Results from a descriptive analysis of the relationship between adoption of OPTICA and delayed discharge from hospital

July 2026

Background

The number of patients medically ready to leave acute hospitals in England who are not discharged, or 'delayed discharges', has remained stable from 2022 to 2026, varying seasonally around an average of 12,500 patients per day. This is despite significant media and policy attention to the flow of patients through hospitals and its impact on A&E waiting times and 'corridor care'.

Discharge from hospital may require involvement of non-healthcare services, particularly social care. This interface is often seen as an underlying cause of delayed discharges, though the extent to which health or social care are individually responsible is hard to estimate.

Timely coordination of the necessary steps required of different services to discharge a patient safely may represent an opportunity to reduce delayed discharges. The Optimised Patient Tracking & Intelligent Choices Application (OPTICA) is a cloud-based digital tool that uses the NHS' Federated Data Platform (FDP) to draw on data held by hospital electronic health record systems and local health and social care data, allowing staff from different organisations to access information they need and work collaboratively towards a patient's discharge plan.

Developed by North of England Care System Support (NECS), OPTICA has been highlighted as one of five case studies of the benefits of the FDP, claiming a '13.58% decrease in average number of delay days for patients staying in hospital for more than 7 days after rolling out OPTICA'. A case study from South Tyneside and Sunderland NHS Foundation Trust found a 37% reduction in the average number of discharge delay days per month for 'long stay' patients, comparing the period before and after OPTICA adoption.

This note describes trends in delayed discharges in hospitals which have adopted OPTICA, seeking to identify whether the claims of benefit made in the published case

studies can be replicated or observed consistently across other adopting trusts. It is an update of similar analysis undertaken last year, and shared with the NHS England FDP Benefits and Assurance team in December 2025. The analysis reported here is updated to use the latest available data and includes some refinements to our approach.

Methods

Data sources

Publicly available data on daily numbers of patients medically fit for discharge from hospital but not discharged were obtained from NHS England's Acute Discharge Situation Reports and Urgent and Emergency Care Daily Situation Reports for each acute non-specialist NHS trust in England from 1 December 2021 to 31 May 2026, spanning the date OPTICA was first deployed in the NHS on 1 April 2022. Monthly data on the number of occupied general and acute inpatient beds at those trusts were obtained from NHS England's Bed Availability and Occupancy Collection for the study period. NHS England additionally provided details (names and adoption date) of trusts that deployed OPTICA in England.

