

## Reducing Ambulance Offload Delay: A Quality Improvement Project at Princess Royal University Hospital

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**Abstract :** Background: Ambulance offload delays (AODs) affect patient outcomes. At baseline, the average AOD at Princess Royal University Hospital (PRUH) was 41 minutes, in breach of the 15-minute target. Aims: By February 2023, we aimed to reduce: the average AOD to 30 minutes percentage of AOD >30 minutes (PA30) to 25% and >60 minutes (PA60) to 10% Methods: Following a root-cause analysis, we implemented 2 Plan, Do, Study, Act (PDSA) cycles. PDSA-1 'Drop-and-run': ambulances waiting >15 minutes for a handover left the patients in the Emergency Department (ED) and returned to the community. PDSA-2: Booking in the patients before the handover, allowing direct updates to online records, eliminating the need for handwritten notes. Outcome measures: AOD, PA30, and PA60, and process measures: total ambulances and patients in the ED were recorded for 16 weeks. Results: In PDSA-1, all parameters increased slightly despite unvarying ED crowding. In PDSA-2, two shifts in data were seen: initially, a sharp increase in the outcome measures consistent with increased ED crowding, followed by a downward shift when crowding returned to baseline ( $p < 0.01$ ). Within this interval, the AOD reduced to 29.9 minutes, and PA30 and PA60 were 31.2% and 9.2% respectively. Discussion/conclusion: PDSA-1 didn't result in any significant changes; lack of compliance was a key cause. The initial upward shift in PDSA-2 is likely associated with NHS staff strikes. However, during the second interval, the AOD and the PA60 met our targets of 30 minutes and 10%, respectively, improving patient flow in the ED. This was sustained without further input and if maintained, saves 2 paramedic shifts every 3 days.

**Keywords :** ambulance offload, district general hospital, handover, quality improvement

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