



2020 HPOR

HOSPITAL PHARMACY OPERATIONS REPORT

Introduction

At Kit Check, we believe that tomorrow's innovations come from thoroughly understanding the challenges of today. This solution-oriented model has helped our network of more than 700 hospitals achieve success through operational efficiency, patient safety, and medication visibility.

We weren't satisfied with turning to our own experiences and perspectives for answers, so we developed our proprietary annual survey to derive key insights and intelligence from pharmacy decision-makers. We think of the Hospital Pharmacy Operations Report survey as our road map forward—shedding light on the state of the industry to inform and equip leaders for what's to come.

Now entering its 7th consecutive year, the 2020 Hospital Pharmacy Operations Report (HPOR) once again takes us inside the minds of Hospital Pharmacy leaders. We'll hear firsthand from those on the front lines of a global pandemic about how they experienced an unprecedented and unexpected year. We'll learn how COVID-19 has challenged workflows, shifted priorities, and reshaped the future of the hospital pharmacy industry. In a year that stress-tested the entire drug supply chain, we'll understand why pharmacy leaders are turning to new technologies to future-proof their operations.

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Key Themes

THEME 1

Future Proofing

After a global pandemic stress-tested the entire industry, pharmacy leaders are looking ahead and preparing for the unexpected.

THEME 2

Operational Efficiency

Facing tight budgets & limited staff hours, pharmacy systems are focused on optimizing their workflows.

THEME 3

Inventory Visibility

Pharmacies are planning for new technology in 2021 as they strive to achieve complete, drug unit-level visibility.

THEME 4

System Integration

Pharmacy leaders recognize the power of new technology to break down silos across the full medication supply chain.

Methodology

The 2020 HPOR is based on survey input from 191 Hospital Pharmacy leaders. Consistent with prior years, our survey data represents a diverse group of respondents across the US. 43% of our experienced participants have worked in hospital pharmacy for 20+ years and most have supervisory roles, such as pharmacy directors, managers, and buyers. The respondents also represent a range of institutions, including single hospitals and those with 20+ hospitals in their network. Collectively, the survey respondents offer a wide, balanced, and intimate perspective of the hospital pharmacy industry.

43%

of our experienced participants
have worked in hospital pharmacy for

**20+
years**

THE 2020 HPOR OFFERS INSIGHT INTO THE IMPACT OF COVID-19

The research for this year's report was conducted in December 2020, at the end of an unprecedented year where a global pandemic tested every aspect of the pharmacy industry. For hospital pharmacies, COVID-19 caused increased drug shortages and recalls, created staffing shortages, tightened budgets, altered pharmacy roadmaps, and made patient & staff safety even more important. To better understand the impact of the pandemic, and to provide important context for this year's research findings, we'll explore COVID-19 throughout this report.

FOR THE 3RD STRAIGHT YEAR, DRUG SHORTAGES ARE THE #1 ISSUE TO ADDRESS

For the 3rd consecutive year, Hospital Pharmacists cited drug shortage management as their top issue to address. This ongoing challenge was made even worse by COVID-19, with 86% of Hospital Pharmacists reporting that drug shortages are occurring more often due to the pandemic. In fact, 62% are currently experiencing more than 10 different drug shortages in their pharmacy.

Resolving these occurrences is a time-consuming endeavor that can have serious implications on overall operational efficiency, particularly when a lack of supply chain visibility leaves pharmacies unprepared for the unexpected. With one in four pharmacists reporting that each shortage can consume more than 10 staff hours, shortages can quickly add up to a costly distraction from a pharmacy's primary function of patient care.

62%

of Hospital Pharmacists are currently experiencing more than 10 different drug shortages in their pharmacy

THE IMPACT OF DRUG RECALLS WAS EXACERBATED BY COVID-19

Over the past decade, there has been a continual rise in the impact of drug recalls. In 2020, for 25% of Hospital Pharmacists, this impact was exacerbated by COVID-19. Across the year, 18% of pharmacists had 10 or more recalls impact their pharmacy kits. Similar to drug shortages, the extent of a recall's effect can vary depending on the readiness of a pharmacy's inventory management system. For those lacking accurate, item level visibility, processing recalls can consume valuable staff hours.

