



An Roinn Sláinte
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Patients' Reasons for Non-Attendance at Outpatient Appointments: A Literature Synthesis

A Department of Health Research Paper, 2019

Robert Murphy and Carol Taaffe, Research Services and Policy Unit, R&D and Health
Analytics Division, Department of Health

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Executive Summary

One in six patients in Ireland did not attend (DNA) hospital outpatient appointments in 2015. This is a DNA rate of 15%, costing the HSE over €20 million and compounding the waiting list problem (Cullen, 2016). To address the issue of non-attendance it is important to understand the reasons given by patients for DNAs. This report synthesises findings from international studies on the reasons given by patients for non-attendance at outpatient appointments. These studies draw on patient questionnaires, surveys and interviews.

The key findings are:

1. The four **most common reasons** were: patient forgot; patient was too unwell to attend; patient felt better; and service error, including failure to inform the patient of his/her appointment or to register a cancellation. The next three most common reasons were: trouble getting off work; the patient feeling the appointment appeared to have no benefit, or was unnecessary; and transport problems, including cost.
2. Reasons for DNAs were **categorised** according to those originating with the service user, with the service provider, or with service user and service provider interactions. While more than half of the reasons for DNAs can be categorised as patient factors, some commonly cited reasons for non-attendance do not rest solely with the patient, such as service error or the patient feeling the appointment would be of no benefit (see Table 1).
3. Taking the reasons for the undesired outcome (DNA) into consideration shows that the **desired behaviour** depends on the nature of the reasons for the DNA, namely:
 - a. the patient attending, for example where the patient forgot, or did not see a benefit in the appointment.
 - b. the patient rescheduling or cancelling, for example where the patient was unwell, felt better or was on holiday.
 - c. the event is not recorded as a DNA, for example where a patient was admitted to another hospital and so could not attend.

Analysing the reasons for DNAs suggests **interventions or changes** that may help. It may be possible to increase attendance with better communication (e.g. more effective appointment letters, the use of reminders) and by reducing barriers to attendance (e.g. addressing transport problems). DNAs may also be reduced by providing patients with a choice of appointment times or by providing an easy means for rescheduling or cancellation. Improving hospital processes may reduce events being inappropriately recorded as DNAs.

Table 1: Patients' Reasons for Non-Attendance at Outpatient Appointments

Service User	Service Provider	Service User and Service Provider Interactions
Patient forgot ^{1, 2, 4, 5, 6, 7, 8, 9}	Service error ^{5, 6, 7}	Patient felt the appointment appeared to have no benefit ^{2, 3, 4}
Too unwell ^{1, 2, 3, 6, 7, 8, 9}	Admitted to hospital ^{2, 5}	Not at a convenient time ^{8, 9**}
Felt better ^{1, 4, 6, 8, 9}	Hospital changed the appointment ³	Patient was fearful of being seen by a junior doctor ⁵
Transport problems ^{2, 6, 7*}		Frustrated with structure & delivery of outpatient care ⁸
Trouble getting off work ^{3, 7, 9}		
Patient was on holiday ³		
Illness of a family member ⁶		
<p>The reference numbers in the table correlate to nine articles consulted in this literature review.</p> <p>*Transport problems might also be attributed to service user/service provider interactions, as they can relate to location of the service provider, transport networks and parking availability or costs, or to the individual's ability to drive or location of residence.</p> <p>**This is listed as arising from service user/ service provider interactions as the service provider could offer options for appointment times or dates.</p>		

1. Introduction

1.1 Background and Purpose

One in six patients in Ireland did not attend hospital outpatient appointments in 2015. 'Did not attend' (DNA) rates ran at 15%, costing the HSE over €20 million and compounding the waiting list problem (Cullen, 2016). DNAs are not in the interest of the health of patients nor in the efficient provision of health services.

To address the issue of non-attendance, it is important to understand the reasons given by patients for DNAs. International experience shows that changing the content and layout of appointment invitations is one way to significantly improve patient attendance. In Australia, the behaviourally-informed design of text message reminders reduced outpatient DNAs by almost 20%. Changes in reminder letters for cervical screening appointments similarly improved screening rates by 9% (Behavioural Insights Unit, n.d.).

In Ireland, a variety of outpatient appointment letters are currently used throughout the hospital system. The Research Services and Policy Unit in the Department of Health is working collaboratively with the National Treatment Purchase Fund (NTPF), the Health Service Executive (HSE) and an advisory group to design and test a letter and SMS with the aim of reducing DNAs. The purpose of this literature review is to summarise reasons that patients reported for their non-attendance at outpatient appointments.

