

Risks Inherent in Pharmacists' Workloads Earn Attention of Legislators

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States Strike Back Against Extended Work Hours

Long hours and lack of breaks are accepted facets of working in community pharmacies. However, there is growing concern that the lack of limits on pharmacists' workload may increase the risk for patient harm.



In early February, representative Mary Flowers of the Illinois General Assembly put forth bill HB2392, which would require a pharmacy technician to work alongside a pharmacist at all times, limit prescription fills to 10 per hour, mandate nonworking breaks, and cap pharmacist working hours at 8 hours per day.^[1]

The bill was prompted in response to a *Chicago Tribune* investigation in which reporters brought in prescriptions to be filled that would cause severe adverse effects if taken together. Of the 255 pharmacies visited, 52% failed to warn the patient of the potential adverse effects. The report suggested that speed of checking prescriptions may be a factor in missed counseling events.^[2]

Although Illinois is the first state to propose such specific legislation, several others have rules that allow pharmacists to take a 30-minute break without closing the pharmacy, provided that they check any prescriptions before leaving and place a sign in a prominent place to alert customers of the pharmacist's absence. Few states specify a break beyond 30 minutes for lunch, and none actually mandate breaks.^[3-5]

Some states have specific regulations for the number of hours pharmacists can work. In West Virginia, pharmacists can work no more than 12 hours a day and must have 8 hours off between each period of work, although there are exceptions in documented emergency situations. West Virginia also specifies that a pharmacy technician must be on duty with the pharmacist if an average of 15 prescriptions per hour is filled.^[6] In Virginia, pharmacists cannot be required to work more than 12 hours in a work day, and must have 6 hours off between shifts.^[3] Minnesota is proposing restricting pharmacists to no more than 12 work hours per day, and allows a restroom break every 4 hours for staff working in the pharmacy.^[7]

There are some major differences between the state laws currently in place that regulate pharmacist hours and bill HB2392 being proposed in Illinois. The Illinois bill mandates that pharmacists must take a 30-minute break and two 15-minute breaks in which there is no work; work that does occur during the break requires paying the pharmacist three times their hourly rate. The bill would also limit pharmacists to working 8 hours per day and includes language for enforcing these mandates and penalties for noncompliance.^[8]

Behind the Evidence

Few studies have researched whether pharmacists' workload increases the risk for medication errors.

Malone and colleagues^[9] evaluated pharmacist and pharmacy factors and the number of potential drug/drug interactions (DDI) of medications dispensed at pharmacies in 18 US metropolitan areas. Pharmacists responded to survey questions about the number of hours they worked and the particulars of their working environment. The risk of dispensing medication with a DDI

increased by 3% with each additional prescription filled per hour. Using a telephone system for having new prescriptions and refills called in by patients also increased the risk of dispensing a medication with a DDI. Potential DDIs per prescription were significantly decreased in low-volume compared with high-volume pharmacies (0.12% vs 9.99%; $P < .001$).

Becker and colleagues^[10] reviewed determinants that may be related to dispensing medications with DDIs in community pharmacies. Determinants were separated into four groups: relationship with provider, medication surveillance program, pharmacist and pharmacist organization, and workload. It was determined that drug regimen complexity, number of prescribers, and higher number of prescriptions filled increased the likelihood of dispensing medications with DDIs.

These studies' results are similar to those found among other healthcare professionals, in which an increase in errors corresponds with increasing workload.^[11,12] The Accreditation Council for Graduate Medical Education's current guidelines include limits on the number of hours worked per week and in a work shift.^[13] However, a recent study of surgical residents found that having flexible schedules with no mandatory time off between shifts or shift hour limits did not affect patient safety or increase errors compared with standard procedure.^[14] This discrepancy indicates that more research is needed to determine whether limiting pharmacists' hours would increase patient safety.

Determining the exact reason for a medication error is difficult, because it is often multifactorial.

Several aspects of work can influence the numbers of errors among pharmacists and other healthcare professionals. Many are interrupted multiple times throughout the day and are often multitasking, which can decrease concentration. Although most pharmacies use technology to alert for potential DDIs, these alerts are often overridden and not discussed with the patient.^[15] Determining the exact reason for a medication error is difficult, because it is often multifactorial.

Community pharmacists are under great pressure to dispense medications quickly and accurately, all while answering questions from patients, physicians, and insurance companies. Both the *Chicago Tribune* investigation and the study by Malone and colleagues^[9] indicate that some safety steps may be skipped, possibly owing to the number of hours worked. Whether mandating hour limits and breaks for pharmacists will help prevent medication errors is yet to be determined.

Currently, the Illinois General Assembly is in recess, and bill HB2392 has been referred to the Rules Committee as of March 31, 2017.^[16]

If this bill passes, it will be interesting to see whether mandatory breaks and limited hours for pharmacists will decrease workload burden and make dispensing medication safer. If new research becomes available suggesting that limiting certain aspects of pharmacists' workload improves patient safety, this could encourage other states to follow Illinois's progressive regulation.

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