In our 2020 survey, 79% of Hospital Pharmacists reported that each recall typically requires up to 10 staff hours. To minimize the impact of recalls, pharmacists are likely to turn to analytics software. When evaluating a software solution for improving inventory management, 75% of Hospital Pharmacists consider the ability to locate recalled medications "very" or "extremely" important.

Turning to Analytics

Pharmacists are seeking analytics software to aid in their fight to minimize the impact of recalls, especially during COVID-19

IN 2020, STAFFING CHALLENGES BECAME A TOP CONCERN

While COVID-19 has put a strain on nearly every aspect of hospital pharmacy operations, the impact has perhaps been felt most significantly by pharmacy staff. In this year's report, staffing-related challenges grew in importance more than any other issue. With COVID-19 causing more frequent drug recalls and shortages, the burden of these time-consuming occurrences fell largely on pharmacy staff. For 43% of Hospital Pharmacists, staff hours have become more limited, and for 25%, staff shortages are the #1 issue to address.

As Pharmacists look to optimize staff hours, many are considering software solutions to gain efficiencies. In 2020, interest in a clinician decision support system grew by +58% since our 2019 report. In addition to sourcing sufficient hours, Hospital Pharmacists are also concerned with the safety of their staff. 85% reported that staff safety has become more important due to COVID-19.

43%

of Hospital Pharmacists, staff hours have become more limited

25%

staff shortages are the #1 issue to address

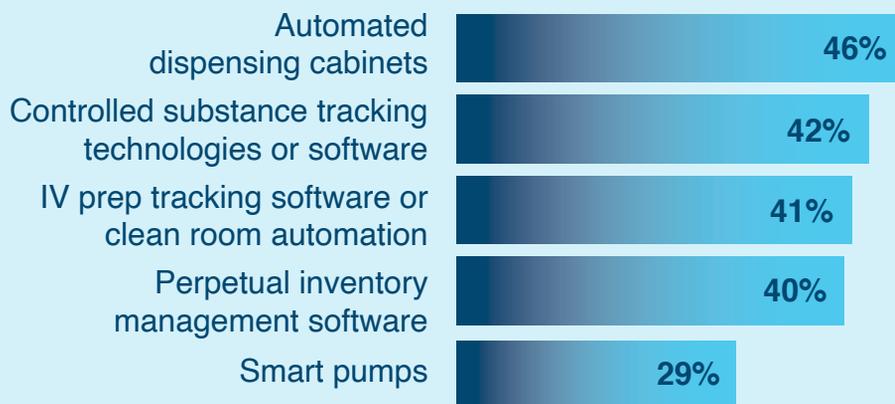
TO ADDRESS CHALLENGES, PHARMACIES PLAN FOR NEW TECHNOLOGY

To address their most important challenges, Hospital Pharmacists are embracing the power of new technologies. While current adoption rates and time horizons for implementation vary across hospitals, nearly all Pharmacists recognize the power of technology to streamline workflows, improve inventory management, and increase visibility across the entire drug chain of custody.

Looking ahead to 2021, the #1 technology initiative for Hospital Pharmacists will be to employ automated dispensing cabinets. Automated dispensing cabinets moved up from the third most important initiative in last year's report. Controlled substance tracking technology ranked as #2 for the second consecutive year, followed by IV prep tracking software, last year's top initiative.

As hospitals face staffing challenges and Pharmacists dedicate their time to treating COVID-19 patients, streamlining the implementation of new technology will be critical for success.

TOP 5 TECHNOLOGY INITIATIVES FOR 2020-2021



TECHNOLOGY ROADMAPS WERE RESHAPED IN 2020

COVID-19 has changed the top technology priorities for 82% of Hospital Pharmacists. In an unprecedented year, new challenges added stress to the entire pharmacy workflow, exposing areas for operational improvements and reshaping technology roadmaps. Automated dispensing cabinets were most likely to become more important due to COVID-19, followed by perpetual inventory management software and IV prep tracking software.

For 37% of Hospital Pharmacists, COVID-19 has made it less likely that they will implement new technologies within the next 12 months. For 61%, the delays are due to limited budgets while another 43% cited limited staff hours.

