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Digital Clinical Transformation

DC2Vue®
DATA CAPTURE EXPERTS

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Digital Clinical Transformation

Health care organisations and governments are facing an unprecedented challenge with the global COVID-19 pandemic to simultaneously improve health care quality and reduce costs. The pressure placed on health care workers and the need for social distancing have underscored the urgency for digital channels such as telehealth, virtual clinics and remote monitoring. Patient beds must be freed for critical cases, so there is a need to move outpatient care into the community, which requires collaboration among multiple care providers.

This growing need to deliver a wide variety of health care resources in the community is generating pressure to create digital medical records (DMRs) and eventually electronic medical records (EMRs), making all relevant patient information accessible at the point of care. The challenge with EMRs is that they can require investments of tens of millions of dollars, so the ROI is difficult to justify for most Australian health care providers. DMRs deliver value by unlocking data in digital or paper patient records for efficient intake or referral management.

To reduce cost and improve medical treatment, health care professionals at all levels are moving from paper-based records toward DMRs. Likewise, individual departments within health care facilities are also moving to digital information, as are related organisations that have a vested interest in the data locked within health records such as insurers, regulators, suppliers, government health agencies and state human services departments.

Organisations have found that document capture software enables them to make this transition from paper to digital quickly and successfully. Document capture takes paper and other documents, transforms them into appropriate electronic formats, automatically classifies and extracts the information, and then delivers that information via digital workflows (to clinicians, referrals to third-party health providers and relevant business systems, etc.). Document capture software cuts medical record processing time, reduces manual recordkeeping, helps protect patient privacy and gives health care providers faster access to critical information at the point of care.

Getting Ready for Digital Clinical Transformation

Under pressure to simultaneously reduce costs, provide high-quality care and comply with government regulations, hospitals and health care providers can no longer settle for labor-intensive, error-prone, manual paper handling. Doctors and other health care providers need electronic access to all patient-related data at the point of care, wherever that may be. Fast access to accurate data is not just important for compliance and audit reasons; it can also save lives by enabling hospitals and health services to:

- Create DMRs to comply with Australian digital medical records standards such as AS2828.2

- Save time with efficient management and tracking of all incoming and outgoing referrals with secure messaging and secure email capability

- Generate discharge summaries on demand, configure workflows, task lists and notifications with electronic sign-off features

- Automate billing, invoicing and Medicare online claiming processes

- Use AI and machine learning to augment clinical coding workflow

Automating the Capture, Extraction and Management of Patient Data

Kofax is the market-leader in Intelligent Automation for digital workflow transformation—with the most sophisticated, widely used enterprise capture solutions in the world. The company has decades of experience helping its 25,000+ customers extract critical information from unstructured documents and other content sources. Kofax provides this capability as part of its Intelligent Automation Platform, which comprises state-of-the-art process automation technology, leveraging the latest in artificial intelligence (AI), machine learning (ML) and natural language processing (NLP).

DCE is a long-time Kofax strategic partner with deep expertise in delivering process automation solutions based on Kofax technology to the health care industry. DCE provides specialised solutions for Clinical Information Management, Community Care, Mental Health, NDIS and other domains. DCE's flagship product is DC2Vue®, a digital care coordination platform which provides clinical, operational and financial efficiencies across the care continuum. Unlike traditional software, DC2Vue provides a sustainable foundation for intelligent automation, is highly interoperable and is delivered as a managed cloud solution on Microsoft Azure.