Data processing

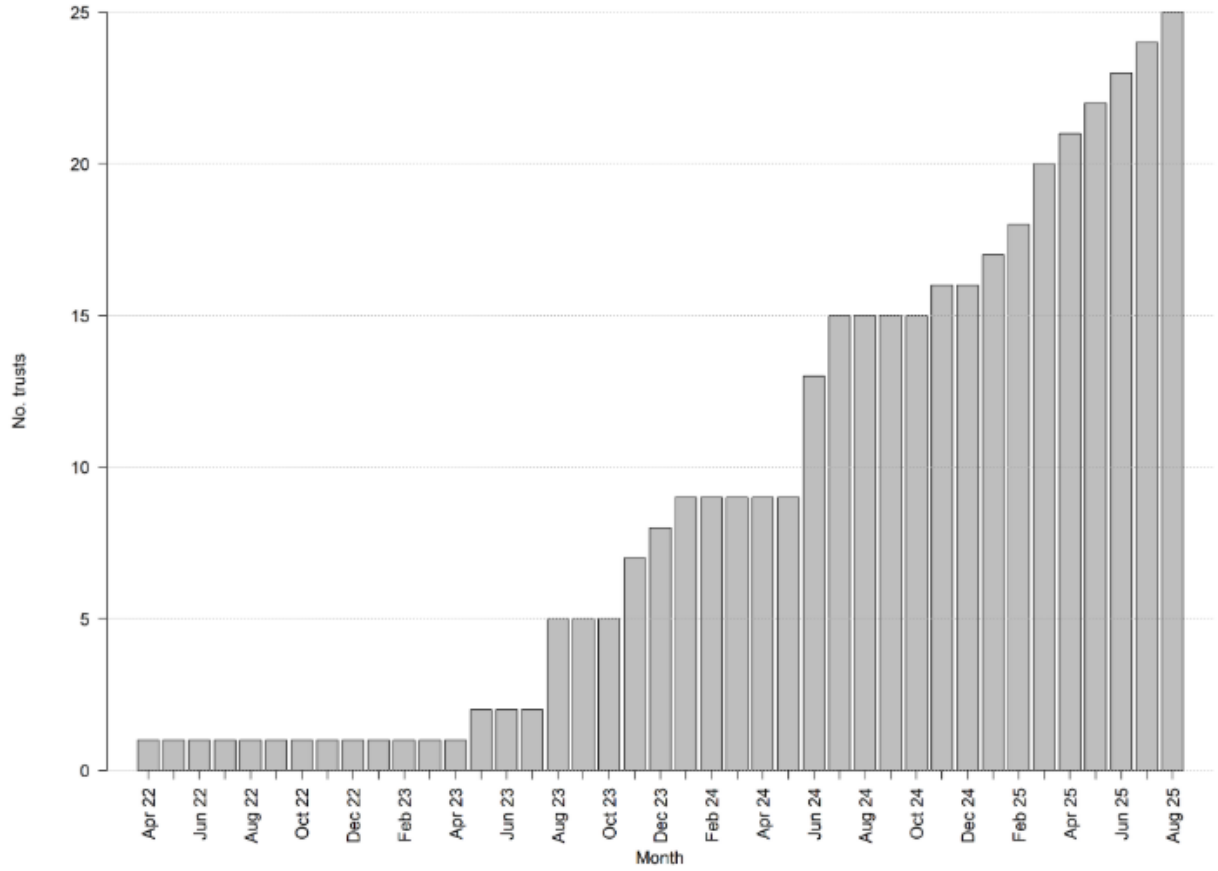
Monthly median numbers of delayed discharges were calculated from daily acute discharge data reported by acute non-specialist NHS trusts in England, both for individual trusts and for groups ever or never deploying OPTICA during the analysis study period. In more detail, the median number of patients who remained overnight in a given hospital trust despite being medically fit for discharge was calculated across each month. This value was then divided by the number of general and acute beds occupied at that trust during the same month to give the percentage of beds occupied by patients medically fit for discharge, in that trust and month. This procedure was applied for each trust and in aggregate for OPTICA-adopting and non-OPTICA-adopting trusts.

Trusts acquiring another trust during the study period were treated as merged for the duration of the study period and retained in the analysis. Data on delayed discharges were largely complete and there were no missing data for bed occupancy. Five trusts had single instances of missing data on delayed discharges of two months or less. In these cases, missing data were imputed as the mean of the median daily number of delayed discharges in the month before and month after the period of missing data. Two trusts with missing data of more than two months were excluded. All calculations were carried out in the Python (version 3.12.8) statistical computing environment.

Findings

Of the trusts with available data, we analysed data on 25 trusts which have adopted OPTICA and 91 trusts which have not. As shown in **Figure 1**, OPTICA was first adopted in April 2022 by North Tees and Hartlepool NHS Foundation Trust. This remained the only adopting trust for a year until adoption by other trusts began at a steady rate, reaching 25 trusts by September 2025.

Figure 1: Adoption over time of the OPTICA platform by acute NHS trusts in England.



Marked variation is seen between trusts in the percentage of beds occupied by patients medically fit for discharge, ranging from less than 5% in some trusts to over 30% in others (Figure 2), remaining broadly stable over time. Trusts that have adopted OPTICA are distributed across this range of values, and delayed discharge percentages separately pooled across non-adopting trusts and adopting trusts are similar across the study period. This indicates no strong relationship between delayed discharges and decisions to adopt the technology, or between the adoption of the technology and post-adoption delayed discharges (Figure 2).

Data were available on the 12 months before and after adoption of OPTICA for 21 out of 25 trusts (84%). As shown in Figure 3, there is a clear downward trend in the percentage of beds occupied by undischarged patients both before and after adoption of OPTICA, decreasing from a pooled percentage of around 14.5% one year before adoption to 12.5% four months after. An increase in the percentage of beds occupied by undischarged patients is then seen, peaking at 14% nine months after adoption before declining again.

Figure 2: Percentages of beds occupied by patients medically fit for discharge from acute NHS trusts in England ever adopting (solid grey lines) or never adopting (dashed grey lines) the OPTICA platform. Median pooled trends across trust groups ever adopting (solid red line) or never adopting (dashed blue line) the platform are also overlayed.

