



Is Technology a Career Threat to Pharmacists?

by Bill G. Felkey

While contemplating what to write about for my first column in 2016, I received an email from pharmacy industry veteran Bruce Kneeland with a link to an article he thought would interest me. It referenced former mainframe computer industry veteran Kim Komando, who now has a radio talk show program with more than 6.5 million listeners. She believes that robotics and other technologies will severely impact a handful of careers in a negative manner this year. Pharmacists were listed as No. 4 of the five on which she focused. Before I dig into her assertions about the impact of technology on current and future careers in pharmacy, I'll give you a list of the other four she mentioned.

PARALEGALS

Komando listed paralegals as No. 1 on the list of threatened careers. With all of the lawyer shows on television, you can't help but notice how large numbers of associates and paralegals are frequently tasked with searching both the laws and case histories to find that nugget of precedence that can make or break a litigation process. The breakthroughs in artificial intelligence and digitization of the entire history of legal documentation makes it possible for technology to search and present information that an entire legal team would address in previous times. Google employs keyword search strategies, but a profession-specific tuning of artificial intelligence can uncover nuances and discriminate between specific legal arguments that go beyond search engines.

STORE CUSTOMER SERVICE CLERKS

Second on the list were store customer service clerks. We have all seen self-checkout lanes in groceries and other retail businesses. Some of us have utilized smartcarts and iPad kiosks that answer our questions, demonstrate "how-to's" by video, and send us commercial messages on our personal smartphones when we enter an establishment. Lowe's employs a wandering robot for customer service,

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although I haven't seen this one in person. You may be interested to know that I was involved in an experiment at Eckerd pharmacies where we gave bagged prescriptions to patients to pay for up front like any other merchandise. We had a system in place where the prescription was tracked, and if the barcode was not scanned and subsequent payment made, a follow-up call requested authorization to charge for the discrepancy over the phone. Only a very small number of patients attempted to shoplift the dispensed medicines.

JOURNALISTS

Emerging technology also looms over journalists, according to Komando. Have you ever been busy and tuned into a real-time game box score website that gave play-by-play updates in text? Newspapers and other print and electronic media outlets are now able to employ software that composes summaries from these stats to include quotes gathered from the closed captioning text that were made before, during, and after sporting events. Robojournalists are capable of producing about 1,000 articles a month. I think this number is impressive when I consider the research and noodling that I have to do to produce monthly columns in four different journals. I have always written that technology can

either enhance or replace human functions. The functions that are most vulnerable are often repetitive and tedious. I enjoy writing and would not like to be replaced by software, but I realize that many categories of journalism don't require much human creativity and judgment in content generation.

DRIVERS

For the moment, I'm going to skip over pharmacy and jump to perhaps the broadest career category: drivers. We're definitely going to see self-driving cars in our very near future. We're already seeing self-stopping technology and blind-spot technology being incorporated on current production models. Some believe that these self-driving vehicles will be available within four years from mainstream automobile companies. We are already seeing how Uber has impacted the taxi industry in towns and cities whose regulations allow them to operate. Google and other producers are going beyond vehicles that require an occupant to be present in the vehicle. Think about how the delivery industry could be impacted by this technology.

PHARMACY

Finally, we get to pharmacists. Komando described it as "Serving Up Just What the Doctor Ordered." She noted that

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a PillPick robot at a University of California San Francisco hospital facility has dispensed 350,000 doses (ranging from oral solids to IVs) without a single error. It was obvious that Komando was not aware of the level of dispensing robots already being employed in both retail and acute care facilities nationwide. Of course, pharmacy technicians are more impacted by this technology than pharmacists are. Every health care administrator and provider in the process stated that the technology was there to free pharmacists from the mechanical burden of dispensing, allowing higher-level cognitive work to be done on behalf of the patient. I am relieved to report that dispensing by machines that can be both faster and more accurate is still how robotics are being tasked. Given that I have just delivered some pretty good news about the future of pharmacy, I can't help but ask how you can better "technology proof" the future of your profession. Can you imagine your knowledge being utilized in multidisciplinary healthcare, where technology is used in a way where your training and problem-solving skills make you the best team member to employ? Can your entrepreneurial side come up with solutions using emerging technologies that will positively impact patient care outcomes between episodes of care delivered by health care providers? Please let me know if you have questions or comments regarding this topic. You can reach me by email at felkebg@auburn.edu to continue the conversation. ■

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