Discussion outputs from DIGITAL HEALTH LEADERSHIP SUMMIT, March 2021

Topic 7: We've had ePrescriptions, eMonitoring, eOrdering. What's working, what's not and what's next?

This topic was discussed by groups in Auckland, Wellington and Christchurch.

Auckland delegates' responses

What's working	• Spark has programmes to help with elderly etc. • eMonitoring – great to have charts etc. in one place • View from consumer of ePrescriptions that ePrescriptions work well • ePrescriptions works well in hospitals as closed loop • eMonitoring – seen as should be in the community. See monitoring as a preventative
Challenges/barriers	• Lack of contact data, privacy etc. issues around that • Vendor resistance to change • Software – hardware – user interaction • How can information be shared to those in need of it? • Old systems – out of support and lacking interoperability • ePrescriptions – risk of fund issue • Need school – health alignment to encourage more students to look to healthcare as a career • Lack of mobility in changing vendors – so lack of pressure on vendors to improve • Drug administration failures – big danger to patients – not addressed by ePrescriptions • Lack of voice for Polynesians • Challenges with engaging different cultural groups • Access 9-5 health vs. 24-hour world • Cell phone coverage in rural areas and cell phone cost • eMonitoring - lack of means to collect vital/early warning data • Scoring for patient judgements is manual • Pharmacies using Gmail etc for alerts - not controlled

	• Messaging needs to be delivered in a way that is understandable to the average person • Problem needing to learn when moving from DHB to DHB • Systems are largely 'dumb' • Not using data well - data is trapped • Consumer – eOrdering – lab results received electronically – but no explanation on interpretation • Why have multiple vendors? Only want one • ePrescriptions doesn't work well in doctors' or hospitals' pharmacies • eOrdering – how to match this to previous health warnings • eHealth profile – missing • Lack of single identity to 'rule them all'
Ideas/solutions	• System for feedback from users • ePrescriptions – AI to reduce medical error • eOrders – improve order form - pre-population of form • eOrders – anything to reduce 'clicks' • Need more integration – but journey has started • Central database FUI for pharmacies • Monitoring of diabetes – cart of available solutions • Is paperless the way to go? Importing information to clients • Need NZ to get back into making and selling medical solutions to the world • Need for health navigator • Nationwide integration of information • eMonitoring – we should be able to monitor patients remotely – the technology is there • Identify priority issues to fix • Streamlining of workflows • Pick a problem domain or fix it • Find out from consumers what they think of ePrescriptions etc. • identify what the next 'e' needs are

Christchurch delegates' responses

What's working	• e-prescription:
	  ○ Concept right
	  ○ Preventing admin errors
	  ○ Better way to monitor
	  ○ Auditable
	  ○ know who prescribing
	• E-ordering:
	  ○ COVID – lab tests
	  ○ cut down on costs, trackable
	  ○ Good software – functionally works
	  ○ Assume better data
	  ○ More efficient and consistent for clinicians in hospitals
	  ○ Adaptable provider is great
	  ○ It is interoperable
	  ○ Radiology (in patient)
	• e-monitoring:
	  ○ Can enable joined up results to improve patient
	  ○ See it from anywhere
	  ○ Electronic triggers based on scores
	• Data is digitally available – access not easy
	• Remote prescribe/order/monitor
	• Records of errors

Challenges/barriers	• e-Prescription:
	  ○ Not rolled out properly
	  ○ Patient Safety Aspects [errors entry] – E-to-E process
	  ○ User experience limited/poor
	  ○ Data inconsistency
	  ○ Terminology inconsistencies

	○ Legislation not supporting digital ○ Access to data from vendors ○ EPS don't capture exemptions ○ No safety checks lead to bad ordering [new ways to mess up] ○ Mandating standards to vendors ○ Legislation archaic/not supporting digital ○ E to E process not digital – leads to paper-based needs ○ Patient expectations – bad comms/understanding ○ No benefits ○ Lack of requirements ○ Lack of common medical dictionary ○ Community pharmacist nightmare [new process, tech] not set up • e-monitoring: ○ Alert facility for toxic comms is an issue ○ GP doing job of referral organisation ○ Not a closed loop ○ Threat of hacking monitoring machines ○ Single view for clinicians ○ Interoperability of vendor systems standards ○ Data not easily used for research • E-ordering: ○ Cost efficiency? ○ Lack of 'Actor' use /needs of e systems ○ Inconsistent suppliers with different software ○ 360 view from clinician ○ More feedback needed ○ Proactive monitoring ○ No competition
Ideas/solutions	• Data/dictionary • AI prescriptions

	• Robotics • Standards based approach (mandated) • Framework • One Health record linked to include • Making data more accessible • Common data/integration standard • Single lab tester NZ • e-monitoring linking data to cure people • Consolidation/cloud integration (e-orders)