For others, COVID-19 has had the opposite effect, with 25% reporting that the pandemic has made it more likely that they'll implement new technology within the next year.

82%

stated that COVID-19 has changed their top technology initiatives

25%

reported that COVID-19 has made it more likely they'll implement new tech in 2021

PHARMACIES PLAN TO REDUCE COSTS IN 2021 AS BUDGETS TIGHTEN

With budgets tightening due to COVID-19, 60% of Hospital Pharmacists have been given a cost savings goal. For 39% of those Pharmacists, their savings goal is as large as \$300,000. To generate cost savings, Pharmacists' top priorities are reducing drug spend, improving operational efficiency, and implementing new technology. While for some, tightening budgets have extended their technology roadmaps, others see the longer-term cost-saving benefits of new technology and are choosing to invest now in a more efficient future.

As Pharmacists work to secure budgets for implementing new technology, a focus on patient safety has proven to be the most effective approach for gaining internal approvals. This was true in our 2019 findings as well. While COVID-19 has caused difficult, unforeseen financial challenges, most Pharmacists are satisfied with how their budgets have been managed through the pandemic. Even as budgets are tightening, 60% of Hospital Pharmacists describe their budgets as being managed “very” or “extremely” effectively.

2021 COST SAVING INITIATIVES



A LACK OF INVENTORY VISIBILITY IS REDUCING OPERATIONAL EFFICIENCY

Many of the challenges facing Hospital Pharmacists, and the reasons that they're turning to technology for help, are related to inventory management and a general lack of full supply chain visibility. When visibility gaps exist, common occurrences such as drug shortages and drug recalls become even more time-consuming and costly.

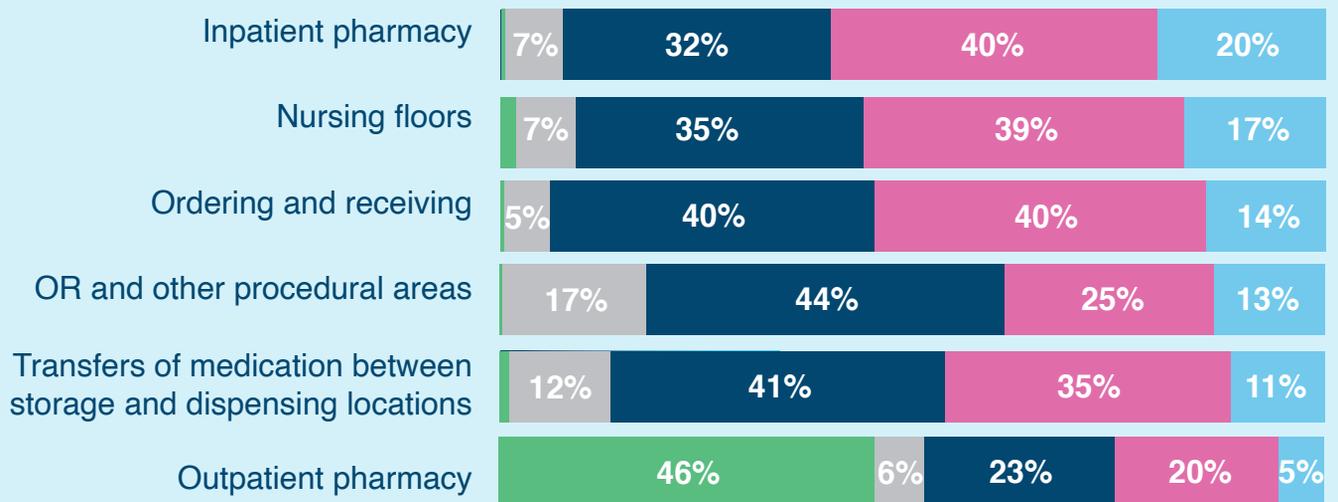
Hospital Pharmacists have the best view of their inventory while drugs are stored in the inpatient pharmacy, though still, only 20% would consider it "excellent." As drugs are being transferred between storage and dispensing locations, Pharmacists' visibility decreases significantly. When drugs reach operating rooms and other procedural areas, only 13% of Hospital Pharmacists describe their visibility as "excellent." These visibility variances by location highlight a lack of integration across systems throughout the medication ecosystem. In fact, 28% of Hospital Pharmacists consider their systems to be "not very" or "not at all" integrated. While new software solutions can be extremely effective at increasing operational efficiency, the key to unlocking comprehensive visibility lies in breaking down supply chain silos through integrated technologies.

