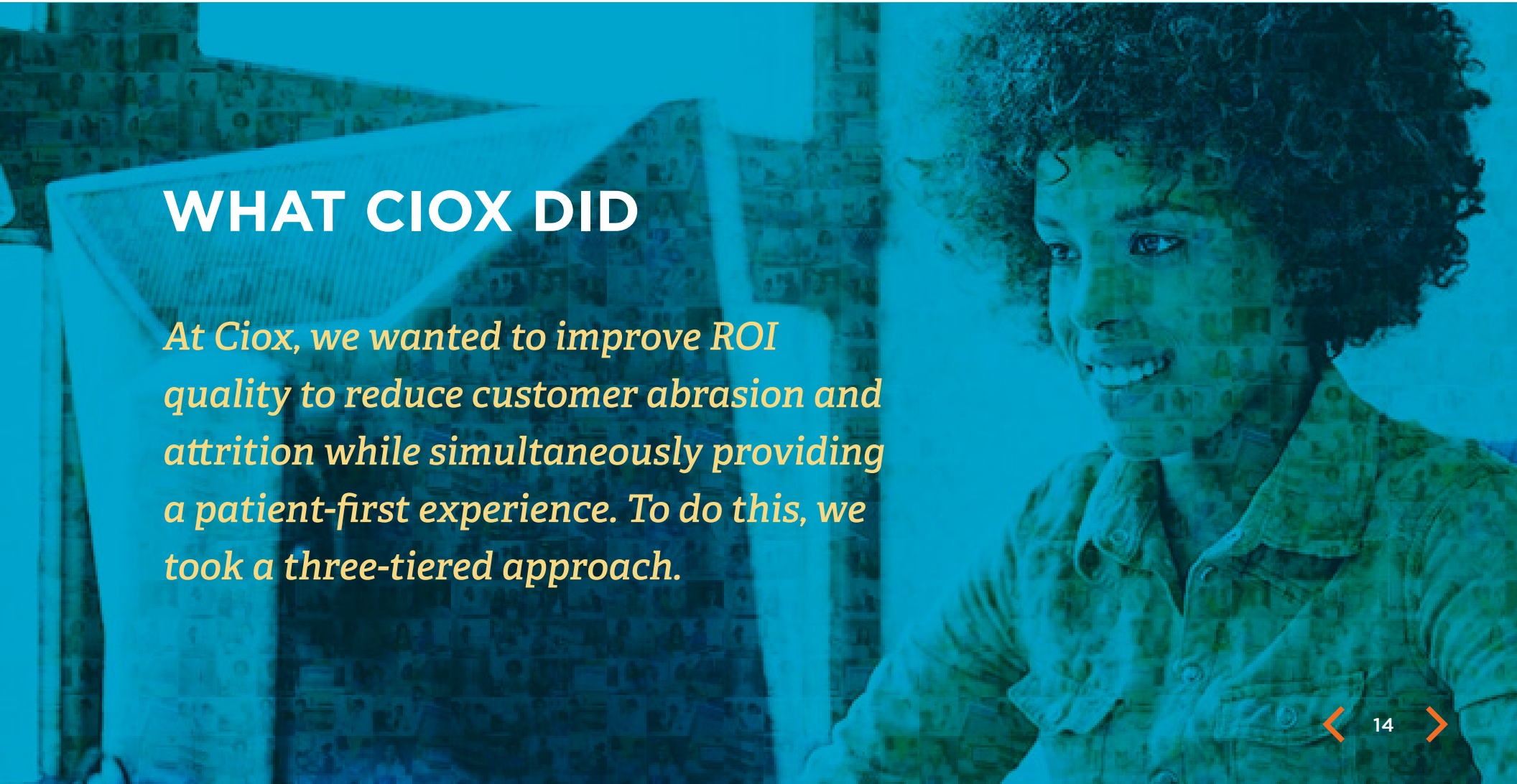
Solution (Poka Yoke)

Ask the IT development team to create a separate field for the suite number so this information is always visible. This solution is the program-influence.