DC2Vue addresses the challenges of capturing any type of patient-related document, extracting critical information and automating engagement between all relevant stakeholders.
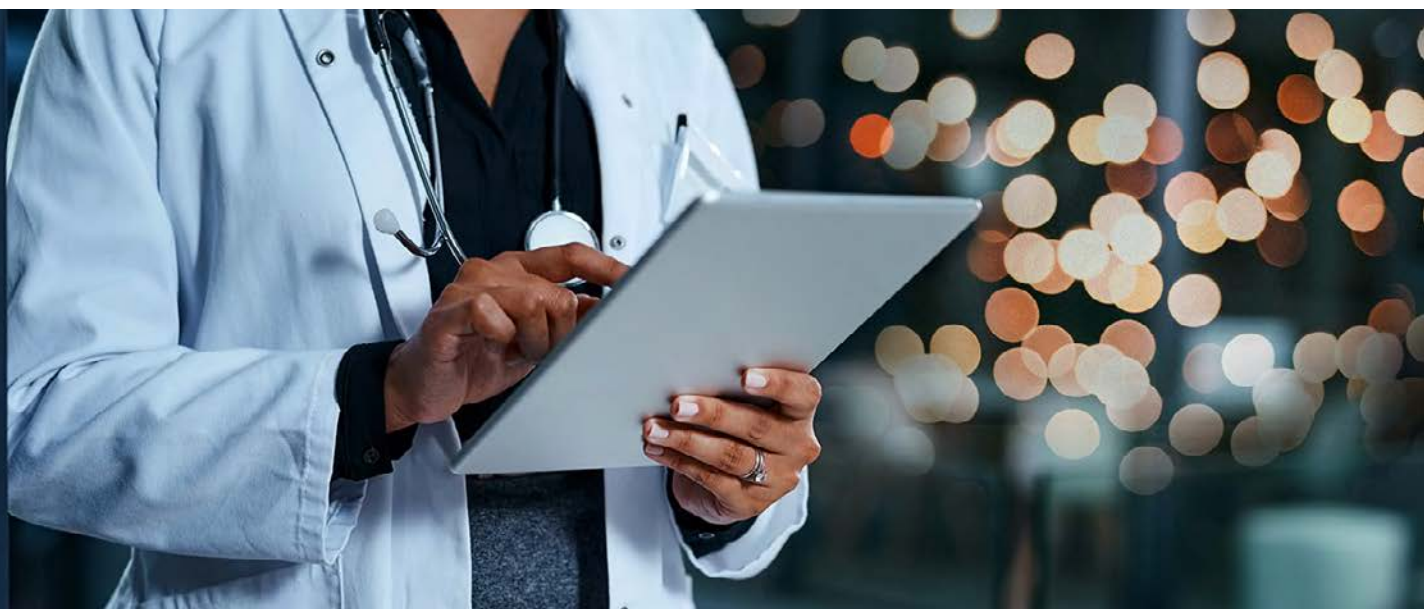
Solution Overview

DC2Vue Plus is a modular digital care coordination platform which brings integrated benefits of Referral Management, Scheduling, Clinical Documentation, Reporting and patient portal capabilities coupled with elegant clinical/admin user experience.

Diagram 1: Kofax-based DC2Vue Solution

DC2Vue brings together data and content, automates scanning of documents and provides an electronic platform for the end user to complete all documentation with automation of workflow, communication and information. DC2Vue is interoperable, extendable and built upon Kofax's Intelligent Automation and Microsoft Azure Cloud technologies. This provides health service providers with a fast, flexible platform that is responsive to changing business dynamics.

Automatically Capturing and Digitising Patient-Related Data

As an integral part of health records management, DC2Vue enables health care organisations to capture any type of patient-related document, in any format, at any stage of the patient's involvement with the organisation. Documents can be scanned in large volumes at a central processing facility, individually at a desktop, or captured via a mobile app or at a remote office.

Kofax and DCE understand the complexity of patient- and health-related data. For example, test reports and lab instructions can be extensive and include multi-page graphs and images where every line item and dot are important. That is why our leading scanning and capture technology, Kofax's pixel-perfect capture, is important to ensure the best possible image quality and readability.

The Kofax Intelligent Automation solution includes patented image enhancement and perfection software that dramatically improves manual scanning productivity and the efficiency of document capture processes. It's like having a quality control operator cleaning the toughest documents and revealing data so accurate information can be easily accessed when and where it's needed. By dynamically evaluating each page and automatically applying the correct image quality settings (e.g., deskew, orientation, cropping, etc.), the solution reduces document preparation time.