28%

of Hospital Pharmacists consider their systems to be "not very" or "not at all" integrated



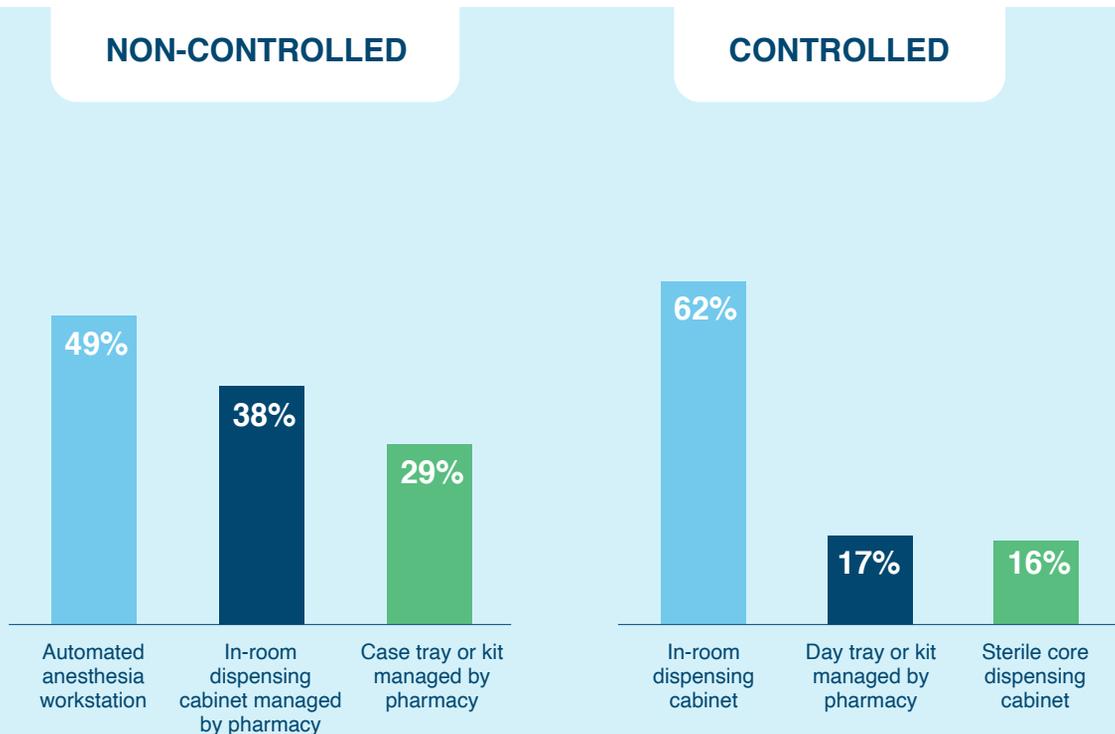
DRUG INVENTORY VISIBILITY



■ N/A
 ■ POOR
 ■ GOOD
 ■ VERY GOOD
 ■ EXCELLENT

AS MEDICATION MOVES TO OPERATING ROOMS, DISPENSE APPROACHES VARY

As medications are transferred to operating rooms, hospital pharmacies are using a variety of dispense approaches. For non-controlled medications going to the OR, 50% are using automated anesthesia workstations, while another 39% are using in-room dispensing cabinets that are managed by the pharmacy. For controlled medications, in-room dispensing cabinets are the most popular method by a significant margin. Overall, dispense approaches have changed very little since last year.



PHARMACISTS RECOGNIZE THE POWER OF NEW TECHNOLOGY TO BREAKDOWN SUPPLY CHAIN SILOS

In last year's report, the concept of Medication Intelligence emerged as a key theme in the research. Hospital Pharmacists shared pain points related to inventory management and expressed a strong desire for complete, drug item-level visibility.