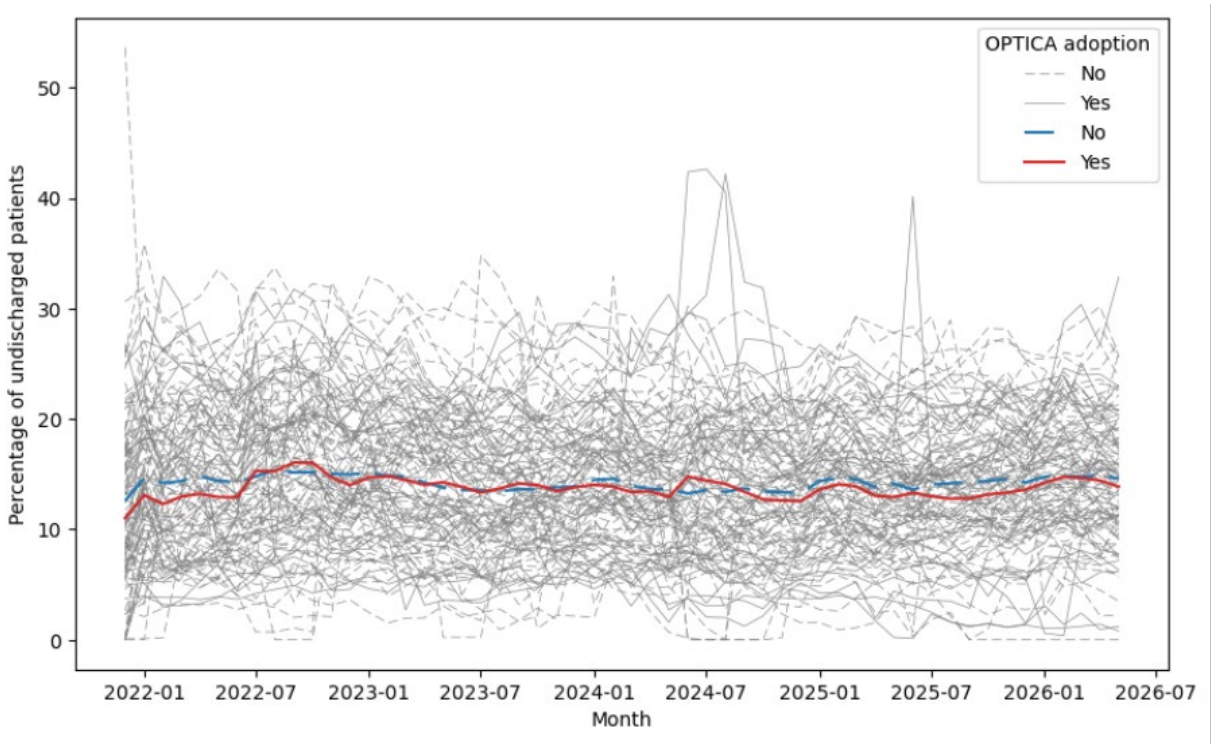
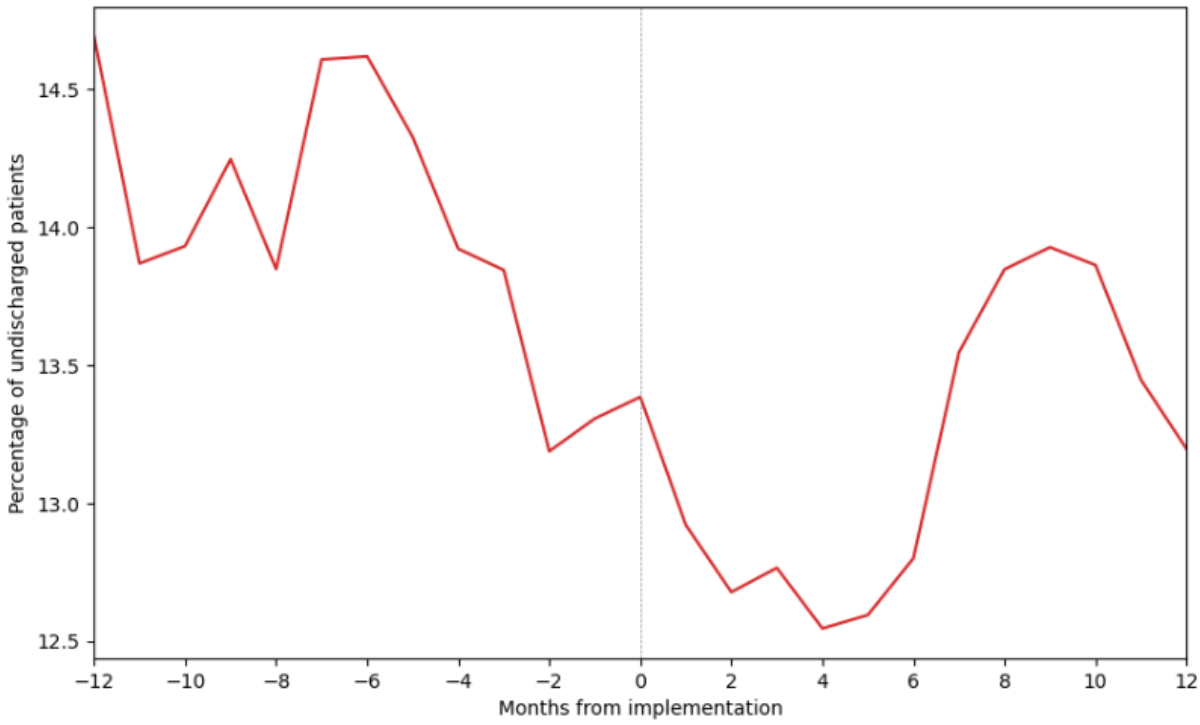