DC2Vue will then automatically classify and separate the scanned documents by type and patient ID; extract the relevant information; transfer it to the existing health information systems (HIS), ECM systems and databases; and trigger workflows to ensure that the right information is at the right place at the right time—a doctor's computer, at pathology, radiology or in the administration department.

Streamlined and automated capture of patient documents minimises errors, increases productivity and ensures high data accuracy and availability, allowing health care providers to focus on what is most important—patients.

Ensuring Security, Compliance and Efficiency

DC2Vue supports interoperability standards such as HL7, and regulatory compliance privacy regulations for process transparency and auditability. It provides single patient view across acute and community care settings.

Transforming Health Records into Digital Medical Records

DC2Vue health content management module turns health records into DMRs by:

- Capturing, classifying, extracting and validating any document regardless of format or type
- Integrating Patient Administration system (PAS) data via HL7 delivering outstanding image quality for any scanned document
- Automating the capture of patient-related content from any device—paper or electronic
- Automating the straight-through processing of patient and health data with workflows into HIS systems
- Auditing the processing of all documents from point of receipt through to archiving

Delivering Quality Care and a Great Patient Experience

When digital medical records are delivered at the point of care in both hospital and community settings, the benefits include:

- Increased health data quality by eliminating manual, error-prone processes
- Streamlined processes for capturing patient- and health-related data across the organisation
- Enable multiple clinical and admin team patient record access at the same time
- Improved availability of patient data at the point of care
- Significant cost reduction by eliminating paper storage and paper mailing
- Improved health care quality, safety and efficiency
- My Health Record integration

Digital Referral Management

Digital referral management systems help hospitals keep track of patient referrals throughout the referral life cycle. It improves and streamlines communication among primary care GPs, specialists, and any other health providers involved in a patient's care. Managing referrals through a standardised process helps health services reduce clinical errors and achieve better utilisation of specialists and resources.

Here are the top 5 benefits hospitals with specialist outpatient clinics experience through Digital Referral Management:

1 **Receiving referrals via multiple channels**

Patients are referred to specialist clinics by GPs, specialists and other community-based health care providers, as well as clinicians in emergency departments, inpatient units and other areas of the hospital. These referrals arrive via FAX, secure messages, phone or physical letters. Care providers often have different processes for handling referrals that come in through different channels. This creates inconsistency. Referrals can fall through the cracks or be buried under other paperwork through human error, creating a lack of overall insight into the referral process.

The DC2Vue referral management module can tap into existing channels and capture required actionable data from each referral document at the point of origination. Upon data capture, providers can apply rules around who needs to be notified—no matter the method the referral arrives.

Referral screening is an important administrative process to ensure that referrals requiring additional information, clarification or immediate action are not unnecessarily delayed.

The referral acknowledgment conveys information to the referrer about the referral outcome (for example, acceptance or rejection) or requests additional information. Through the referral management system, providers can standardise the referral screening and referral acknowledgement process.
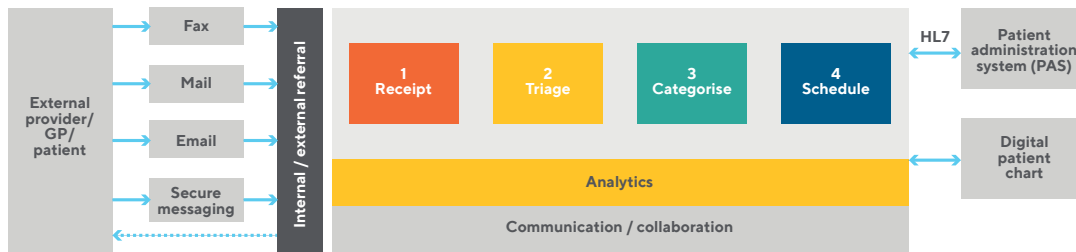
Diagram 2: DC2Vue Referral Process Flow

2 Standardisation of triage and categorisation workflow

After referrals are screened, they are sent for clinical prioritisation. Clinical prioritisation aims to ensure that patients are treated equitably within clinically appropriate timeframes and that priority is given to patients with an urgent clinical need.

