The 7 Levels of Work in Hospital Pharmacy

And What To Do About Them

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# Table of Contents

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>Developing a New Model to Describe Hospital Pharmacy Work</td>
<td>4</td>
</tr>
<tr>
<td>Two Categories and Seven Levels of Work</td>
<td>7</td>
</tr>
<tr>
<td>The Top of License Work Requires Expertise</td>
<td>8</td>
</tr>
<tr>
<td>The Bottom of the List is Less Complex, Ripe for Automation</td>
<td>8-9</td>
</tr>
<tr>
<td>How to Use the 7 Levels of Hospital Pharmacy Work Model</td>
<td>9</td>
</tr>
<tr>
<td>The Impact of Kit Check When Automating Low Level Manual Tasks</td>
<td>10-11</td>
</tr>
<tr>
<td>Higher Efficiency without Lower Efficacy Tasks</td>
<td>11-13</td>
</tr>
<tr>
<td>About the Author</td>
<td>13</td>
</tr>
<tr>
<td>Other Resources from Kit Check</td>
<td>14</td>
</tr>
</tbody>
</table>
The 7 Levels of Work

Have you ever felt like you were being asked to do more with less? Most of your colleagues do. Hospital pharmacy leaders placed this as the number two challenge they faced in their response to the 2016 Hospital Pharmacy Operations Report survey, up from the third spot in 2015.

Drug shortage management took the top spot in 2015 and drug price spikes rose to number one in 2016. This isn’t surprising. We all know that managing drug supply disruption is complex and high profile. Right behind that topic, meeting all of the pharmacy operational imperatives is now a close second. Becker’s Hospital Review characterized the challenge this way in 2012:

“While the clinical side of the house focuses on gaining access to medical advances and newer, more effective drug treatments, the finance department is focused on, at best, maintaining the status quo in terms of pharmacy spending. It’s a double edged sword. New regulations and quality expectations are requiring that pharmacies allocate more resources to ensure that appropriate initiatives are in place that promote the highest level of patient care and safety. At the same time, the pharmacy represents a prime area of focus for improving cost efficiencies and benchmarks for appropriate reimbursement. Going forward, hospital pharmacies will have to improve operational practices to ensure staff time is used for the most optimal tasks.”

- Becker’s Hospital Review 2012

The article then went on to list several areas to target for cost improvement including converting paper to digital processes and implementing real-time medication tracking technologies to eliminate waste. Four years later and there is some progress on digitization and automation, but the pharmacy still faces many of the same challenges.
Developing a New Model to Describe Hospital Pharmacy Work

In 2014, I first proposed a new model for describing hospital pharmacy work. My motivation was to help our profession more clearly communicate with our healthcare colleagues and better prioritize our work. After more than 20 years working in hospital pharmacy and serving as a director in multiple systems, I have seen first-hand the many pitfalls we all face. In my role as a consultant and an executive for a technology vendor, I have repeatedly seen these situations play out in hundreds of hospital settings.

My experience and observation is that administrators don’t differentiate between the types of work that consume the time of hospital pharmacy staff. They seem to have a better understanding of the clinical activities of physicians, nurses, radiologists and even information technology staff than they do about pharmacy. As a result, requests for pharmacy budget cuts often seem fickle and devoid of thoughtful consideration. The edicts don’t account for the growing role of pharmacists in clinical care and heightened complexities around regulatory compliance and ensuring patient safety. The workload has increased far faster than the staff capacity. Are we destined to work in a profession where highly trained professionals are perpetually overworked and their contributions misunderstood?

I am an advocate for enabling pharmacists to work at the Top of License where professional judgment, knowledge and experience are most critical. The Pharmacy Advancement Initiative (PAI) formerly known as the Pharmacy Practice Model Initiative (PPMI) from ASHP
is designed to further this objective. For example, the consensus of the Pharmacy Practice Model Summit of 2011 included some specific guidance around operational and management practices:

- A1: There is opportunity to significantly advance the health and well-being of patients in hospitals and health systems by changing how pharmacists, pharmacy technicians, and technology resources are deployed
- A2: In the next 5-10 years, hospital and health systems will be under increasing pressure to cut operating costs
- A3: In the next 5-10 years, hospital and health system executives will require pharmacy department operations to be more efficient
- A4: Within the next few years, financial pressure on hospitals and health systems will force them to pursue significant changes in how their pharmacy resources are used.
- A6: In the next 5-10 years, the expectation of hospital and health system executives and medical staff for pharmacists to help ensure cost-effective use of medications will increase.
- C1: In most hospitals and health systems, improvements in technology will be required for pharmacy departments to fully achieve optimal deployment of pharmacist and pharmacy technology resources

Barriers to Achieving Optimal Pharmacy Practice Methods

- B6c: Lack of pharmacy staff resources
- B6d: Lack of qualified pharmacy technician staff
- B6e: Lack of automation
- B6f: Lack of technology connectivity
- B6i: State laws and regulations that require direct pharmacist supervision of medication distribution
Recommendations