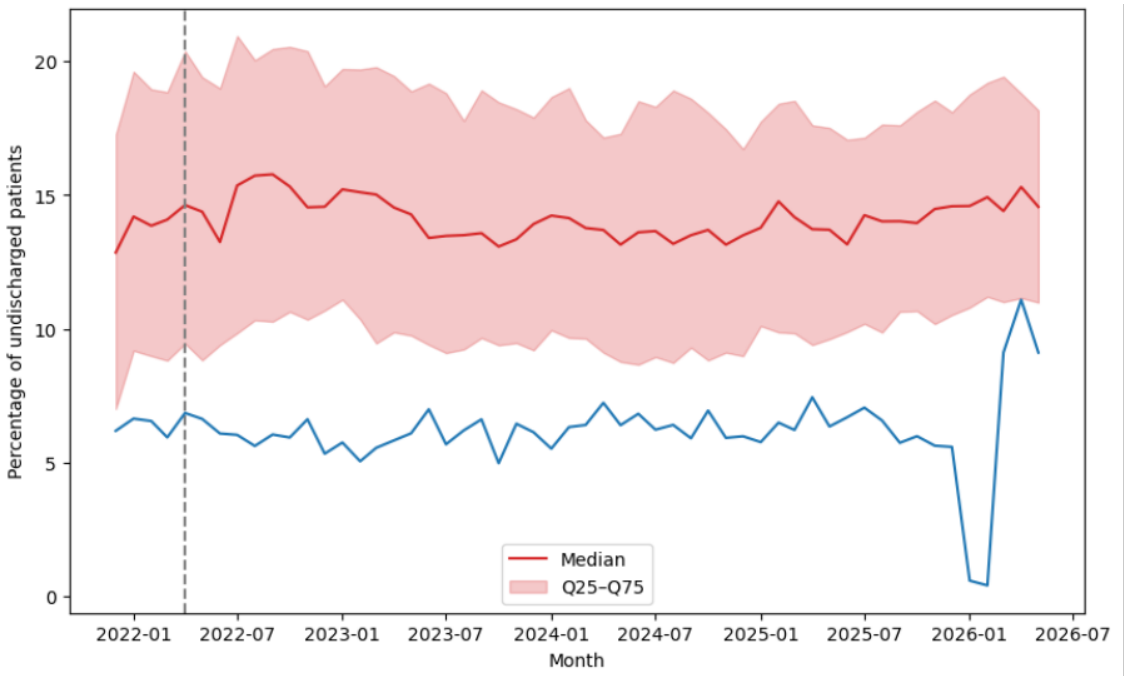