Care providers are challenged today with manual filing, retrieval and transfer of printed FAX referrals between departments. Responding quickly to referral sources is critical, yet most referral management processes rely heavily on manual follow-up, which is vulnerable to human error. Opportunities fall through the cracks and revenue can be lost.

A good referral management system can be configured to drive triage and categorisation within an electronic workflow to meet specific service level agreements (SLAs).

3 Patient-centric appointment scheduling and booking

According to HIMSS, currently only 54% of patient referrals become appointments. This means nearly half of the time, patients do not receive the care they need, and destination providers do not realise the revenue they could have. Health services need effective and efficient use of staff and other resources to support timely service access and patient flow through specialist clinics.

The key metric is not how many referrals are received, but how many are converted into appointments and what proportion of those appointments are kept and appropriately paid.

A referral management system enables health services to implement patient-focused booking to allow patients the choice of a suitable appointment time. The use of patient-focused booking for non-urgent appointments has been shown to maximise clinic capacity, control patient flow and decrease failure-to-attend rates. Less administrative time is spent cancelling and re-arranging appointments. As a result, health services can improve access and equability to specialist clinic services through timely and effective communication with patients and referrers at key stages of the specialist clinic pathway.

4 Patient flow and care-coordination

Health services often work in partnership with local primary and community providers to facilitate effective coordination of care. Seamless integration between patient and appointment systems is key to drive effective collaboration with primary and community care providers.

The referral system should be able to read information from the Patient Administration System (PAS), insurance plan, ICD-10 and lab results from the EMR, and send and receive documents such as continuity of care documents (CCDs). The referral management system can use information such as a patient's insurance plan to match specialist recommendations with the needs of the patient.

Proper care coordination ensures that patients are discharged to community-based settings when clinically appropriate or where there is capacity for a primary or community service to provide appropriate care.

5 Referral process analytics

The collection of a Minimum Data Set for specialist clinics will be used to provide clinical, demographic and resource utilisation information necessary for service planning and coordination, and will enable the department to meet its state and national accountability obligations.

Health services are required to monitor their specialist clinic performance through collection and analysis of data against a range of internal KPIs and to examine barriers to service efficiency or other management issues. Standardising the referral process through a referral management system allows organisations to digitally capture key critical data required at every step of the workflow so referral patterns and process bottlenecks can be easily identified.

Through analytics, organisations can identify top referring sources and strategically define them. For some organisations, it may be quantity/volume or dollar value, or even by certain products and services that are higher margin. By focusing on top referral sources and building a strong network, a stream of high-quality referrals will be guaranteed.

