

The Importance of Selecting a Specialised Controlled Drug Management Solution for Ambulance Services

Ensuring Safety, Compliance and Efficiency in Critical Care

In this White Paper, John Elkerton (BPharm BSc) discusses the importance of selecting specialised electronic Controlled Drug Registers to support safe management of Controlled Drugs (CDs) in an ambulance setting.

Introduction

Ambulance services operate in highly dynamic and time-sensitive environments, where every decision can significantly impact patient outcomes. One of the critical aspects of these operations is the management of controlled drugs. This is crucial not only for ensuring the safety and well-being of patients but also for maintaining regulatory compliance and operational efficiency.

There is variation in practice both in contrast to hospital, residential care and pharmacy environments, and between paramedic services in how they choose to manage controlled drugs.

This white paper explores the importance of selecting a controlled drug management solution tailored specifically for ambulance services.

The Role of Controlled Drugs in Ambulance Services

Controlled drugs, including analgesics, sedatives, and other emergency medications, enable paramedics to provide immediate and often life-saving treatment to patients in critical conditions. However, their use necessitates stringent management protocols to prevent misuse, abuse, and errors.

Past management revolved around paper registers to document the receipt, withdrawal and fating of controlled drugs at the point of storage.

Electronic solutions move beyond this to provide more efficient management across all aspects of management. This includes supply, on-road activities, audit, and incident management.

In selecting an electronic controlled drug solution, it is essential to consider this wider management across all activities rather than only as a safe register.

Ensuring Patient Safety

The safe use of medicines is paramount in any healthcare setting, and ambulance services are no exception. The use of controlled drugs must be managed to prevent dosing errors, ensure the correct medication is administered, and safeguard against adverse reactions. A robust controlled drug management solution provides paramedics with clear information about each

medication administered including any wastage and allows increased time to focus on patient safety rather than paperwork.

Maintaining Regulatory Compliance

Ambulance services must comply with various laws and regulations governing the use of controlled substances. These regulations are designed to prevent drug diversion and ensure accountability at every stage of drug handling, from procurement to administration and disposal. A specialised controlled drug management system ensures that all regulatory requirements are met, with features such as closed loop tracking, incident management, audit trails, and alerts for expired or recalled medications.

Enhancing Operational Efficiency

Operational efficiency is critical for ambulance services, which must respond swiftly and effectively to emergencies. A well-designed controlled drug management solution streamlines inventory management, reduces administrative burdens, and ensures that medications are readily available when needed. By automating routine tasks, providing actionable insights including for compliance related activities, such a system allows paramedics to focus more on patient care and less on paperwork.

Key Features of an Ideal CD Management Solution

When selecting a controlled drug management solution for ambulance services, it is essential to match it to the unique requirements of pre-hospital use as distinct from hospital or community care.

Real-Time Tracking and Monitoring

An effective system should offer real-time tracking of controlled drugs, from the moment they are received from suppliers to their administration or disposal. This includes features such as real-time inventory updates, and automated alerts for discrepancies or potential diversions. Real-time monitoring enables services to avoid localised drug shortages and unnecessary procurement by highlighting where drugs shortages and surpluses exist. As importantly, real-time tracking gives peace of mind to paramedic staff that their actions are more clearly documented than ever possible on paper.

Automated Incident Recording

Manual documentation is time-consuming, prone to errors and can be ignored. An ideal electronic solution should detect an anomaly as it is documented and automate the recording of incidents, ensuring appropriate escalation to management in real-time thus creating a closed loop incident reporting framework. This not only ensures accuracy but also facilitates compliance with regulatory requirements.

Secure Access and User Authentication

Controlled drugs must be accessible only to authorised personnel. A robust system should include multi-factor authentication, role-based access controls, dual sign off and secure storage solutions to prevent unauthorised access and tampering. Solutions should enable,

where permitted, non-clinicians to perform roles such as acting as a Witness. Unwitnessed CD transactions should be required to explain the reason. Finally, and critical to maintaining system integrity at all times, all data must be immutable.

Integration with Electronic Patient Records

Integrating the drug management system with electronic patient records supports population of the CD record with clinical information. This reduces time taken and increases the accuracy in documenting the use and fating of controlled drugs.

Audit Trails and Reporting

Compliance with regulations requires detailed record-keeping and reporting to provide comprehensive audit trails, customizable reports, and analytics to support internal reviews, organisational continuous quality and safety improvement and regulatory audits. The system should enable production of a medication register required by legislation and support appropriate inspection by quality and safety regulatory bodies.

Paper registers require staff to physically review the book onsite. Electronic registers aggregate records and remove the need to be onsite therefore reducing the time and increasing the accuracy of the audit process.

Case Study: Benefits of a Controlled Drug Management Solution in Ambulance Services

To illustrate the benefits of a specialised controlled drug management solution, consider the case of a regional Ambulance service that implemented such a system in 2024. Before the implementation, the service faced risks and challenges such as drug shortages, discrepancies in inventory, diversion and regulatory compliance issues. After adopting a controlled drug management solution, the service experienced significant improvements:

- **Enhanced Accuracy:** Automated documentation reduced errors and ensured precise record-keeping
- **Improved Compliance:** The system provided audit trails and alerts, ensuring adherence to regulations
- **Operational Efficiency:** Real-time tracking and streamlined inventory management saved time and resources and ultimately money
- **Incident Investigation:** Incidents are investigated quickly and efficiently resulting in increased safety and cost savings
- **Patient Safety:** Access to real-time drug information and patient records enhanced the quality of care
- **Patient Care:** Less manual documentation delivers more time for patient care
- **Real-time Reporting:** Managers and accountable officers can run reports in real time to monitor activity and investigate discrepancies

The Executive Director – Clinical Information Services said, “This improved capacity by personnel to manage and monitor stock of specified medications reduces costs, enables more hours to be delivered to patient care and reduces medication waste”.

Questions for Consideration

Controlled drug management is far more than a register by a safe. In adopting an electronic solution, the opportunity for full medication management across your service from acquisition to delivery (including supply chain, fraud detection and audit) are desirable.

There are several questions to consider when considering a move to an electronic CD register:

- What are the unique aspects of your service that must be addressed:
 - Complex supply flow from Store to Delivery to Station to Paramedic?
 - Unique handling of CDs, including pouches, kits, vehicle safes?
 - Safety promotion, including audit, compliance and fraud management?
 - Destruction and discard practices?
- What reporting, controls and efficiencies can support best practice for:
 - Supply staff?
 - Area Managers?
 - Paramedic staff?
 - Auditors?
- How can a system support incident and anomaly management in real-time?
- How does the system ensure compliance with legislation?

Conclusion

The selection of a controlled drug management solution is a critical decision for ambulance and emergency services. Such a solution must address the unique challenges of pre-hospital care, ensuring patient safety, regulatory compliance, and operational efficiency. By choosing a system tailored to their specific needs, rather than adapting a solution made for different practice environments, ambulance services can enhance their ability to deliver timely and effective care, ultimately improving patient outcomes.

The author of this paper is a Clinical Pharmacist and the Founder and CCIO of HealthCare Software, a leading supplier of software solutions for medication management.