



Improving the availability of Community Public Access Defibrillators in Wales



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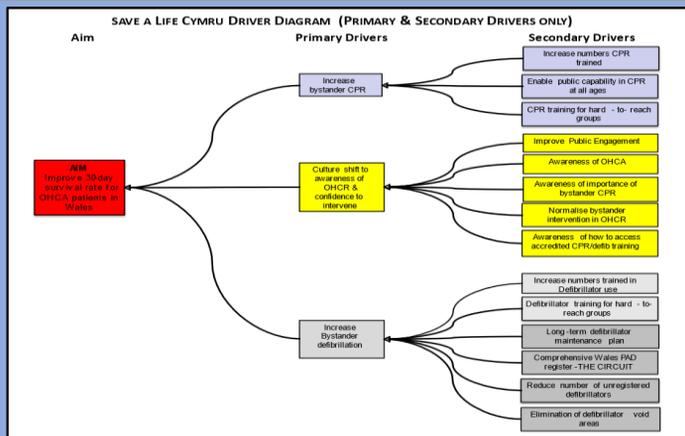
Introduction:

The aim of Save a Life Cymru (SaLC) is to improve 30-day survival rate for Out of Hospital Cardiac arrest (OHCA) in Wales. We describe work within the third Primary Driver: Increase bystander defibrillation in OHCA events.

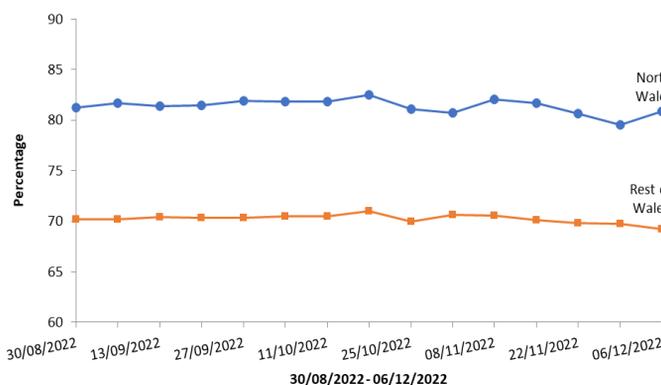
Aim:

To improve the proportion of Community Public Access Defibrillators (CPADs) with assigned guardians by 2% in North Wales (NW) over 3 months.

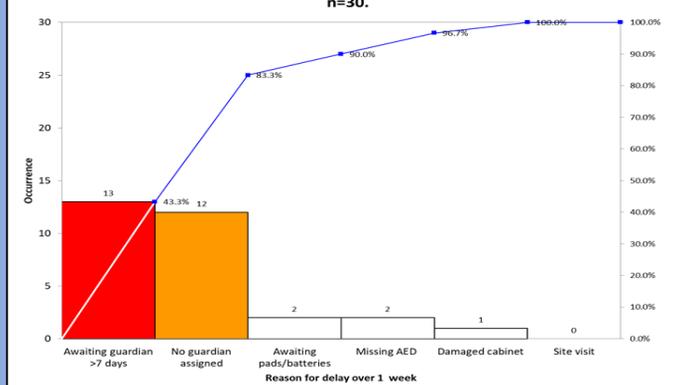
Betsi Cadwallader University Health Board (BCUHB) in North Wales introduced the role of Public Access Defibrillator (PADs) officer in 2018: Tasks included managing a network of CPADs across the region. SaLC is spreading this innovative role to all regions of Wales.



Percentage of CPADs in Wales that are Emergency - Ready



Reasons for offline AEDs >7 days NW September 22



Understanding the Problem:

Wales has 7194 CPADs. The compound line chart above shows a 11% difference in the percentage of emergency-ready CPADs in NW compared to the rest of Wales, maintained by the work of a single PADs officer:

These data formed the baseline for 'best practice' Spread & Scale, plus refinements of the PADs officer role.

The British Heart Foundation (BHF) has kindly agreed to share "Circuit" database (a live network of UK community defibrillator status linked to ambulance services) with SaLC, which has facilitated our work.

By operational definition an "emergency-ready" CPAD is:

- Registered on the BHF Circuit database.
- Maintained in a weatherproof heated cabinet, with working batteries & new skin pads.
- Re-instated promptly after use by a registered voluntary "guardian", liaising with the Circuit.
- Available 24/7 to the public

Fishbone analysis & Pareto analysis (below & above right) show the significant causes of 'offline' defibrillators.

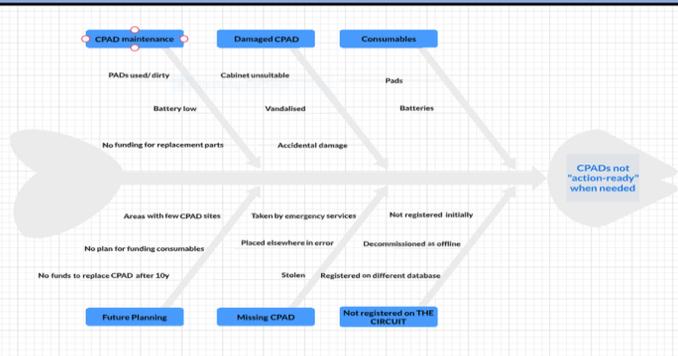
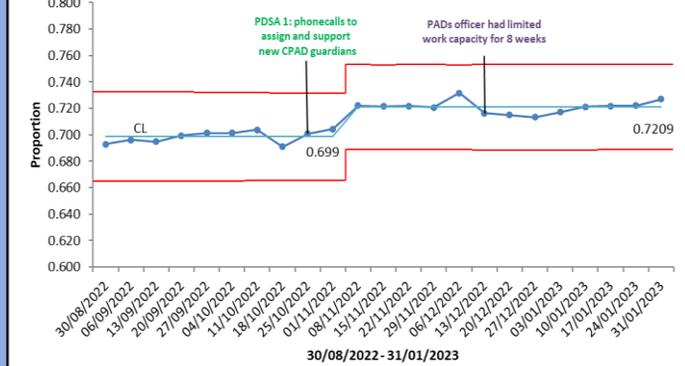
Strategy for change:

A key part of the PADs officer role is the maintenance of CPADs in an emergency-ready state.

Plan Do Study Act (PDSA)

A Pareto analysis of causes of offline CPADs >7 days shows most relate to the guardian role. Therefore the PADs officer focused on assigning new guardians & improving guardians response times to Circuit alerts; during several weeks of intensive phone calls.

Proportion of all CPADs in NW with assigned Guardian - p Chart. (n=1740 CPADs)



Conclusion:

P-chart (above) shows simple remote intervention by PADs officer improved the proportion of CPADs with assigned guardian during this PDSA. Weekly Circuit data updates allow rapid testing of new initiatives through PDSA cycles.

Next steps:

Refining the model of guardianship to improve proportion of CPADs with guardians from 0.72 closer to 1.0, and so improve proportion of emergency-ready CPADs.