

HOSPITAL & CLINICAL SOLUTIONS

REDUCING MEDICATION ERRORS, IMPROVING PATIENT OUTCOMES

MEDCHART ELECTRONIC MEDICATION MANAGEMENT

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Preventable medication errors have a hefty price tag: Adverse drug events (ADEs) lead to prolonged hospital stays, resulting in additional bed day costs. Frequent and often serious, many of these errors are avoidable.

THE ANSWER: **ELECTRONIC MEDICATION MANAGEMENT**

Improved patient outcomes and the significant reduction of ADEs are possible with electronic medication management (eMM).

eMM systems reduce clinical risk and improve medication safety, resulting in significant reductions in medication errors and ADEs. In addition, they eliminate inefficiencies for greater cost savings.

Dedalus MedChart provides hospitals, clinics and aged-care facilities with an end-to-end eMM solution. It transforms medication management from a complex, time consuming manual and paper-based process, into an automated system that streamlines prescribing, clinical pharmacy review and administration processes, resulting in reduced risk, decreased errors, increased efficiency and improved coordination between clinical teams.

eMM SIGNIFICANTLY REDUCES CLINICAL RISK AND HARM

One of the earliest adopters of electronic medication management, St. Vincent's Hospital in Sydney, Australia, implemented Dedalus' MedChart solution in 2005. Today, the system is used across all wards and has significantly reduced clinical risk and harm, with prescribing errors down 57.5 percent in wards and serious medication errors cut by 44 percent.¹



¹ Westbrook JI, Reckmann M, Li L, Runciman WB, Burke R, et al. 2012. Effects of Two Commercial Electronic Prescribing Systems on Prescribing Error Rates in Hospital In-Patients: A Before and After Study. PLoS Med 9(1): e1001164. doi:10.1371/journal.pmed.1001164.

MEDCHART: SUPPORTING CLINICAL WORKFLOWS FOR SAFER CARE

Designed by clinicians, MedChart adoption by staff is strong with users quickly realizing the benefits such as reduced task complexity and legibility of all prescriptions. MedChart is tried, tested and proven to reduce medication management errors and inefficiencies, leading to fewer ADEs and better, safer patient care. Used by leading hospitals in Australia, New Zealand and the UK, MedChart is fully web-based and user friendly. Not surprisingly, it is extremely popular with staff, simplifying otherwise complex, time consuming tasks, allowing them to focus on patient care.

MedChart includes a range of separate workflows for optimum medication management:

- Electronic prescribing
- Medication reconciliation
- Clinical pharmacy review
- Drug administration
- Clinical decision support



END-TO-END ELECTRONIC MEDICATION MANAGEMENT SOLUTION

Electronic medication chart

The MedChart electronic medication chart is based on familiar and commonly used paper charts, easing the transition from paper to digital. Chart transcription errors are dramatically reduced, with clinical staff able to view and update a patient's chart from any terminal.

Electronic prescribing

Medications can be prescribed via quicklists and protocols using pre-built orders based on best practice, or represcribed from previous orders for the same patient. Protocols provide quick access to instructions, specific medication usage rules and safety information. The drug selection list can be configured for selection of national or hospital formulary preferred medications. To improve dose calculations and patient safety, prescribers are prompted to enter current height and weight for all calculating medication orders.

