

Comparison of Patient Stay at Withy Bush Same Day Emergency Care and Then Those at the Emergency Department

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Abstract : Introduction: In April 2022, the Welsh Government introduced the six goals for urgent and emergency care programs. One of these goals was to provide access to clinically safe alternatives, leading to the establishment of the Same Day Emergency Care (SDEC) program. The SDEC initiative aims to offer viable options that maintain patient safety while avoiding unnecessary hospital stays. The aim of the study is to determine the duration of patient stay in SDEC and compare it with that of Emergency department (ED) stay to ascertain if one of the objectives of SDEC is achieved. Methods: Patient stays and attendance datasets were constructed from Withybush SDEC and ED patient records. These records were provided by Hywel Dda University Health Board Informatics. Some hypothetical pathways were identified, notably SDEC visits involving a single attendance and ED visits then immediately transferred to SDEC. Descriptive statistics were used to summarise the data, and hypothesis tests for mean differences used the student t-test. Propensity scoring was employed to match a set of ED patient stays to SDEC patient stays which were then used to determine the average treatment effect (ATE) to compare durations of stay in SDEC with ED. Regression methods were used to model the natural logarithm of the duration of SDEC attendance, and the level of statistical significance was set to 0.05. Results: SDEC visits involving a single attendance (170 of 384; 44.3%) is the most frequently observed pathway with patient length of stay at 256 minutes (95%CI 237.4 - 275.1). The next most frequently observed pathway of patient stay was SDEC attendance after presenting to ED (80 of 384; 20.8%) and gave the length of stay of 440 minutes (95%CI 351.6 - 529.2). Time spent in this pathway significantly increased by 184 minutes (95%CI 118.0 - 250.2, support for no difference $p < 0.001$) compared to the most seen pathway. When SDEC data were compared with ED, the estimate for the ATE from SDEC single attendance was -272 minutes (95%CI -334.1 - -210.5; $p < 0.001$), while that of ED then SDEC pathway was -50.6 min (95%CI -182.7-81.5; $p = 0.453$). Conclusion: When patients are admitted to SDEC and successfully discharged, their stays are significantly shorter, approximately 4.5 hours, compared to patients who spend their entire stay in the Emergency Department. That difference vanishes when the patient stay includes a period spent previously in ED before transfer to SDEC.

Keywords : attendance, emergency-department, patient-stay, same-day-emergency-care

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