ROYAL COLLEGE
OF PHYSICIANS AND SURGEONS OF CANADA
COLLÈGE ROYAL
DES MÉDECINS ET CHIRURGIENS DU CANADA

2019

The International Conference on Residency Education
La conférence internationale sur la formation des résidents

An innovative, light-touch approach to clinical change management in a tertiary hospital emergency department

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I have an affiliation (financial or otherwise) with a pharmaceutical, medical device or communications organization.

J'ai une affiliation (financière ou autre) avec une entreprise pharmaceutique, un fabricant d'appareils médicaux ou un cabinet de communication.

What we did

- Used a mobile app (Resident Guide, by MedApps) to drive significant clinical change in a busy Emergency Department

- Significant reduction in administration time and effort

- Highly scalable

Initial Problem

- Royal Brisbane and Women's Hospital Emergency Department
  - > 987 Bed Hospital
  - > 75,000 Emergency Presentations per year
- Technology to Scale Clinical Change
- Funding QLD Government
- 2 aims
  - > Shift prescribing behavior from IV to PO Metronidazole, when appropriate
  - > Decrease unnecessary aDT injections

Traditionally

- Change through:
  - > Posters
  - > Education sessions
  - > Emails
- Made difficult by:
  - > 'Signal to Noise'
  - > Resources (personnel, time)
  - > Resident turnover (10-12 weeks in Australia)

Method

- Introduce Resident Engagement Application

  > Orientate incoming Residents (12 week term)

  > Send out clinical pearls related to aims

  >> Track, review engagement

  > Close the loop

  >> Review medication data & engage again

  > Adjust messages and repeat for second cohort

Platform

- Resident Guide

  > Orientation, Communications & Engagement Platform

  > Used by 5,000 Residents across 34 Hospitals in Australia

Set up message

Message received by user...
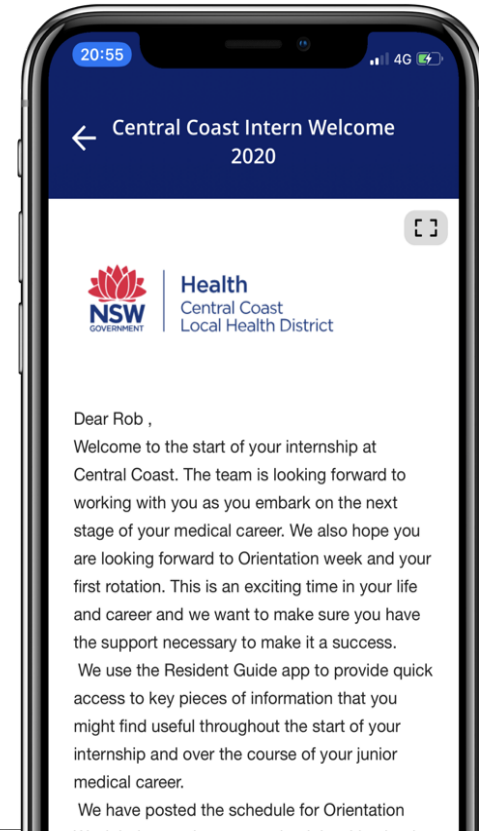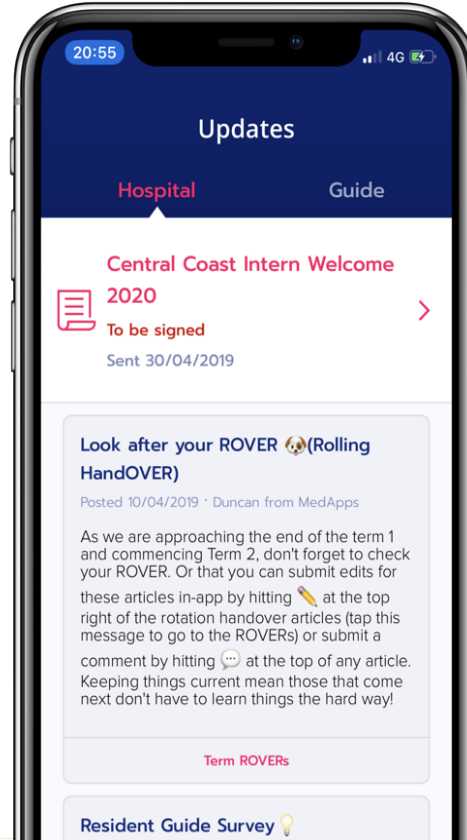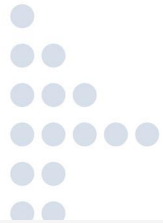
Track engagement

