Medication Errors in Human Medicine

Medication errors—any errors that occur in the medication process (ie, ordering, transcribing, dispensing, administering, and monitoring)—are more common in acute care hospitals but also occur in the outpatient setting. Some studies estimate that about 15% to 21% of outpatient drug prescriptions contain at least 1 prescribing error.

- The Institute of Medicine (IOM) estimates that there are more than 1.5 million preventable adverse drug events in the US annually.

E-PRESCRIBING—THE PAST, PRESENT, AND FUTURE

The Push for E-Prescribing in Human Medicine

In response to this growing problem and staggering costs arising from medication errors, the Centers for Medicare & Medicaid Services included e-prescribing in the Medicare Modernization Act (MMA) of 2003. This Act along with the IOM 2006 report on increased patient safety seen with e-prescribing brought it to the forefront of public and professional attention. Thus e-prescribing became a major component in the push for electronic medical [health] records (EMR or EHR) in human healthcare. In the US, e-prescribing increased by 40% from 2008 through 2012, with rates ranging from 28% to 70% by state.
E-Rx Becomes State Law
The success of e-prescribing has been recently highlighted when a few states adopted e-prescribing as law.

- New York State required by law that all prescriptions—including prescriptions for controlled substances and with certain limited exceptions—be electronically transmitted as of March 27, 2016.
- Maine followed New York in April 2016 by requiring that all controlled substances be electronically prescribed.
- Minnesota also implemented an e-prescribing requirement on January 1, 2011, but unlike in New York State, there are no penalties for prescribers who do not adhere to the rule.

E-Prescribing in Veterinary Medicine
*Why does veterinary e-prescribing lag so far behind human medicine?*
Despite the ever-increasing adoption and success of e-prescribing in human healthcare, veterinary medicine is having trouble bringing e-prescribing into practice. The primary reason for this is that veterinarians are currently ineligible to receive National Provider Identifier (NPI) numbers that are reserved for human prescriptions. NPIs are a standard identification number meant to simplify the administration and transmission of human health information including prescriptions. NPIs do not cover prescription care for animals, hence an essential component that has streamlined the human prescribing system is not yet completely developed for veterinary practice.

E-Rx: Which Number to Use?
Often pharmacists will ask both doctors and veterinarians for NPI and/or DEA numbers so they can verify and track all prescriptions. The DEA emphasizes that their registration numbers are for transactions involving controlled substances only, and the use of DEA numbers for other medications only weakens the system. Many pharmacies/prescription processors are unaware that NPI registrations are not required of veterinarians. Their requests of veterinarians to provide NPI numbers before filling animal prescriptions often leads to unnecessary delays and inconvenience to the pet owner and the veterinary office staff.

After repeated inquiries on behalf of veterinary prescribers by the AVMA, the NCPDP now directs pharmacies and third-party processors to accept veterinarians’ state-issued license numbers for non-controlled agents.

The American Veterinary Medical Association (AVMA), the National Council for Prescription Drug Programs (NCPDP), the Electronic Prescribing Best Practices Task Group, and other institutions are working together so that future e-prescribing systems will incorporate the needs of veterinary practices.
Demand for E-Prescribing in Veterinary Practice
As in human healthcare practice, e-prescribing can confer the same benefits in the veterinary practice including:

- Better medication safety
- Improved management of medication costs
- Enhanced prescribing speed, accuracy, and drug and patient information storage
- Improved client convenience and compliance

In addition, increased practice efficiency and associated cost savings will be seen, particularly from reduced staff time spent on phone calls and faxes to and from the pharmacy to clarify orders, discuss errors, and renew or authorize prescriptions.

VETPRESCRIBER OFFERS A DIGITAL PRESCRIBING SOLUTION
Diamondback Drugs, the nation’s leading veterinary compounding pharmacy, has partnered with VetPrescriber and developed a powerful new digital prescribing solution for veterinarians.

Time and Money Spent Ordering and Follow-Up: Without An E-Prescribing Portal
In 2015, the Veterinary Hospital Managers Association (VHMA) published reports on compensation and benefits for associate veterinarians and for non-DVM staff. The national average cost per minute of all hospital staff was $0.43/minute; average pay rates for key veterinary personnel are shown in Table 1.

Table 1. Average Pay to Employees Per Minute 2015

<table>
<thead>
<tr>
<th>STAFF POSITION</th>
<th>HOURLY PAY ($)</th>
<th>PAY/MINUTE ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veterinarian</td>
<td>47.22</td>
<td>0.79</td>
</tr>
<tr>
<td>Veterinary Technician</td>
<td>16.33</td>
<td>0.27</td>
</tr>
<tr>
<td>Vet + Tech Combined</td>
<td>31.78</td>
<td>0.53</td>
</tr>
<tr>
<td>Practice Manager</td>
<td>23.87</td>
<td>0.43</td>
</tr>
<tr>
<td>Client Care Rep (Receptionist)</td>
<td>13.00</td>
<td>0.22</td>
</tr>
</tbody>
</table>
Results From an Independent Survey

An independent survey of veterinary prescribers was recently conducted by the VetVine® Specialty Consulting Service® (administered by PetsVetSpace®, LLC) and funded by Diamondback Drugs in partnership with VetPrescriber. Veterinary professionals working in the 150 hospitals currently using VetPrescriber were invited to participate in this survey, which yielded a 41% response rate. Respondents indicated that the primary responsibility for submitting prescriptions (whether by phone or using the VetPrescriber) falls on the technicians, followed by the veterinarians, typically the most expensive employees in the practice. The average time spent ordering prescriptions via telephone is shown in Figure 1.