This year, the same principle was even stronger in the findings, as the COVID-19 pandemic tested pharmacy systems, processes, and staff. Inefficiencies were exposed and pronounced as drug shortages and recalls increased, putting a strain on already limited staff. Pharmacy leaders are now looking not only at implementing standalone technology solutions but at using technology to break down silos in the drug supply chain.

When evaluating analytics software solutions to help with inventory management, 64% of Hospital Pharmacists consider full supply chain visibility a "very" or "extremely" important capability. If implemented, 76% expect it would be very helpful for their operations.

64%

of Hospital Pharmacists consider full supply chain visibility a "very" or "extremely" important capability



NEARLY HALF OF HOSPITALS ARE USING KIT AND TRAY INVENTORY MANAGEMENT

While for many Hospital Pharmacists, the idea of achieving Medication Intelligence feels like a future state, many of the necessary technology solutions already exist and have been widely adopted. 48% of hospital pharmacies are currently using kit and tray inventory management software. Among the available product offerings, Kit Check is used most often and is most likely to be implemented in the future. Consistent with last year's report, kit and tray systems are most prevalent in crash / code trays and least commonly used in ancillary areas.

CARE AREAS WHERE KIT & TRAY INVENTORY MANAGEMENT SYSTEM/SOFTWARE IS CURRENTLY BEING USED

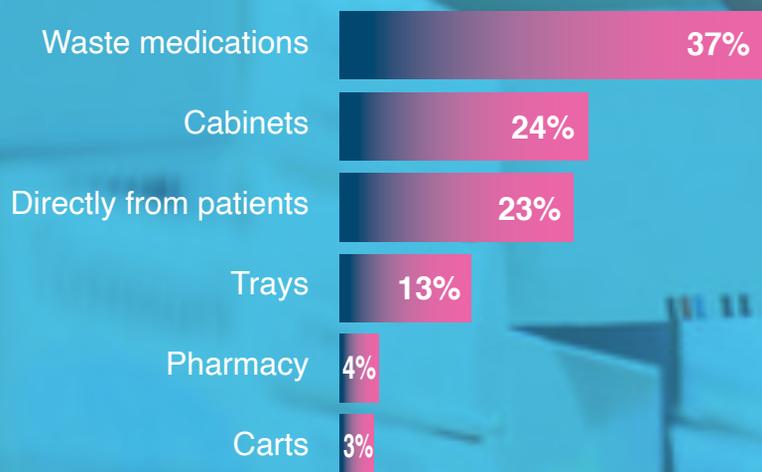


DRUG DIVERSIONS CONTINUE TO OCCUR IN AREAS OF LOW VISIBILITY

When areas of low visibility exist on a drug supply chain, the risk of diversions is high. 44% of Hospital Pharmacists have experienced a diversion event within the past 12 months and only 23% say it would be “very difficult” to divert opioids from their organization. Sadly, 24% are aware of a colleague who has diverted opioids and 10% have observed colleagues changing their behaviors to evade diversion prevention technology. Consistent with last year, waste medications remained the most common target for diversions, as 20% of pharmacies are still documenting waste on paper.

Drug diversions are not only a serious threat to patient and staff safety, but they also require valuable hours to prevent, detect, and resolve discrepancies. Across operating rooms, nursing floors, and stocking, most hospital pharmacy teams are spending up to 10 hours per week on discrepancies related to controlled substances. Manual investigation efforts remain the most common way that drug diversions are identified.

MOST COMMON TARGETS FOR DIVERSION





LEADERS ARE COMMITTED TO DIVERSION PREVENTION

With patient and staff safety as their top priorities, Hospital Pharmacists are focused on expanding their drug diversion prevention strategies. The most common approaches currently in place are physical security, diversion detection software, education, and 100% audits between EMR and waste documentation. 64% of hospital pharmacies have at least one full-time staff member dedicated to diversion monitoring and 48% have established a diversion task force. More than half of hospital pharmacies have a post diversion response plan in place.