Pre-Vocational Trainee Orientation
Created 4-4-2019

SEND TO NEW USERS

USER ↑	SENT	VIEWED	SIGNED	VIEW	REMINDER
PRATT, ADELAIDE	11-4-2019	—	Not Signed	👁	SEND REMINDER
HUNT, TIMOTHY	15-4-2019	—	Not Signed	👁	SEND REMINDER
HART, ANDREW	15-4-2019	15-4-2019	15-4-2019	👁	
PRATT, ADELAIDE	15-4-2019	15-4-2019	Not Signed	👁	SEND REMINDER
DIAMOY, JOSH	15-4-2019	15-4-2019	15-4-2019	👁	
HUNT, TIMOTHY	11-4-2019	11-4-2019	11-4-2019	👁	
HART, ANDREW	11-4-2019	11-4-2019	11-4-2019	👁	
DIAMOY, JOSH	11-4-2019	15-4-2019	15-4-2019	👁	
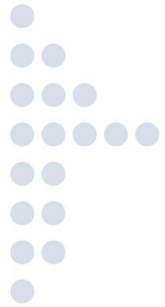
Platform Uptake

- Excellent uptake and ongoing engagement by both cohorts

	12 Nov 2018 – 14 April 2019
Users	72
Sessions	699
Pages of Information	6,414
Time in App (hrs)	70

Source Note

Messages read within 24 Hours

Message		Term 1 (12 Nov 18 - 20 Jan 19)	Second Term (21 Jan 19 - 14 Apr 19)
Welcome to the ETC	Not Viewed	6	2
	Viewed	30	34
	Total (%)	36 (83.3%)	36 (94.4%)
Project PAVE Update	Not Viewed	6	23
	Viewed	14	28
	Total (%)	20 (70%)	51 (54.9%)

Source Note

Results - Metronidazole

- Significant reduction in IV Metronidazole usage over project period

|	Baseline	Project	Change	
IV Metronidazole (Units/Day)	2.89	2.49	13.9%	p = 0.017
PO Metronidazole (Units/Day)	0.40	0.48	20.5%	P = 0.108

Source Note

Results – Metronidazole Time in Motion

- Previous TiM showed 22.5 minutes IV dispensing vs 5.3 minutes PO dispensing

	Dispensed During Project	Absolute change vs BaU	Time (minutes)
IV Metronidazole	538	-86.78	1,951
PO Metronidazole	104	+16.9	90
Time Reduction (Hours)			1,861 (31 Hours)

Source Note
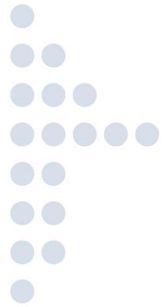
aDT

- Data only available in weekly samples
- Underpowered – 17 samples over study period (v 216 for Metronidazole)

Summary

- 14% Reduction in IV Metronidazole usage

  > All driven by Dashboard!

- 31 hours nursing time returned to department

- Annualised savings of $30,000 AUD

- Low-touch change management is possible

  > Requires the right equipment!

  > High engagement of platform enabled high engagement with messages and high impact

Next Steps

- Larger Projects
  - > Optimising pathology test ordering
  - > Reducing unwanted variations
  - > Linking in with eMR to ensure targeted messaging
    - » 'High Signal to Noise'
- Measure post-project change
  - > ?Return to baseline

- More information
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