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# Electronic Medication Management Systems in Long-term Care and Beyond

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The move by Medicare and other payers toward pay-for-performance systems can improve outcomes for patients and increase financial returns for providers. In long-term care (LTC), special issues, such as accessing medications through Medicare Part D and requirements of the State Operations Manual (SOM), make efficient and effective management of medications essential. Electronic medication management systems can provide more reliable data on what is being measured and paid for.

The Institute of Medicine's (IOM's) 2006 *Preventing Medication Errors* reported that 800,000 medication errors occur in LTC.<sup>1</sup> Many of these errors could be prevented through use of electronic medication management systems. The failures include<sup>2</sup>:

- Incomplete information about LTC residents
- Unclear communications regarding drug orders
- Lack of independent checks before dispensing or administering medications
- Lack of computerized warnings of interactions, allergies, or dosages
- Drug storage problems (look-alike and sound-alike drugs)

- Deficient staff education

## Real-life Applications

In response to the IOM report, NewCourtland Elder Services set out to implement a full electronic medication management system throughout its network of LTC facilities. NewCourtland Elder Services is comprised of 6 nursing homes, housing options, and programs in Pennsylvania.

The system's electronic medication management system is being developed in partnership with Millennium Pharmacy Systems, a Pennsylvania company. The system was developed by nurses using proprietary software, bar-coded prescription packaging, and hand-

held bar-code scanning devices.

This type of system is critical in LTC because of issues such as Medicare Part D and the SOM. Medicare Part D is especially problematic in LTC because prescription plans have an incentive to restrict access to medications. This presents a particular problem for LTC because, under their Conditions of Participation, facilities have a responsibility to ensure that all medications needed for residents are provided in a timely manner. As a result, if LTC facilities are unable to manage the Medicare Part D benefit for their residents, they are forced to cover the cost of medications not covered by the plan. Electronic medication management systems can help prescribers recognize at the time of prescribing whether medications are covered by Medicare Part D.

Another issue specific to LTC is the SOM. Recent revisions to the SOM have focused on reducing the use of psychotropic medications through mandatory gradual dose reductions. These dose reductions can be more effectively managed

through use of an electronic medication management system.

The benefits of an electronic medication management system in LTC include the following:

- Elimination of handwriting and other communication issues
- Prospective drug regimen review
- Coordination with Medicare Part D formulary requirements
- Bar coding of medications
- Electronic completion of a medication administration record (e-MAR)
- Automated processing of monthly physician orders

### Applications Beyond LTC

Frail elderly patients also live outside the nursing home, which is why these same systems will have application beyond LTC, especially as the Centers for Medicare & Medicaid Services (CMS) moves to apply the same requirements under Medicare Part D and the SOM to nursing home-eligible seniors without regard to where they live. In a move to apply regulations and benefits to senior *needs* instead of *location of care*, CMS is developing a system of payment and benefits that “follows” the patient. This move will increase the need for electronic medication management systems in caring for all frail seniors without regard to where they live. The electronic medication management system of NewCourtland Elder Services and Millennium Pharmacy Systems is poised to face this challenge.

These systems show promise for reducing the number of drug-related medication errors and improving medication access. Studies continuously indicate that paper-based prescribing is associ-

## LTC facilities have a responsibility to ensure that all medications needed for residents are provided in a timely manner.

ated with high error rates. Electronic prescribing is safer because it eliminates problems with handwriting legibility and, when combined with decision-support tools, automatically alerts prescribers to possible interactions, allergies, and other potential problems. While the IOM committee acknowledged that significant regulatory issues and problems with automated alerts still need to be worked out, it indicated that by 2008 all healthcare providers should have plans in place to write prescriptions electronically.

By 2010 all providers should be using E-prescribing systems, and all pharmacies should be able to receive prescriptions electronically. The Department of Health and Human Services (DHHS) appears ready to push the implementation of health information technology (HIT) systems for ordering, administering, and monitoring drugs—the problem and solution seem clear. Companies like NewCourtland and Millennium are leading the industry in implementing electronic medication management systems; others need to follow suit to make these systems a reality on a wide scale. *MPM*

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### References

1. Institute of Medicine. *Preventing Medication Errors. Quality Chasm Series*. Washington, DC: Institute of Medicine; 2006.
2. Grissinger M. Medication errors in long-term care. *Consult Pharm*. 2007;22(7):544-564.

## PROVIDER ACTION

### Impact to You

The use of electronic medication management systems can improve not only the quality of care rendered but also the profitability of one's practice. Legislation just passed provides positive Medicare payment incentives of up to 2% for practitioners who use qualified E-prescribing systems in 2009 through 2013, and a reduction in payments of up to 2% to providers who fail to E-prescribe by 2012.

### What You Need to Know

The Institute of Medicine's 2006 *Preventing Medication Errors* reported that 800,000 medication errors occur each year in LTC settings. Many errors could be prevented through the use of electronic medication management systems.

### What You Need to Do

Practices should investigate implementation of electronic medication management systems that apply to not just LTC, but also to outpatient settings.