B24b: Develop a plan to reallocate its resources to devote significantly more pharmacist time to drug therapy management services

B25a: Pharmacists must have oversight and responsibility for medication distribution

B25b: The pharmacist in frontline practice should not be limited to drug distribution and reactive order processing

B25d: Individual pharmacists must accept responsibility for both the clinical and distributive activities of the pharmacy department

These beliefs, barriers and recommendations cover a variety of issues. There is a focus on an increased role for clinical pharmacy, an expectation for greater operational efficiency and management financial accountably, and a recognition that several barriers will remain while current trends will make these goals more difficult to achieve. The clinical work requires more pharmacy staff time, but we all know there are also time consuming bottom of license activities that simply must be done. Hospital budget priorities rarely differentiate between these more mundane tasks and top of license activities. This needs to change. The focus on operational efficiency and the PAI objective number 3 address this directly,

“Identify which emerging technologies support your implementation of practice advancement as well as any emerging technologies that might help or hinder pharmacy practice advancement.”
Two Categories and Seven Levels of Work

There are two major categories of hospital pharmacy work: clinical and dispensing. This categorization is too broad for most people to grasp the nature of the activities. The new model includes seven levels of work based on the training required and the impact on clinical outcomes and operational necessity. The top four levels are clinical work and bottom three are dispensing tasks. The levels are presented in descending order of sophistication.

<table>
<thead>
<tr>
<th>Category</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical</td>
<td>1. Direct Patient Clinical Management – rounding, clinical decision support</td>
</tr>
<tr>
<td></td>
<td>2. Formulary Management</td>
</tr>
<tr>
<td></td>
<td>3. Computerized Medication Order Entry / Review</td>
</tr>
<tr>
<td></td>
<td>4. Drug Shortage Management</td>
</tr>
<tr>
<td>Dispensing</td>
<td>5. IV and Chemotherapy Dispensing / Compounding</td>
</tr>
<tr>
<td></td>
<td>6. Unit Dose Dispensing / Compounding</td>
</tr>
<tr>
<td></td>
<td>7. Pharmacy Kit / Tray and Floor stock Replenishment</td>
</tr>
</tbody>
</table>

Pharmacy leaders will recognize there are other management responsibilities that also must be tended to in every hospital. Scheduling, training and mentoring staff, organizing annual budgets, tracking expenditures, collaborating with colleagues around hospital initiatives and many more activities consume our time. However, those tend to be tasks that are not specific to the work of pharmacy. Every department must do them. In addition to those responsibilities, pharmacy must perform the seven levels of work to fulfill our professional duties.
Early in my career, pharmacists managed most of the dispensing tasks and there was less focus on clinical duties. That has changed. It is well documented that pharmacist interventions improve patient outcomes. That added more clinical workload on top of the manual dispensing tasks that must be completed each day.

More dispensing tasks have been delegated to pharmacy technicians to make room for clinical work. However, pharmacists still play a role in even the least sophisticated tasks such as pharmacy kit checking. Concerns about patient risk have resulted in guidelines from state boards of pharmacy and The Joint Commission that require pharmacist participation in these tasks. The question then arises whether these “due care” activities are more important that clinical pharmacy interventions.

Drug regimens are more numerous and complex than ever and physicians typically must contend with existing patient treatment plans whenever prescribing a new treatment specific to their specialty. Few of our clinician colleagues can keep up. Clinical pharmacy is about both reducing patient risk and improving treatment efficacy. Our budget priorities must reflect the patient imperative to maintain clinical work capacity, while considering ways to drive efficiency in dispensing activities.

Thankfully, pharmacy technicians increasingly manage less complex tasks such as unit dose dispensing and
pharmacy kit restocking. Technicians are well qualified in many instances to execute the core processes for these tasks and pharmacists need only to focus on verification. However, because of the manual nature of the work, many of the verification processes take nearly as much time as core work done by technicians.

It is important to note that these processes are both manual and repetitive and historically the least likely to be automated. That doesn’t make sense. A low level of task sophistication combined with a highly repetitive process suggests strong suitability for automation. This is particularly true when we consider the role that pharmacists play in checking technician work. Automating these low level tasks delivers an immediate benefit.

How to Use the 7 Levels of Hospital Pharmacy Work Model

The obvious question is how to use this new model most effectively. First, simply presenting it to hospital colleagues will demystify the work of pharmacy. The scope of pharmacy activity and necessity of our core work can be understood in full context. Whether these activities exist to support direct patient care, regulatory compliance or good management principles, it will be clear that there is no particular work area that is superfluous today.

Second, this model can then be used to go deeper into explaining the specific tasks, knowledge requirements, policies and procedures that govern each level of work. It also provides a model to point out how regulation, new hospital policy or increased clinical duties impact staff capacity requirements. As these requirements continue to grow, pharmacy leaders can present trade-off opportunities to administrators to increase staff or fund new automation initiatives that can offset workloads. The model is designed to use education as the method for bringing about a common understanding of the challenges and available solutions.
The Impact of Kit Check When Automating Manual Tasks

Kit Check was designed to directly address one of these challenges. We automate the lowest task level: pharmacy kit restocking. Because it is highly manual and repetitive, automation allows us to reduce the time required of both pharmacy technicians and pharmacists. This frees up pharmacists to spend more time on top of license clinical work, while creating cost-saving opportunities by eliminating low-level tasks.