TOP 5 DIVERSION PREVENTION STRATEGIES CURRENTLY IN PLACE

- 1 Physical security
- 2 Diversion detection software
- 3 Education
- 4 100% Audits between EMR and waste documentation
- 5 Multi-disciplinary task force

FOR MANY, DIVERSION PREVENTION EFFORTS WILL EXPAND IN 2021

Hospital Pharmacists take drug diversions very seriously and most are not satisfied with their current prevention tactics. Even during a time when budgets are tight and staff hours are limited, 37% of pharmacy leaders plan on investing more resources toward diversion prevention within the next 12 months. In fact, 25% reported that COVID-19 has increased the likelihood that they'll implement additional prevention approaches. More than half of Hospital Pharmacists are interested in bringing in outside resources to help manage their prevention program.

As Hospital Pharmacists build out their prevention roadmaps, efforts are most likely to expand next into education, diversion detection software, and 100% audits between EMR and waste. Despite the all-too-common occurrence of colleagues diverting, pharmacy leaders do not anticipate introducing random drug testing of personnel.



WITH PATIENT SAFETY IN MIND, PHARMACY LEADERS EMBRACE DIVERSION TRACKING SOFTWARE

Diversion detection software has been adopted by 32% of Hospital Pharmacists, while another 10% are actively planning its implementation. Patient safety is by far the most important reason for seeking a monitoring solution, with 65% of pharmacy leaders reporting it as their top motivation. For another 26%, regulatory compliance ranked as #1

When it comes to selecting a controlled substance monitoring solution, 86% of pharmacies are the primary decision-maker for their institution. As pharmacies evaluate different diversion monitoring offerings, their most important capabilities are consistent with last year's findings: ADC/EMR integration, proactive alerting, and investigation workflows.

32%

are using diversion
detection software

86%

of pharmacies are the
primary decision maker
for diversion monitoring

AS DSCSA 2023 REGULATIONS APPROACH, PHARMACISTS ARE CONCERNED ABOUT COMPLIANCE

With the DSCSA 2023 regulations one year closer, the ability to store pedigree information remains Hospital Pharmacists' top concern for the second consecutive year. After a challenging 2020, Pharmacists worry that they're now less compliant than they were in 2019. The largest gaps relative to the regulations exist with products obtained from secondary wholesalers.

BIGGEST GAPS RELATIVE TO 2023 DSCSA REGULATIONS



SUMMARY

Kit Check's Hospital Pharmacy Operations Report, now concluding its seventh year, remains an invaluable cornerstone of our operation. In order to gain a comprehensive, longitudinal understanding of the state of the industry, we aim to capture sentiment, expectations and circumstances that collectively reflect the state of pharmacy operations in more than 1,000 U.S. hospitals. The annual survey is selectively distributed to hospital pharmacy leaders and represents a wide variety of perspectives on trend forecasting, operational efficiency, inventory visibility, and system integration. Once we've collected results from participants, we release our findings on the top issues facing hospital pharmacists, helping build community and problem-solve together.

The 2020 survey questions were tailored to address current events (COVID-19), and the report sheds light on the state of the industry regarding the demographics of hospitals, diversion, GPO's, regulation & compliance, supply chain management, analytics, and more. We've discovered where priorities lie, and what will be falling by the wayside in 2021. In addition, the survey addresses Kit Check's latest innovations, including Bluesight Insights, a fully automated software tool that optimizes pharmacy purchasing and supply chain management.

As hospitals are projected to lose billions due to pandemic-related stressors, Bluesight Insights provides actionable insights into supply chains to optimize spending, maximize compliance, and enhance pharmacy management with real-time market insights.

ABOUT KIT CHECK™

Kit Check is the leading provider of automated medication tracking and diversion detection solutions for hospital pharmacies in the U.S., bringing visibility, simplicity, and predictability to the complex world of medication supply management. Our groundbreaking Medication Intelligence™ platforms provide item level visibility, workflow simplicity and actionable analytics, empowering stakeholders to deliver the right medicine to the right patient at the right time, every time.

To date, our more than 700 U.S. and Canadian hospital partners have tracked more than 140 million medications using Kit Check's RFID product. Bluesight™ for Controlled Substances software is currently in use in more than 250 hospitals including full health system implementations, with nearly 20 million cases tracked, and was ranked #1 in the Drug Diversion Monitoring category in the 2020 Best in KLAS report. More information about Kit Check and our software solutions can be found at kitcheck.com.

What's been clearer than ever to us is the immense benefit of Kit Check to its clients, as we continue to bring medication intelligence across systems and unify communities around the world.



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