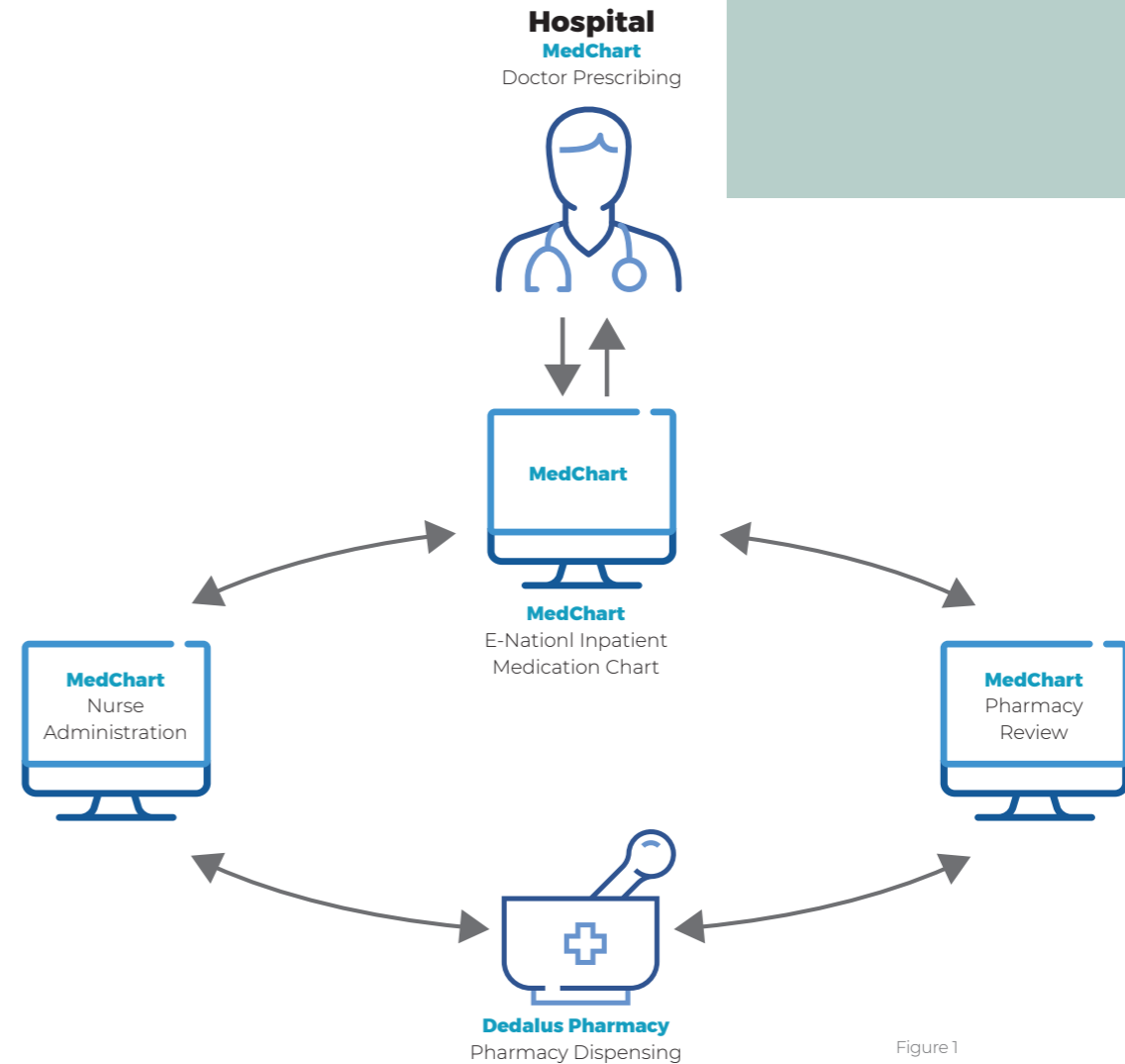


Figure 1
Medicines reconciliation —
from community to hospital
and back to community

MEDCHART ELECTRONIC MEDICATION MANAGEMENT

Pharmacy review

Pharmacists have an essential role to play in improving medication safety in hospitals and in aged care. MedChart facilitates their involvement by providing remote chart access to review orders, add instructions for dispensing and administration, or block unsafe orders.

Decision support

Configurable clinical decision support assists the entire care team in providing best practice care, according to hospital defined protocols and business objectives. Decision support is implemented through a hospital's clinical business rules, and is an integral step in the medication management process.

Ward overview

The ward overview provides an at-a-glance overview of medication-related tasks, such as due or overdue medications. MedChart also allows nursing staff to work as a team to efficiently share the workload.

Offline chart backup facility

Offline charts, or printable medication charts, ensure patient care is not compromised in the event of a power cut or technical infrastructure failure. Real-time duplication of the most recent medication chart is maintained on a designated computer in the system. These can be printed and medications managed manually until system access is restored.

Reference viewer

The built-in reference viewer can be configured to present blended reference data from multiple local, regional, national or even international sources for quick reference during prescribing.

Medication administration

MedChart enables medication administrations to be scheduled and recorded electronically, to help ensure this is done correctly, safely and on time. The administration function for infusions allows each event (start, stop, rate changes, etc.) to be recorded individually, resulting in a complete record. The administration workflow is designed to support the Five Rights of medication administration:

- The right patient
- The right drug
- The right dose
- The right route
- The right time



Prescribing errors were reduced by >50% whilst incomplete and unclear orders were eliminated by using Dedalus' MedChart.²

² Westbrook J, Lo C, Reckmann M, Runciman WB, Braithwaite J, Day R. The Effectiveness of an Electronic Medication Management System to Reduce Prescribing Errors in Hospital. 18th Annual Health Informatics Conference. August 2010. <http://search.informit.com.au/>

COMMITTED TO INNOVATION, INDUSTRY BEST PRACTICES

Dedalus has a long-standing commitment to innovation in the healthcare sector and continuously incorporates evolving work practices, regulations and technology advancements such as mobile access to software. As part of Dedalus' commitment to innovation and quality, MedChart undergoes rigorous internal testing through the Global Clinical Safety Team, an experienced group of practitioners, including doctors, nurses, healthcare scientists and software safety specialists. The team ensures Dedalus solutions and services are clinically effective and safe, from design through deployment and service support.

As a solution across functions and departments, MedChart optimises the medication management process.

KEY BENEFITS

In addition to robust clinical capabilities, MedChart delivers significant return on investment through cost savings and improved efficiencies and helps ensure clinical safety through:

- Accurate, efficient and timely medications administration.
- A clear picture of each patient's medication record, accessible at any time.
- Reduction in manual, paper chart based inaccuracies and medication errors.
- Decision support configurable to support the various needs of the care team — promoting best practice whilst preserving clinical freedom.
- Greater pharmacist/pharmacy involvement in clinical care.
- Ability for nurses to coordinate care and share responsibilities.
- Improved communication between nursing, medical and pharmacy staff.
- Configurable protocols to support quality-based, complex prescribing.
- Security and traceability throughout the medication process.

MedChart – a global solution

- MedChart is the only electronic medication management solution in Australia to have been implemented across all inpatient wards within a hospital.
- MedChart is implemented in a number of DHBs using a nationally negotiated contract
- MedChart has been successfully implemented in NHS trusts across the UK.



Dedalus

www.dedalus.com

About Dedalus

Dedalus is the leading healthcare and diagnostic software provider in Europe and one of the largest in the world. With its innovative framework of comprehensive and process-oriented solutions, Dedalus enables a revolutionary digital transformation of country-wide Healthcare Systems fully supporting the patient digital journey. Dedalus serves more than 6,100 private and public hospitals across 40 countries, through more than 5,500 highly specialized resources, of which 2000 are dedicated to R&D activities. We aim to help caregivers and healthcare professionals to deliver better care to the communities they serve and for this reason we are very proud of doing a special job, working with healthcare organisations to improve healthcare outcomes for patients.

Life flows through our software.

For more information, visit www.dedalus.com