Mobility : Enabling virtual healthcare with Clinician and Patient portal

With the current pandemic, the need to move care into the community to free hospital beds for critical care is key. The DC2Vue clinician app deliver schedules to clinicians, review and update patient notes, and flag any potential issues, such as allergies, etc. DC2Vue Connect - Patient Portal App makes it possible for health and community care providers to optimise care delivery beyond traditional care settings. It enables care providers to remotely manage the health condition of their patients at home or in the community via built-in telehealth features.
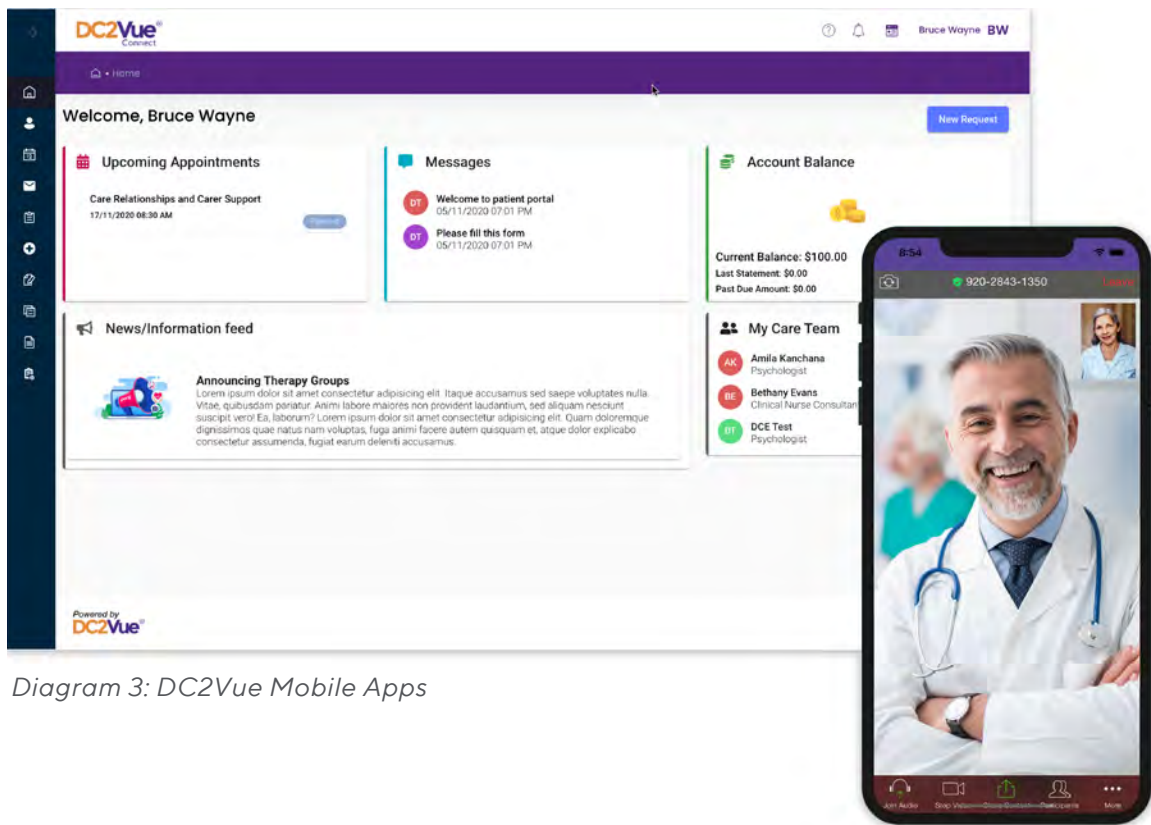

Diagram 3: DC2Vue Mobile Apps

In its treatment of patients, the medical community is moving toward a holistic approach that extends beyond the ailments that affect the body—encompassing emotional and spiritual well-being, diet and exercise as parts of a complete approach to health.

Likewise, the health care industry has recently been striving for a holistic view of health records, which Kofax enables through delivering DMRs. DMRs allow collaboration across all aspects of patient care including clinical, mental health, community and aged care.

Summary

While many traditional EMR systems improve transactional clinical processes, they often do not solve larger-scale operational process problems and do not support collaboration with partners who do not have access to the EMR. Consequently, hospitals are beginning to focus on process design and improvement as a discipline to provide more patient-centered and harmonised care. Implementing business process management solutions "on top of" existing EMR systems helps avoid the costly and often painful process of changing or re-implementing the EMR system.

Close to 80 percent of all health care data is unstructured, in the form of clinical notes, test results and images, discharge summaries and patient communications. Consequently, unstructured data remains an untapped resource for many organisations.

For Health and Community care providers providers, it delivers an agile and cost-effective framework for Digital Clinical Transformation.

Ready to optimise your clinical and admin workflows?

Find out more at www.dc2vue.com.au

DC2Vue ®
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