

Alfred Health, the main provider of health services to people living in the inner southeast suburbs of Melbourne and a major provider of specialist state-wide services to the people of Victoria, worked with InControl Australia, Purcell's southern hemisphere co-developers, to bring the proven benefits of CARPS fast response electronic task management system to the clinical environment.

Clinical CARPS was rolled out on 17th July 2013 with immediate impact. Later that year Alfred Health received "The Premier's Award for Advancing Healthcare – Putting Patients First", followed in 2014 by the "Metropolitan Health Workforce Initiative Award" in recognition of the measurable improvements to patient care made in this short time, facilitated in no small part by the introduction of Clinical CARPS.

"This year the Alfred Health Redesigning Care department won The Metropolitan Health Workforce Initiative Award for their "Out of the dark" redesigning care program. A program utilizing Carps Clinical at its heart to distribute, manage and monitor tasks performed by doctors and nurses overnight." - Alfred Health News ²



The Challenge

In 2012, Alfred Health began the highly successful "Timely Quality Care" initiative, a whole hospital re-design to look at where patient focussed improvements could be made to their service. Concerns were raised about how The Alfred Hospital was operating at night.

Active progression of patient care

The mindset of the overnight team was one of "getting through it" or "surviving", rather than cultivating an environment conducive to progressing patient care. The Emergency Department was seen as the safest place for patients overnight, with admissions routinely avoided and delayed until morning, impacting patient care and experience.

Workforce of Individuals

Overnight medical staff experienced unbalanced workloads with no culture of load sharing. The mentality was that, even with an unmanageable workload, assigned tasks were "my work" and could not be shared around.

What is Clinical CARPS used for?

Clinical CARPS is a fast response electronic task management system that brings consistency, clarity and efficiency to the process of managing and assigning the clinical workload. It offers real time visibility of staff status and tasks and the ability to prioritise and re-assign work to effectively manage valuable clinical resources and improve patient care outcomes. The system is highly scalable and adaptable, according to the needs of the individual Trust or hospital.

At The Alfred, Clinical CARPS replaces paging as the primary means of requesting clinical tasks from 21:00 until day teams commence at 08:00. Tasks include requesting a phone call for clinical advice, procedures and medication or fluid orders: anything that requires action by an overnight doctor or nurse, as well as all admissions.

Variable Communication Quality

Communication on task allocation was open loop and inconsistent with a significant reliance on paging and the absence of active task management. Clinical staff routinely had to make one or more time-costly phone calls to gather the required patient information before engaging with a task.

Inconsistent Handover

There was a frequent mismatch between the labour assigned to overnight staff and their skill set. Handover work from the day such as drug charts, IV fluids and patient admissions placed a burden on the reduced but highly skilled out-of-hours workforce.

On the ground, Clinical CARPS is employed as follows:

- **Nursing staff issue clinical task requests from ward computers**
- **Tasks are assigned automatically or by The "Clinical Lead", according to requirements**
- **Every member of the Night Team carries a mobile smart device to track their allocated tasks**
- **Clinicians tap their device to acknowledge an allocated task, and again when the task is complete**
- **All members of the team can see all the work**
- **The "Clinical Lead" has the ability to re-allocate work according to priority and demand**

Benefits

In contrast to the paper based task request system previously in place, Clinical CARPS requests contain all the information required to immediately prioritise and complete the task. This saves huge amounts of time previously spent checking details by calling the relevant nurse or ward clerk, often multiple times, before beginning work, giving skilled clinicians and nurses more time to focus on patient care.

The “Clinical Lead” can see all tasks in real time and can redistribute them as appropriate. Geographic, nurse, and patient identifiers provided by Clinical CARPS task requests help to optimise efficient task allocation, improve communication and prevent errors. The system facilitates a form of dynamic search, allowing staff that are less busy to ease the burden on colleagues, preventing staff from becoming overwhelmed or stressed and reducing delays to the delivery of care.

Hard data from Clinical CARPS is used to identify long trends and to understand the type of work carried out by specific staff at night. This has provided supporting evidence in cases of complaints or concerns from staff, such as the volume of certain types tasks handed over to staff at night. This supports the implementation of organisational or procedural change to improve staff utilisation and manage risk.

Achievements

Clinical CARPS has been instrumental in the success of Alfred Health’s multi award-winning improvements to their overnight care services through the Timely Quality Care initiative.



Measurable achievements of Clinical CARPS’ implementation include an **8% average increase in performance against National Emergency Access Target**, up from 65% of patients being admitted from emergency within 4 hours to 73%. This has obvious implications for patient safety and has aided the significant reduction in emergency department occupancy in year-on-year comparisons. ³

Data drawn intelligence from Clinical CARPS has facilitated improved workforce planning, one example being the reduction of minor tasks or procedures assigned to overnight medical staff. **The number of venepunctures and cannula insertions carried out on an average night by medical staff has been reduced by 80% or more, while instances of drug chart rewrites overnight has reduced on average from 42 to 2.5 per night**, giving highly trained clinicians more time to deliver care appropriate to their skill set and creating opportunities for professional development.