Figure 3: Percentages of beds occupied by patients medically fit for discharge from the 21 trusts with at least 12 months of available discharge delays data before and after adoption of OPTICA, measured relative to months lapsed before and since the month of deployment (time 0).



These pooled percentages across a sample of OPTICA-adopting trusts may mask varying trends within individual trusts. Looking at the first adopter of OPTICA, North Tees and Hartlepool NHS Foundation Trust, in Figure 4, we can see it has maintained a steady percentage of undischarged patients of 6% since adoption in April 2022 – among the best in the country – before showing marked volatility throughout 2026. Data for the four months of available data before OPTICA adoption in the trust are similar to post-adoption data, with no clear evidence of a change in delayed discharges associated with OPTICA adoption.

Figure 4: percentages of beds occupied by patients medically fit for discharge from the North Tees and Hartlepool NHS Foundation Trust since before and after adopting the OPTICA platform (blue line). Median (solid red line) and inter-quartile range (filled red region) across all included trusts are also overlayed. The vertical dashed line indicates the month OPTICA was deployed in the trust.



As mentioned in the introduction, South Tyneside and Sunderland NHS Foundation Trust was highlighted as an example of the benefits of OPTICA, with the case study highlighting a 37% reduction in the number of 'delay days' per month for 'long stay' patients in the first two months after adoption in December 2023 (Figure 5 – taken directly from the NHSE case study). Notably, we are unable to replicate the values presented in this case study from published data, instead finding the mean number of 'delay days' at the trust to be 3,575 per month from February 2023 to November 2023 and 3,725 per month in January and February 2024 – a 4.2% *increase*.

As Figure 6 shows, a trend towards a lower percentage of undischarged patients is seen in the early post-adoption period from February to April 2024, aligned with the findings presented in the case study. Importantly, this is followed by a substantial increase in the percentage of undischarged patients from around 11% to an average of around 18% from June 2024 to September 2025 and exceeding 23% in January 2026. The trust goes from being close to the best performing quarter of trusts to the worst performing quarter six months after adopting OPTICA.

Figure 5: The total number of 'delay days' (the numerator of the percentages used in our analysis) each month in a selected period before and after adoption of OPTICA in South Tyneside and Sunderland NHS Foundation Trust. Taken directly from the NHSE FDP 'uptake and benefits' case study.

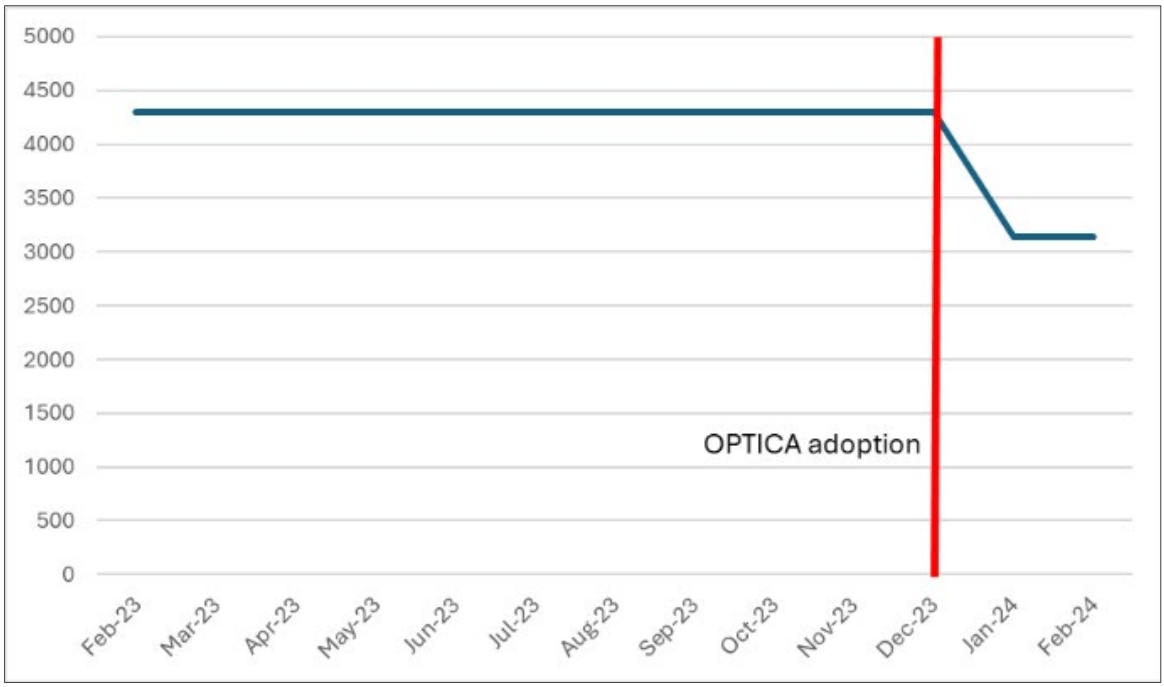
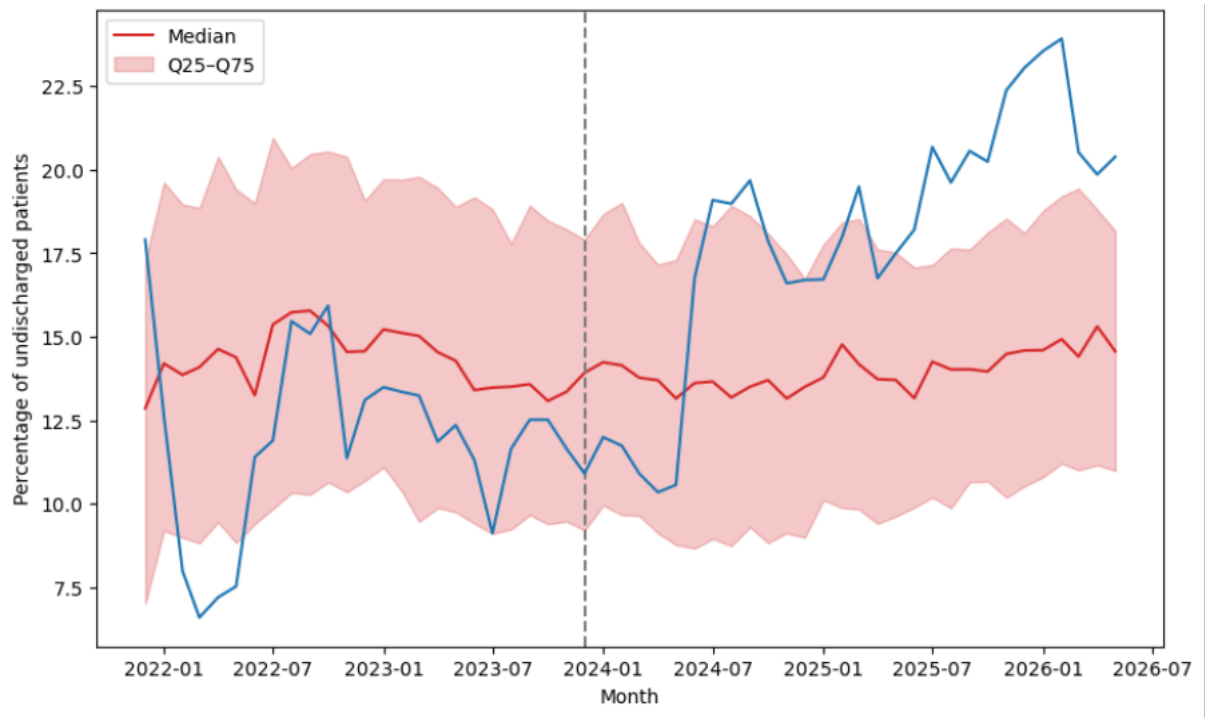