![Figure 1. Time Spent Ordering Prescriptions](image)

Notably, Respondents reported that in addition to calling in prescriptions, they typically spend an additional amount of time (12 minutes/day on average) communicating with clients—giving updates or answering questions on prescription status or other prescription related questions (Figure 2).

![Figure 2. An Additional 12 Minutes/Day (average) Spent With Clients Updating or Answering Questions About the Rx](image)

*The VetVine® Specialty Consulting Service (VSCS) is a network of board certified veterinary specialists and other industry experts.*
Cost Savings With VetPrescriber

Data from the VetPrescriber-sponsored independent survey show that the portal is cutting average prescribing time in half from 6 minutes to 3 minutes (Figure 3) and decreased time spent with clients on prescription submission and shipping status updates (Figure 2). “Overall, the average cost in staff time to call in a prescription was $2.58 and to submit a prescription with VetPrescriber was $1.29. It’s important to remember that this 50% reduction reflects money saved on performing a non-revenue-generating task,” commented VetVine® Practice Management consultant Sandy Walsh, RVT, CVPM. “As an RVT, CVPM consultant, my role is to help practices reach a higher level of efficiency and find ways to cut unnecessary costs. Time is money and anything we can do to reduce the amount of time spent on non-revenue-generating functions is in the best interest of the hospital,” said Walsh.

Figure 3. VetPrescriber Cut Average Prescribing Time in Half

The VetPrescriber portal substantially decreased the time spent submitting prescriptions to the pharmacy.

- 48% 3 to 4 minutes
- 42% 1 to 2 minutes
- 10% > 4 minutes

Figure 4. Cost Savings of Time Spent Communicating

Costs saved in staff time related to communicating to clients about prescription status

<table>
<thead>
<tr>
<th>Total Costs Saved *</th>
<th>Per Month (range)</th>
<th>Per Year (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$65</td>
<td>$297</td>
</tr>
<tr>
<td></td>
<td>$780</td>
<td>$3,564</td>
</tr>
</tbody>
</table>

*Total savings of money may vary based on the number of prescriptions submitted per month and employee hourly pay rate.
The greatest time and cost savings using VetPrescriber reported by the survey was the reduction in time spent communicating with clients after submitting the prescription. The costs saved ranged from an estimated $0.43 to $25.80 per day† in staff time related to communicating to clients about prescription status.

According to data from VetPrescriber, veterinary practices submit between 10 to 150 prescriptions a month. This translates into potential practice owner savings of $65 to $297 monthly using VetPrescriber versus telephone for submitting prescriptions—that is an average potential annual savings of $780 to $3,564 in non-revenue-generating employee costs! †

"Not only is money saved, but the time reclaimed by using e-prescribing can be redirected toward focused patient care or to other activities such as record review to ensure that fees are captured for services provided—all of which are revenue-generating activities for the practice," says VetVine® CEO and Chief Visionary Officer Sheri Berger, DVM, DACVO.

The use of the VetPrescriber portal has increased the rate of prescribing compounded medications by about 25%, according to survey Respondents. Veterinary compounding tailors the specific medication requirements to the patient so that they receive the most accurate drug mixture, formulation, and dose required to help improve health.

E-prescribing in veterinary medicine with VetPrescriber is showing real-world benefits for the practitioner, for the practice (time/cost savings and improved efficiency), and for the veterinary patient (maximizing provided healthcare). Future versions of the software program include a pet owners’ portal where they will submit prescription refill requests and payment, manage communications preferences (automated notifications and refill reminders), and more.

†Total savings of time and money may vary based on the number of prescriptions submitted per month and employee hourly pay rate.
WHY CHOOSE VETPRESCRIBER?

Veterinary care is about to undergo an enormous change with the rollout of e-prescribing, and e-prescribing will only be as good as the companies that are ready to fully utilize it. VetPrescriber is ready to maximize on the gains in efficiency, convenience, accuracy, and quality of veterinary care through its affiliation with a leading national compounding veterinary pharmacy.

It Saves Money and is Free to Use
VetPrescriber does not charge for ordering or refilling prescriptions and it offers free shipping to clinics. As seen in human medicine e-prescribing helps to save time and control costs at all steps in the prescribing process.

Easy Access and Support
VetPrescriber offers both veterinarians and pet owners access to online prescribing, pharmacist support, and price quotes for meds—electronic access 24/7/365 for your convenience and the health of the pet.

Uses Latest Technologies
The VetPrescriber uses the latest e-prescribing technologies and its portal is not only accessible from your desktop but also from your smartphone and tablet. Its mobile-friendly design and programming protocols can sync and/or work with their practitioner customers’ client database and software systems. VetPrescriber has the tools to ensure accuracy, efficiency, and digital recording keeping for the formulation, delivery, and administration of your patient’s and pet’s medications.

Automated Communication
Veterinarians and their staff will no longer wait on hold with the pharmacy since all communications regarding prescribed drugs and care instructions are automated among pet owners, veterinarians, and the pharmacy.

Tracking Disease States in Patients
VetPrescriber system can track diseases, allergies, and the overall condition of the animals under care so that the veterinary office, pharmacy and pet owner are on the same page and working toward the same desired outcome.
Sources

American Veterinary Medical Association (AVMA). National Provider Identifier numbers not for veterinarians. September 1, 2013.
https://www.avma.org/News/JAVMANews/Pages/130901v.aspx