Real time visibility of task allocation has allowed the Clinical Lead to **re-allocate around 14% of the workload on a nightly basis**, reducing stress, fatigue and the associated risks, while creating a team environment in which the workload is shared to achieve the common goals of delivering timely quality care and facilitating learning.

“The rapid delivery of the package has led to the sense that the night-time is really a dynamic environment in which the hospital is working to improve the outcomes for our patients by improving the system for clinicians.” - Benjamin Warren, Alfred Health ¹

“Where this is quite revolutionary is that our nursing staff can actually prioritise what their request is and really, really quickly put their doctor in a position to understand “Right, I need to get on this right now” or “It’s something I can wait until the morning to get to”.” - Benjamin Warren, RDC Project Officer, Alfred Health ¹

“Surgical doctors would have around half the workload of their medical counterparts overnight. The Clinical Lead would see this in real time and re-allocate the work on the fly. Around 14% of the workload could be re-allocated on a nightly basis” – Dr Kyle Brooks, Senior ICU Registrar, Alfred Health ¹

“Clinical CARPS data was able to inform the scope of the problem and we are able to monitor on a night-by-night basis how we are going at tackling it.” - Benjamin Warren, Alfred Health ¹

“One of our ‘Timely Quality Care’ initiatives won The Premier’s Award for Advancing Healthcare – putting patients first. ‘Out of the dark: Timely Quality Care – After Hours Working Group’ was recognised for introducing a new model of care that includes a new team structure and roles, processes to streamline care and centralisation of task management to effectively manage Alfred Health’s resources and staff at night.” – Alfred Health News ²

“Clinical CARPS allows them to see all the tasks and now they share tasks of their own volition. As you can imagine, this phenomenon is unprecedented and also a sign that we had not just a team, but a high functioning team overnight.” – Dr Kyle Brooks, Alfred Health ¹

Nursing staff have benefitted enormously from improved communication including the consistency of a single point of entry, automatic task allocation and real-time understanding of task and staff status. Clinical staff have benefitted from their transparent and more evenly distributed workload and consistently receive the mandatory minimum data required to prioritise and complete tasks immediately.

The Alfred report that handover between shifts has also been radically improved by Clinical CARPS; the rapid transfer of high quality information giving staff more time to focus on what is most important as well as creating new opportunities for learning and risk identification.

“One of the things we didn’t really expect was that we were going to improve the quality of our handovers so dramatically.” - Benjamin Warren, Alfred Health¹

Conclusion

The initiative has been an overwhelming success and has earned the team prestigious recognition for their achievements. While Clinical CARPS is not the sole cause of this success, it can be said to have provided the backbone to support a new and dramatically improved structure for the overnight clinical workforce. It has done this by improving communication, which reduces risk and saves time, and by enabling dynamic, fast response task management with a visible and instantly accessible workforce and workload. Furthermore, it has provided easy access to hard data, enabling the fast development of new processes, which have improved staff attitude and morale, boosted performance against targets and improved patient care, safety and experience.

“Improving patient safety and actively progressing patient care at night is no small feat and required more than a single intervention. But the combination of great clinical leadership, a high functioning team and the power of a shared mental model informed by real-time data is a really powerful one.”

Benjamin Warren, Alfred Health ¹



Notes

1 All quotes, unless otherwise attributed, are drawn from the presentation “Data to Transform: Electronic Task Management in the After Hours” by Alfred Health’s Benjamin Warren (Redesigning Care Project Officer) and Dr Kyle Brooks (Senior ICU Registrar and overnight Clinical Lead at The Alfred). The full video is available via the *InControl Australia* YouTube channel:

<https://youtu.be/NmHE0Jg4DXU>

2 Alfred Health News articles “Alfred Health wins honours at Healthcare Awards” and “The Alfred Hospital Wins *The Metropolitan Health Workforce Initiative Award*” are available online:

<http://www.alfredicu.org.au/news-2/2013-news/alfred-health-wins-honours-at-healthcare-awards/>

<http://www.alfredicu.org.au/news-2/2014-news/the-alfred-hospital-wins-the-metropolitan-health-workforce-initiative-award/>

3 Slides, including helpful graphs, from a presentation delivered by Andrew Stripp, Deputy Chief Executive & Chief Operating Officer of Alfred Health, at the 2014 *Emergency Department Management Conference* in Melbourne, Australia are available online. The presentation slides further illustrate the instrumental role that Clinical CARPS has played in the success of this of this ambitious and multi-award-winning project:

<http://www.slideshare.net/informaoz/andrew-stripp-alfred-health>