Other Errors

There are countless other errors that can occur during the ROI process. For example, do staff frequently release records to the wrong person? Perhaps the '5 whys' root cause analysis might reveal it's because of incorrect email addresses. If so, require staff to enter the email into a second field that prompts a 'does not match' error if not duplicated accurately when typing. Do staff frequently release wrong dates of service? Perhaps the '5 whys' root cause analysis might reveal it's because they're multi-tasking. If so, alter the responsibility of answering phones to specific staff members in specific timeframes so employees aren't constantly interrupted.

CHAPTER 4



WHAT CIOX DID

At Ciox, we wanted to improve ROI quality to reduce customer abrasion and attrition while simultaneously providing a patient-first experience. To do this, we took a three-tiered approach.

1. Top Down

Every month, our CEO discusses ROI quality during town hall meetings, reminding staff of how it affects patients directly. Ciox also publishes a weekly newsletter called 'Think About It Thursday' that highlights external news releases, new regulations, analysis of internal quality data, and other quality-related content. Ciox has also begun highlighting top performers, noting greatest quality improvement, longest streaks, and similar accolades. Finally, leadership meet virtually twice a month during 'Coffee with Compliance' to voice concerns about quality and share best practices. Ciox also publishes the minutes from these meetings on its Intranet so staff can access the discussions. **Ciox saw a 19% drop in DPMO after making these changes.**

2. Bottom Up

Ciox assigned a designated privacy analyst and compliance director for each business unit. With robust training, the privacy analyst performs daily reviews of DPMO data to immediately address problems as they arise. In addition, audit managers perform in-depth privacy assessments using the Office for Civil Rights methodology. **Ciox saw an additional 29% drop in DPMO after making these changes.**

3. Technology

Ciox rolled out Natural Language Processing (NLP) and Optical Character Recognition (OCR) technology to ensure scanned records are accurate. The technology reviews each record for the patient's name, and it flags any information that may not belong in the record. **Ciox saw an additional 34% drop in DPMO after making these changes for a total of an 82% decrease in DPMO.**

82%

decrease in DPMO

CHAPTER 5

LESSONS LEARNED

Throughout its journey toward ROI quality, Ciox learned several lessons it hopes will help healthcare organizations move the needle on quality.

1. Obtain executive leadership buy-in

Consistent messaging is a critical part of improving ROI quality. As evidenced by Ciox's experience, simply raising executive awareness and getting executive leaders on board can have a significant impact on DPMO.

2. Review your DPMO on a daily basis

Apply the Pareto Principle, set a goal, and ask why to identify the root cause of the problem. Devise a solution, and then reassess your goal. Ciox does this regularly and never remains complacent, always setting and achieving new goals.

3. Focus on attracting, retaining top talent

Create a high-quality onboarding process supplemented by ongoing education and targeted training based on root cause analyses. For example, Ciox has provided training about Patient Right of Access and the 21st Century Cures Act.

4. Create a culture of accountability

Beef up your HIPAA sanctions policy. Also commit to sharing information organization-wide when incidents occur. Ciox provides customers with complete visibility into any and all compliance incidents.