Wellington delegates' responses

What's working	• Tolerances etc. are well recorded • Covid waivers have been great – need to be permanent. Don't want government to roll these back (regarding Digital Signatures). Physical signatures are still required • eMonitoring is superior to Paper Chats • Able to check remotely (via Citrix etc.) • Usually have tablets which they can use around the practice • Huge amounts of data generated • ePrescription – secure, great during COVID. Still need to print off and sign for control drugs • eOrdering is implemented well. Autofilling, authentication etc. • COVID a driver for eOrdering • GP – ePrescriptions is game changing • eReferrals are working well • ePrescriptions – can see the trace of what the doctor has ordered • Covid has dramatically increased virtual consults. Previously was > 1%
Challenges/barriers	• If a digital solution isn't making things better, then why are we doing it? • Some applications aren't designed to be accessed beyond the firewall (not mobile native) • Digital approaches can be mandated, but that isn't ideal

	• Paper scripts from hospitals are still the norm • Pharmacy end is still largely paper-based • Currently siloed approach to implementing technology • With ePrescriptions, the flow wasn't well understood (e.g., pharmacists have a requirement to print out prescriptions by law) • PMS integration is still immature • Consent (patient) is a concern, especially regarding patient understanding on what is shared with MoH • Number of eMonitoring systems are great but need to be connected as they are distinct currently (Proprietary). Lucky if they have SSO • How to analyse data so that it is useful • Hard to sell a 'bad' digital solution. Too many in NZ • Data → quality. Garbage in, garbage out • Data sources can be good, but true value impacted by its reach, i.e., integration into different parts of the system • Lack of workflow → leading to mis-prescribing mistreatment • Paper-based → relying on what the patient brings with them • Data is fragmented across the system • Figuring out where consent sits in the process → tools/technology • Understanding what the data will be used for. Privacy → consent • MVP approaches must be equitable • Gaps in process/data due to software/system/solution idiosyncratic features/ differences • Challenges stemming from hybrid solutions: paper and digital • Monopoly environment → some software/system providers • Consenting: What need to be anonymised vs. kept? • Control days – still have to post-fax scripts to pharmacists. Some still release drugs before script received • Single portal does not yet exist (proprietary) • Estonia have implemented an interoperability layer, but have not solved presentation • Lots of systems don't solve teams' approach (shifts etc.) • eOrdering - concerns with authorisation • System needs to show patient eligibility etc. which is difficult to discern with paper-based forms

	• Patients are issued a range of appointments from a range of systems. Different departments use different scheduling systems • Interoperability is key to defragment the presentation and consumption of patient, and other data. Transition will be difficult. Change management required. • Currently manual and time consuming. Put control back on patients (diabetes management example) • Avoidance of aggregation of health providers (Don't want to make money off health) • Poor VX →web ≠ mobile • Operational effectiveness → in bed vs. discharged • ePrescribing not working: requiring specific pharmacy for delivery, but that is not always known/changes • People who [had/suffered x] also [may have/suffered x] • Sometimes eOrdering doesn't function • GP – eOrdering needs work. Still need to print things off • 'Messaged-based' currently, as opposed to pure API integration • Hospital and community prescriptions are currently separate • Some workplaces issuing vaccinations do not submit to the national register • Some areas have not been digitised (still reliant on faxes or in the post) • Still not sure about what can be done face-to-face (due to COVID) • GPs want someone or something to offload smaller tasks • One-third of paperwork is spent clearing inboxes, which contributes to burnout • Currently if patients want to contact via email, there is a cost associated • Virtual consultations are single problem based. Patients can't ask for physical checks etc. • Has created billing issues as patients aren't able to pay in person
Ideas/solutions	• Networking communities to discuss digital approaches is a key to knowledge sharing • Need a sector wide understanding which is communicated so participating organisations understand how their part fits (ePrescriptions) • Make Covid waivers and digital signatures permanent • Patient data must be stored on shore, or near shore (Australia) • Standards required for data sharing (FHIR) • Get Natively on mobile devices

	• Two-way communication (vs. paging, which as single direction (SmartPage)
	• Nerve centre – allows additional modules over time (phased implementation)
	• Standards (national) required → interoperability across parts of the system
	• Storytelling as a way of promoting change/informing (e.g., consent)
	• Data: Opt in/option out → to give people control
	• National data sets
	• 0-5yr: 400 + data points
	• Interoperability standards might be helpful
	• Logging into a range of systems at health provider
	• Centralised drug database to see drugs prescribed and dispensed
	• There needs to be a shift of power (DHBs → GPs) to achieve the future state
	• AI driven eMonitoring → Future state. Portal can inform patients based on captured data
	• Device support – such as watches to remind patients or alert them
	• Apps for reminding etc. (Zoom Pharmacy)
	• eMonitoring:
	  ○ Allergies in free text
	  ○ e-pathways → needs to be structured and tagged
	  ○ Linked to ePrescribing
	• ePrescribing→ i.e., scarce meds – help manage/avoid scarcity
	• Recommend engine/rule set, to help health providers think of what they might not be thinking
	• Some manual tasks (online) could be automated and efficient
	• There are some smarts in terms of preventing patients from being overissued on scripts. Could these be improved?
	• ePrescriptions could prevent fraud, in terms of duplicating scripts etc.?