

# Improving attendance at HIV clinic - a text message reminder service and analysis of a demographic database to tailor interventions

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## Background

Nationally 9% of all hospital clinic appointments are missed at an estimated cost of 225 million pounds<sup>1</sup>. Data from the Royal Liverpool Hospital (RLUH) shows significantly higher rates of 10% to 26% across different specialities, with HIV clinics amongst the worst attended.

There is good evidence linking clinic attendance and good outcomes for HIV patients<sup>2</sup>. Successful HIV care is dependent on long term daily adherence to medication and blood monitoring to ensure that this remains effective, both of which are primarily provided through clinic attendance at the RLUH.

Focusing on the busiest HIV clinic at the RLUH, over the last 14 months a series of interventions aiming to improve attendance have been put in place with on-going monitoring and team review utilising PDSA methodology. The first of these was a text message reminder service, developed across the trust for all outpatient clinics which commenced in March 2017. The second was raising team awareness and creating a way of recording missed appointments on the electronic record to prompt discussion with patients at subsequent appointments starting August 2017.

The aims of this project were two-fold;

1. To identify if the text reminder service, team awareness and improved recording have had a sustained effect on attendance rates.
2. To undertake analysis of service users who did not attend clinic (DNA) in order to tailor services to reduce wasted appointment slots and improve engagement with care.

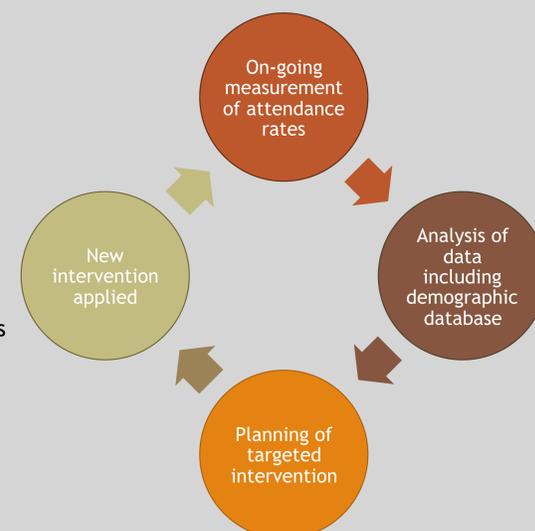
## Methods

Attendance data for the HIV clinic, held at RLUH on Tuesday afternoon was collected from April 2016 onwards.

This was originally undertaken through paper returns and subsequently extracted from iPM, (the appointment management system).

Over a period of 4 months from August to November 2017, after interventions described, all patients who missed one or more scheduled appointments were identified through clinic outcome lists.

The Merseyside HIV database was then used to collect the following characteristics for each patient: Age, gender, viral load, CD4 count, medication regime, co-morbidities, psychiatric history, street drug use.



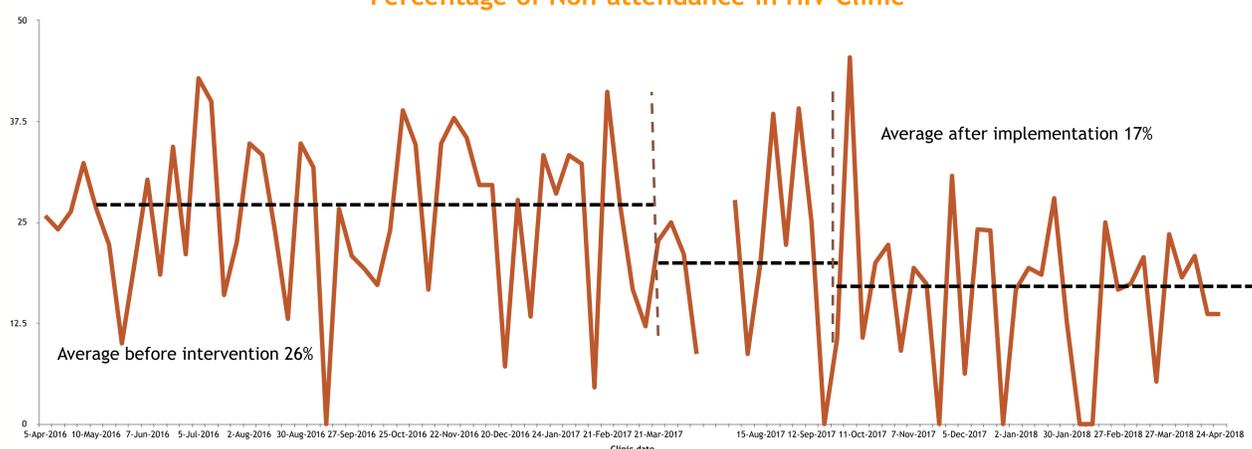
## Results

The number of patients booked into each weekly clinic varied from 12 to 35 over the time window of monitoring. On average 92 patients were seen each month. The proportion of patients that failed to attend showed huge variation from week to week (0% to 46%). Before any intervention mean DNA rates were 26%, this reduced to 19% after text messages and 17% after other interventions.

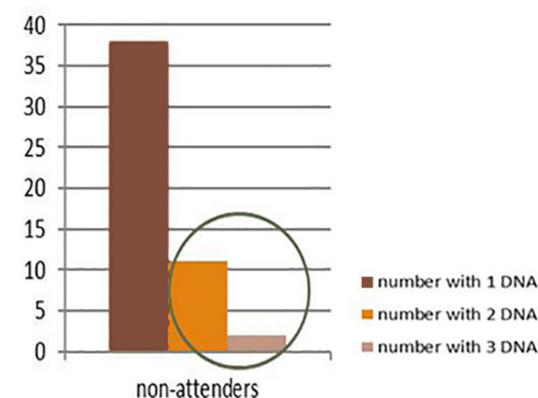
During the 4 month window 49 patients missed a total of 63 appointments. Reviewing demographic data identified two important groups of non-attenders;

1. A group who repeatedly do not attend, missing 2 or more appointments over the period being reviewed. These are vulnerable patients who are not virally suppressed and are more likely to have active psychiatric problems. (Circled on graph below).
2. A larger group that each missed a single appointment. On the whole these patients remained virally suppressed and have similar demographic to the clinic cohort as a whole.

Percentage of Non-attendance in HIV Clinic



Number of appointments missed per patient



## Conclusions.

1. There has been a significant and sustained improvement in DNA rates from 26% to 17%. This equates to an absolute reduction of 35% and an has prevented an average of 9 appointments per month from being wasted. HIV clinics are specially commissioned attracting a tariff of £250 per attendance. Each month this is worth £2250 and £27k over a year for a single clinic. There is potential to use the same interventions in other HIV clinics across the trust as well as other specialist clinics.

2. Review of individual patients has identified subgroups that will require different interventions to help them engage with effective care. Tailoring for even for very small groups is likely to be clinically and financially worthwhile because of the high cost associated with treatment failure and /or the onward transmission of HIV.

3. Significant further improvement is needed and likely to be possible. This project has had the support of the entire HIV team at RLUH who have worked together to review the data and decide on each intervention. Their engagement creates an ideal working environment for further improvement using PDSA cycles.

## Next Interventions

