

Improving Patient Safety in the Homecare Setting: A pilot study of a PIN system

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Introduction

The safe and effective delivery of medication to a patient in their home is a key priority of both providers and homecare companies across the North-West region. Incorrect deliveries have an impact on all involved in the process with incidents of delivery to an incorrect recipient and the subsequent breach in confidentiality having serious ramifications for key stakeholders.

In an effort to improve the delivery process and ensure robust information governance systems are in place Healthcare at Home (HAH) introduced an additional step in their delivery process by utilisation of a patient identification number (PIN) system.

In collaboration with HAH, Pennine Acute Trust was one of the first in the country to pilot the new process specifically with our HIV patient cohort.

Method

The new process introduced a PIN system built into the drivers handheld device (PDA). Before any patient identifiable information is displayed, the patient is asked to enter a six-digit PIN, and if entered correctly the necessary information is released and confirmed by the patient. The current signature verification process is still in place and follows on after successful PIN entry into the PDA. Failure to correctly enter the PIN three times will result in the driver contacting the logistics team. The patient or representative must then answer 3 out of 6 questions taken from the HAH verification check list correctly. If the answers cannot be matched, the delivery will fail and the medication will not be delivered, but returned to HAH for further verification of patient details and reschedule of delivery.

Results

Since the initiation of the pilot in February 2019 a total of 1197 deliveries have been made by HAH. 75% (903) of deliveries were successful PIN deliveries with 5% (70) requiring manual backup processes. From the data provided it was identified that 8.6% (104) were failed deliveries. A break down of the failed deliveries (table 1.) show that 7% (8) were provider related whilst 81% (85) were patient related. Comparison between PIN and non-PIN deliveries nationally within the HIV patient cohort has shown that the failure rate has stayed around 6.6% in both processes. During the pilot no deliveries were made to the wrong address or wrong recipient.

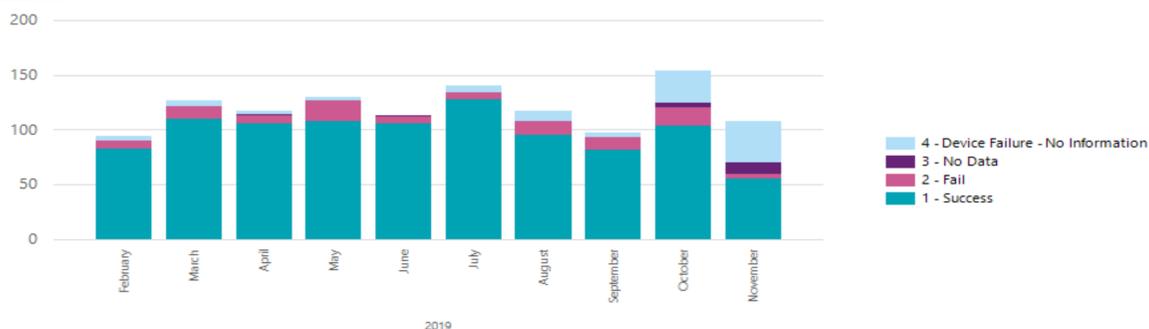


Figure 1: Performance Summary

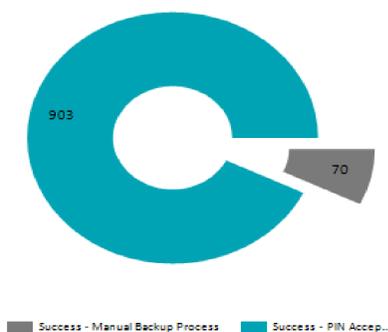


Figure 2: Success details

Table 1: PIN pilot detailed information

Status	No. of Orders
Device Failure - No Information	103
Fail - Goods Not at Depot	4
Fail - Incorrect Address	2
Fail - No Access / Closed	6
Fail - Order Raised on Wrong Day	1
Fail - Other	11
Fail - Overage	1
Fail - Patient Cancelled Delivery	6
Fail - Patient Not In	72
Fail - Route Cancelled by HAH	1
No Data	17
Success - Manual Backup Process	70
Success - PIN Accepted	903

Discussion

- Implementation of the PIN system at The Pennine Acute Hospitals Trust has been a success.
- Failed delivery rate has stayed the same in comparison to non PIN deliveries within the HIV patient cohort but there is now additional patient safety systems in place.
- No incorrect deliveries or breaches of confidentiality have occurred during the pilot, successfully achieving the key aim of the PIN system.
- An increase in device failure had been identified as shown in figure 1. This is being addressed by the implementation of new devices.
- Patients can now be reassured that only people with access to their PIN will be able to accept delivery of their medication.
- Positive feedback from clinical teams and patients over the additional security processes introduced.
- Anecdotal evidence suggests there is no additional time impacts on the driver or the patient when utilising the PIN system.

Conclusion

Further work is needed to identify trends around delivery failures in order to improve the efficiency of the overall system with a particular focus on patient failures.

From a clinical point of view, one unexpected positive of the pilot was the identification of patients who were unsuitable for the homecare service. Patients with a poor grasp of English or failure to comprehend the requirements were escalated to the clinical teams for review of their suitability. This has led to 3 patients being removed from the homecare service and highlighted that it may be necessary for some specific homecare training to be provided to prevent this from happening in the future.

Due to the overall success of the pilot, there are plans to roll the scheme out across a wider geographical and clinical footprint.

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References

Data provided by Healthcare at Home