Research Article ISSN 2639-944X

Journal of Medical - Clinical Research & Reviews

Reducing Ultrasound DNA (did not attend) Rate – A Closed Loop Audit: A District Hospital Experience

Aditi Bhat*, Raza Syed Hasan and Betarse Dev

Milton Keynes University Hospital, Milton Keynes, UK.

***Correspondence:**
Dr. Aditi Bhat, Flat 9, Seckloe House, 101 North Thirteenth Street, MK9 3NX, United Kingdom, Tel: (+44)7961646336.

Received: 28 October 2020; **Accepted:** 13 November 2020

Citation: Bhat A, Hasan RS, Dev B. Reducing Ultrasound DNA (did not attend) Rate – A Closed Loop Audit: A District Hospital Experience. J Med - Clin Res & Rev. 2020; 4(10): 1-3.

ABSTRACT

Background: *Non-attendance for appointments in healthcare results in wasted resources and disruption of planned work-schedules [1]. In the UK, economic cost of DNA (Did Not Attend) events was estimated about 1 billion pounds with a national average DNA rate of 8% in 2018-19 [2] and 8.8% in 2016-17 [3] DNA rates for Radiology are often high probably due to a bias of radiology referrals towards an older, potentially more dependent population [4].*

Objectives: *To analyse the Ultrasound DNA and its reasons.*

To evaluate effect of changes implemented to improve the DNA rate.

Method: *A baseline audit was performed by retrospective analysis of Ultrasound appointments from a week in February 2020. A re-audit was done in July 2020 following recommendations such as setting up a SMS/Call reminder service, maintaining up to date contact details and separate coding for 'false' DNAs.*

Results: *In the initial audit, the DNA rate was 8.6%. The most commonly encountered reasons were appointment letters issues (32%) and false coding as DNA (24%). Introduction of SMS/Call reminder service with regularly updated contact details resulted in a marked reduction of DNA (4.1%), the appointment letters issues and falsely coding contributing to 8.3% each. There was also a significant improvement in the number of patients who responded/could be contacted (increase from 43 to 58.3%).*

Conclusion: *The introduction of Call/SMS reminder system reduced the DNA rate by almost half.*

Keywords

Did not attend (DNA), Non-attendance, Radiology, Ultrasound.

Introduction

Non-attendance for appointments in healthcare is a ubiquitous problem and results in wasted resources and disruption of planned work-schedules [1] Interest in DNA was generated in the early 1980s when the son of conservative MP was the sole patient to attend the hospital for an operating list of 14 patients [2]. In the UK, economic cost of DNA (Did Not Attend) events was estimated about 1 billion pounds with a national average DNA rate of 8% in 2018-19 [3] and 8.8% in 2016-17 [4]. DNA rates for Radiology are often high probably due to a bias of radiology referrals towards an older, potentially more dependent population [5]. Whilst there is no extensive study relating to non-attendance within the radiology department [6,7] there is literature from other health disciplines, which may help to understand the background of why patients fail to attend out-patient appointments [8,9].

Objectives

The first objective of this audit was to analyse the rate of DNA at out-patient Ultrasound appointments over a period of 1 week in

February 2020 at Milton Keynes University Hospital (MKUH). It also aimed to identify the reasons for non-attendance and implement recommendations in order to reduce the rate of DNA.

Secondly, this audit aimed at evaluating the effects of implemented recommendations by re-analysing the DNA rate over a period of 1 week in July 2020.

Methods

The PACS (Picture archiving and communication system) division of Radiology department was contacted and a list of all out-patient Ultrasound appointments along with the DNAs was generated. For the purpose of this audit, DNA was considered as a patient not attending the appointment or attending too late to be able to be seen[7]. The rate of DNA was calculated and the reasons for DNA were analysed by utilising the eCARE and CRIS (Radiology information system) systems of the hospital and by contacting the patients who had missed appointments via telephone based on contact details available on the system.

Following the first cycle of the audit, recommendations were made to initiate call/SMS reminder service, separate coding for 'false' DNAs and maintaining up to date contact details of patients. 5 months later, a re-audit was done to assess the effect of the implemented recommendations.

Results

A total of 675 out-patient Ultrasound appointments were scheduled over a period of 7 days in February 2020, which had 58 DNA (8.59%). Out of total DNA, 6 were falsely coded as DNA. So, the actual DNA rate was 7.7%.

Among the 58 DNAs, only 25 patients (43%) were contactable through available contact details. Remainder did not answer the call on two different days (25), had wrong contact details on the system (6), or had no contact details on the system (2).

Reason for DNA	Number
Did not receive appointment letter or received late	8
Work, other commitments, forgetting or sickness	8
Concerns of COVID-19	3

Table 1: Shows the reasons for DNA among 25 patients who answered the call.

1	Patient being unfit for scan, like inadequately fasted for scan.
2	Scans rescheduled by patients.
3	Scan requests deemed inappropriate by radiologist.

Table 2: Enlists the common examples of falsely coded DNAs.

Average waiting time for the appointment was 31.9 days among DNAs (range 9-53 days).