Figure 6: percentages of beds occupied by patients medically fit for discharge from the South Tyneside and Sunderland NHS Foundation Trust, before and since adopting the OPTICA platform. Median (solid red line) and inter-quartile range (red filled region) across all included trusts are also overlayed. The vertical dashed line indicates the month OPTICA was deployed in the trust.



Interpretation

- Examining the period from December 2021 to May 2026, trusts which have adopted OPTICA have very similar delayed discharge performance to trusts which have not adopted OPTICA (Figure 2).

- OPTICA adoption is not strongly associated with pre-adoption delayed discharge performance, ie it is not generally the best or worst performing trusts which adopt the technology. (Figure 2).

- OPTICA adoption in the 21 trusts with a year of data before and after adoption is not associated with a noticeable change in delayed discharge performance in the first four months after adoption, continuing the gradual trend towards better performance also identified in the pre-adoption period. An increase in the percentage of beds occupied by undischarged patients is then seen, peaking at nine months after adoption before declining again (Figure 3).

- These findings, though descriptive in nature, do not support the benefits of OPTICA described in the FDP case studies. In particular the South Tyneside and Sunderland NHS trust, which was identified as an FDP case study, has instead seen a marked *deterioration* in its performance after adopting OPTICA (Figure 6).

- An inferential or causal evaluation of the link between the deployment of OPTICA and delayed discharges, though possible, would require additional data and is outside the scope of the present analysis.

- Many factors influence delayed discharge from hospital and, while OPTICA may be useful and received well by staff who use it, there is little evidence of those benefits translating to measurable reductions in delayed discharges from this analysis. It may be, for example, that OPTICA is helpfully addressing one factor (eg communication between staff), but other factors (eg social care capacity) may limit its impact. These could be the subject of future evaluation.