5. Leverage technology to enhance performance management

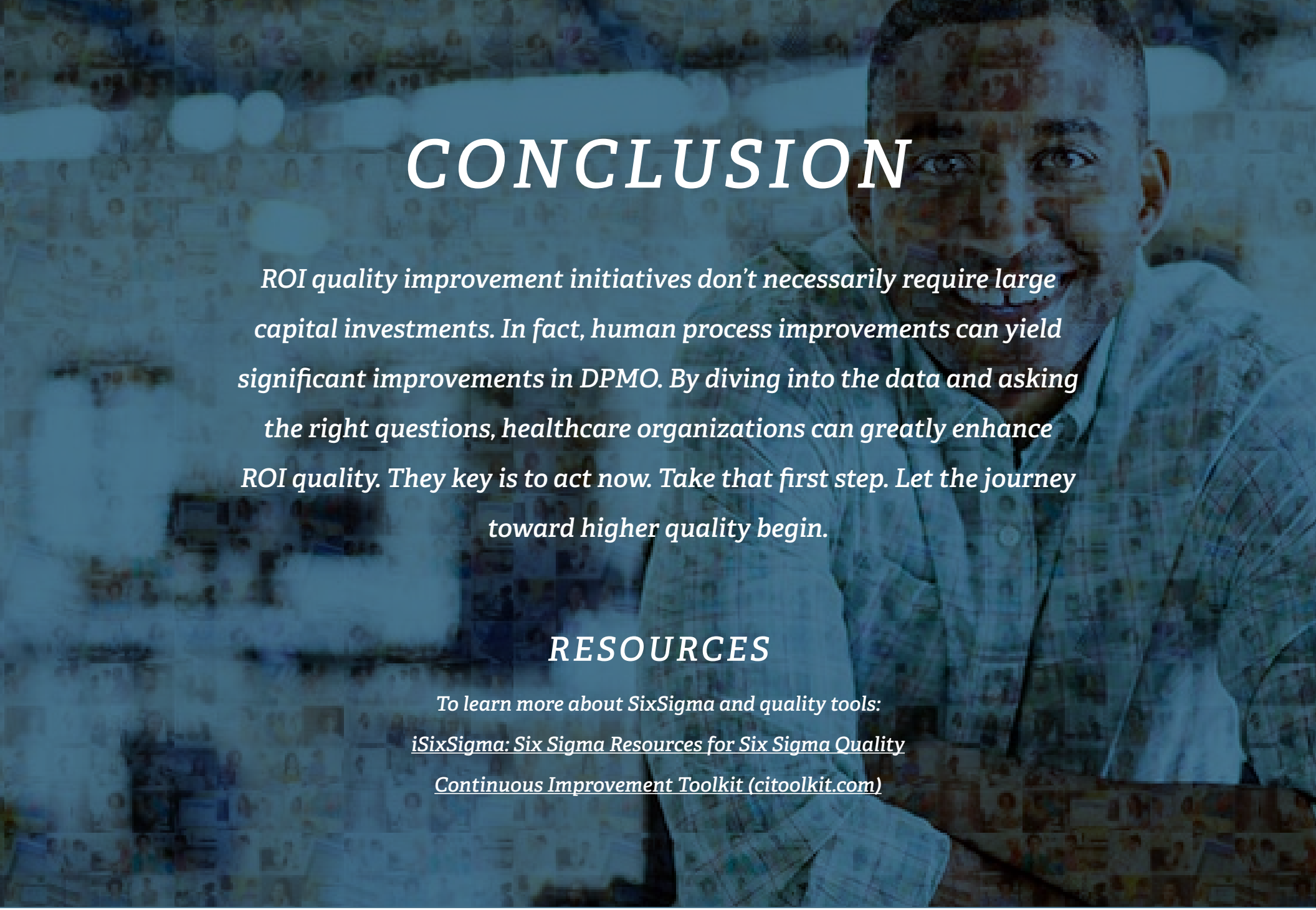
Using data analytics across settings and over longer periods of time enables organizations to spot trends more easily. Ciox uses a platform that enables views across requests. The technology also allows Ciox to centralize incidents so it can determine whether an incident occurring at one site could be happening at another site.

6. Look beyond UADs

Ciox has applied Six Sigma principles to accounting of disclosures (i.e., Are employees documenting exactly what they sent out?), delivery method (i.e., Are employees delivering information in the manner in which it was requested?), and annual HIPAA training (i.e., Do employees receive training in a timely manner?).

7. Don't play the blame game

Mistakes happen. It's human nature. The tone of conversions with staff should always be one of ease, not blame. Focus on the goal: To improve ROI quality. Staff play a valuable role in accomplishing that goal, and you need their input and cooperation to achieve it.



CONCLUSION

ROI quality improvement initiatives don't necessarily require large capital investments. In fact, human process improvements can yield significant improvements in DPMO. By diving into the data and asking the right questions, healthcare organizations can greatly enhance ROI quality. They key is to act now. Take that first step. Let the journey toward higher quality begin.

RESOURCES

To learn more about SixSigma and quality tools:

iSixSigma: Six Sigma Resources for Six Sigma Quality

Continuous Improvement Toolkit (citoolkit.com)

ABOUT CIOX HEALTH

For 40 years, Ciox has advanced the healthcare industry through better health information management and exchange of health information. Our broad reach in medical records extends across industries, allowing us to modernize workflows, facilitate access to clinical data, and improve the accuracy and flow of health information.

We help our clients manage, protect, and leverage health information to achieve operational improvements, optimized revenue, and better patient outcomes.

To learn more, please visit cioxhealth.com
or contact us by clicking here.

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