The re-audit was done in July 2020 over a period of 7 days and had a total of 585 scheduled appointments for out-patient ultrasound scans. Out of which 24 patients missed their appointments (4.1%). Of the 24 DNAs, only 2 were falsely coded as DNA. So, the actual DNA rate was 3.7%.

Only 14 patients (58.3%) who missed their appointments answered the call. Remainder did not answer the call on two separate days (8) nor had no contact details on the system (2).

However, there were no patients with incorrect contact details among the DNAs during this audit cycle.

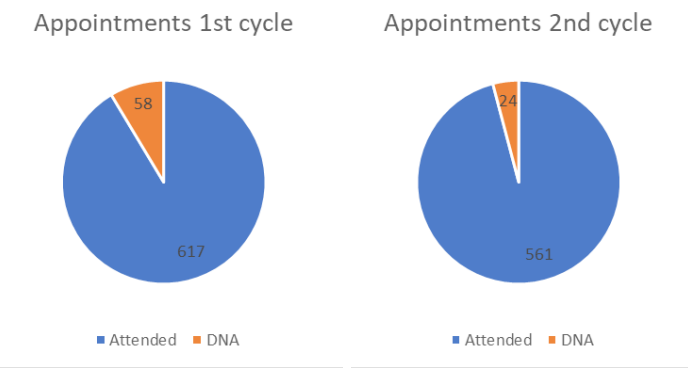
Reason	Number
Appointment letter related	2
Work or other commitments or forgetting	5
Death	2
Late arrival	2

Table 3: Enlists the reasons for DNA among the patients who answered the call.

1	Patient had Ultrasound guided procedure done a week earlier, hence request cancelled by radiologist. Patient subsequently had a CT scan.
2	Patient had two ultrasound requests, one less than 2 week – wait.

Table 4: Lists the falsely coded DNAs during the re-audit.

Average waiting time among DNA of second cycle was 24.9 days (range 7-45) (Figure 1).



Discussion

Overall, the audit revealed the rate of DNA for ultrasound appointments at MKUH is comparable with the national average [3,4]. The introduction of a single measure of reminding patients of their appointments via SMS/call resulted in marked improvement in the attendance rate. The SMS/call reminder service ensures patients are reminded of their upcoming appointment and serves as a safety measure in case the patient has not received the appointment letter. The reminder service also serves as a unique opportunity to the patient to reschedule the appointment if unable to attend and that appointment slot can be allotted to other patients waiting before it is too late to do so. While this study did not assess the economic impact of missed appointments vs SMS/call reminder service, it is understood from other studies that the cost of these reminders is much less than the missed appointments [1].

There were a significant number of patients who did not answer the call in both the cycles of the audit, which though a potential bias in this study, is a variable that cannot be controlled.

The first and second cycle of the audit were done in winter and summer respectively, and the effect of weather on attendance rate if any was beyond the scope of this audit to analyse and is another potential bias.

Longer waiting times for appointments could be a reason for DNA. In this audit, the lower rate of DNA in the second cycle coincides with a lower waiting period. A further detailed study with a data over a longer period will therefore be needed to deduce the effect of waiting period on DNA rate.

Due to the burden of DNA on resources and economy, it is vital to continue to assess the factors that influence DNA and make appropriate changes. In this study, though a single change of initiating SMS/call reminder reduced the DNA rate to half, it is crucial that all other measures aimed at understanding the reasons of DNA and reducing the DNA are continued. Public should be made aware of the problems caused by missed appointments which can be achieved by patient information leaflets attached with the appointment letter or informing the patient during the reminder SMS/call [7].

Conclusion

The effect of SMS/call reminders on DNA rate is huge in a positive way. In this study initiation of SMS/call reminder service reduced the DNA rate to almost half (7.7% to 3.7%).

References

1. Hasvold PE, Wootton R. Use of telephone and SMS reminders to improve attendance at hospital appointments a systematic review. J Telemed Telecare. 2011; 17: 358-364.
2. Davies P. Why don't patients turn up? Health Soc Serv J. 1984; 886: 7.
3. https://www.nhsbenchmarking.nhs.uk/news/2019-outpatients-project-results-published
4. https://www.england.nhs.uk/statistics/2017/02/24/nhs-inpatient-elective-admission-events-and-outpatient-referrals-and-attendances-quarter-ending-31-december-2016/
5. https://www.rcr.ac.uk/audit/ensuring-patients-arrive-appointments-%E2%80%93-reducing-dna-rates
6. Kane K. Non-attendance for appointments in an outpatients X-Ray department. Radiogr Today. 1991; 57: 15e9.
7. Rebecca Lyon, Pauline J. Reeves. An investigation into why patients do not attend for out-patient radiology appointments. The society and college of radiographers. 2006; 12: 283-290.
8. Leese AM, Wilson JA, Murray JAM. A survey of the nonattendance rate at the ENT clinics of a district general hospital. Clin Otolaryngology. 1986; 11: 37-40.
9. Killaspy H, Banerjee S, King M, et al. Prospective controlled study of psychiatric out-patient non-attendance. Br J Psychiatry. 2000; 176: 160e5.