For example, hospitals report capturing 72-96% time savings when using Kit Check. A study published in a peer-review pharmacy journal confirmed these findings in its evaluation of three hospitals using Kit Check. The average time savings for pharmacy kit restocking was recorded at 80.4%. That translated into an expected cost saving of $4.20 to $9.30 per kit. The University of Vermont Medical Center reported saving 14 hours per day by automating this task. That is over 5,000 hours annually and the equivalent of 2.5 full-time equivalent employees that were reallocated to clinical duties. What would you do with that extra time?

Automation also delivers higher accuracy than human processing. Many Kit Check users have conducted audits of their pharmacy kit stocking accuracy prior to implementing our solution. The error rates were far higher than most would consider acceptable in a modern healthcare setting. Error rates ranged from a low of 5% to a high that exceeded 60%. It is hard to imagine that hospitals are sending out incorrect or expired medications in as many as two out of three pharmacy kits. No one
considers that tolerable. However, even an error rate of one in twenty kits is outside the bounds of what most state boards of pharmacy would deem acceptable.

We have seen numerous examples of hospitals that reach out to Kit Check because a clinician or regulator discovered an error. Geoff Cox, Director of Pharmacy at MedStar Georgetown Hospital, discussed his experience in a September 2016 video interview. A clinician complained of an error during a hospital staff meeting and it led Dr. Cox to immediately look into automation solutions.

User data also show that Kit Check in particular fixes this pernicious problem of human error. Brigham & Women’s Hospital in Boston reported in 2015 that it had tracked over 240,000 pharmacy kit medications without a single error using Kit Check. Robert Eastin, Director of Pharmacy at Scripps Health commented at an ASHP presentation in June 2016 how his error rate fell to zero after implementing Kit Check.

Higher Efficiency with Higher Effectiveness

There is a hypothesis that pharmacy is in part to blame for this predicament. No, we are not responsible for the Medicare cuts or regulatory changes that have put more cost and manpower pressure on us all. However, as a profession we have promoted the role of the pharmacy in improving clinical outcomes. The results are well documented and we have largely been successful in convincing our healthcare colleagues through research and practice that clinical pharmacy improves patient outcomes.
The 2016 Hospital Pharmacy Operations Report survey showed that 65% of pharmacy leaders claim to have been very successful or successful in increasing pharmacy’s clinical role and 96% report being at least somewhat successful. This triumph has added clinical workload to hospital pharmacies while budgets and staffing have remained largely flat. At the same time, dispensing tasks have not subsided and in many cases the reporting requirements have increased. This has created a staffing crunch that impacts cost, employee morale and puts patient health at risk.

It doesn’t appear that budgets or staffing levels are likely to increase sufficiently in the near-term to offset these changes. However, there are many operational dispensing tasks that are ripe for automation. These include pharmacy kit restocking and checking, IV compounding and outsourcing other compounding tasks. The pharmacy is saddled with many legacy manual processes. Automating these processes and moving toward more digital solutions can help rebalance the seven levels of work in the hospital pharmacy and provide more time for top of license clinical work.
As pharmacists, we can extend our concept of efficacy beyond medications. We also can discuss the effectiveness of our department on patient outcomes. Delivering those outcomes depends upon having sufficient capacity to devote to clinical work. In this regard, protecting pharmacist positions is necessary but insufficient. Moves by administrators to cut pharmacy technicians merely shifts dispensing tasks to more highly educated pharmacists. This raises processing costs, while displacing necessary clinical work.

The answer lies in automation. We can achieve higher efficiency without sacrificing effectiveness by automating repetitive manual tasks. When making this argument to your administrator during the next budget cycle, consider showing them the new model of 7 Levels of Pharmacy Work and suggest automation can drive efficiency without sacrificing quality of care.

About the Author

Doug Zurawski spent the first ten years of his career on the provider-side of healthcare serving in various health-system pharmacy leadership positions in Iowa and Michigan. The next ten years of his career were spent in sales and marketing, sales management, and product development on the healthcare pharmacy technology division of McKesson and for ForHealth Technologies. In 2013, Dr. Zurawski joined the Kit Check team and now serves as Executive Vice President of Sales. He earned his Pharm.D. and has served as an educator and adjunct faculty member at the University of Michigan College of Pharmacy throughout his career.
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Hospital Pharmacy Operations Report 2015

Kit Support for 2016 JCAHO Standards
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Salinas Valley Case Study
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St. Rita's Medical Center Case Study
View Now

7 Levels of Work in Hospital Pharmacy
View Now
Kit Check’s focus is helping hospital pharmacists improve operational efficiency, patient safety and visibility of medications throughout the hospital while enabling more time to focus on clinical care.

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