1.2 Method

A systematic search was undertaken for peer-reviewed articles on patient-reported reasons for not attending outpatient appointments. PubMed and Google Scholar were searched. The search included variations on the term 'do not attend' and 'DNA': 'missed appointments patients' and 'missed outpatient appointments reasons', 'non-attendance AND reasons OR why,' 'non-attend* AND reasons OR why,' 'non-attendance AND outpatient,' 'non-attend* AND outpatient,' 'failure to attend,' 'patient dropouts.'¹ This search produced 59 relevant results and their abstracts were screened, with five studies selected to be reviewed in full.

A further four studies were identified through citation searches and reviews. A Web of Science citation search was also conducted of a systematic review of non-attendance in primary care (Ajay et al., 2003).

¹ The search ranged over the last thirty years of publications on the topic.

Citations in four studies dealing with outpatient appointments were then consulted (Frankel et al. 1989; Murdock et al. 2006; Van Baar et al. 2006; Collins et al, 2003), as well as a report on using behavioural insights to reduce missed outpatient appointments (Behavioural Insights Unit, n.d.), and a randomised-controlled trial on SMS reminders reducing missed hospital appointments (Hallsworth, 2015). No systematic reviews were found on this topic.

The table on the next page summarises the methodologies of nine studies reviewed in full.

In preparing this report, the authors followed the Irish Government Economic and Evaluation Service (IGEES) quality assurance process, seeking feedback on: the analysis format (structure), clarity (quality of writing), accuracy (reliability of data), robustness (methodological rigour), and consistency (between evidence and conclusions). The report was circulated for review to the following:

- Internal/ Departmental
 - Line management – Research Services and Policy Unit
- External
 - A behavioural insights advisory group
- Other
 - Outpatients Communications Improvement Project Group, representatives from the Health Service Executive (HSE) and the National Treatment Purchase Fund (NTPF).

1.3 Report Structure

The findings of the individual studies were summarised as follows (Appendix A provides a tabular summary of the evidence found):

- frequency of reasons reported (see Chapter 2)
- service user or service provider factors (see Chapter 3)
- identifying the ideal behaviour given the circumstances for the DNA (see Chapter 4)

Key	Author	Year	Sector	Location	Method	Respondents	Scale
1	Bottomley et al.	1994	Dermatology outpatient clinic	District general hospital, UK	Prospective study of new patient non-attendance	Non-attenders referred by GPs	54 non-attenders
2	Collins et al.	2003	Neurology and orthopaedic outpatient clinics	Teaching hospital, Australia	Survey questionnaire	Patients	100 attenders, 100 non-attenders
3	Frankel et al.	1989	General surgery, gynaecology, ENT, trauma and orthopaedics, general medicine and dermatology outpatients	General hospital, UK	Questionnaire with open and closed questions	Patients	162 non-attenders and 112 attenders
4	Mason	1992	Dermatology, general medicine and postnatal obstetrics outpatient clinics	General hospital, NI	Qualitative: open-ended interviews with GPs; observation and open-ended interviews with hospital staff, semi-structured interviews at home with non-attenders	Non-attenders and health professionals	11 GPs, 18 other health professionals, 19 responses from non-attenders
5	Murdock et al.	2002	Gastroenterology outpatient clinic	Teaching hospital, NI	Postal and telephone questionnaires: multiple choice	Non-attenders	73 non-attenders
6	Pal et al.	1998	Outpatient	Two NHS Trust hospitals	Questionnaire	Non-attenders	983 non-attenders
7	Stone et al.	1999	Plastic surgery outpatient clinics	General hospital, UK	Audit questionnaire for health professionals; anonymous questionnaire for non-attenders	Non-attenders and health professionals	176 outpatient clinics audited; 250 non-attender responses
8	Van Baar et al.	2006	Outpatient asthma clinic	Teaching hospital, UK	Interviews	Patients with moderate to severe asthma	12 attenders, 7 non-attenders
9	Verbov	1992	Dermatology outpatient clinic	General hospital, UK	Asked why they had failed to attend previously	Non-attenders who attended at a later date	100 non-attenders

2. Frequency of reasons reported

Table 2.1 lists reasons given by patients for non-attendance; the most frequently cited reasons are listed first.

Four or more studies cited the following four reasons for DNAs, namely: patient forgot; patient was too unwell to attend; patient felt better; and service error, including failure to inform the patient of his/her appointment or to register a cancellation.

The next three most common reasons for DNAs were: trouble getting off work; the patient feeling the appointment appeared to have no benefit, or was unnecessary; and transport problems, including cost.

Table 2.1. Patient Reasons for Non-Attendance by Frequency Cited

Rank	Reason
1	Patient forgot ^{1,2,4,5,6,7,8,9}
2	Patient was too unwell to attend ^{1,2,3,6,7,8,9}
3	Patient felt better ^{1,4,6,8,9}
3	Service error, including failure to inform the patient of his/her appointment or to register a cancellation ^{1,4,5,6,7}
4	Trouble getting off work ^{3,7,9}
4	Patient felt the appointment appeared to have no benefit, or was unnecessary ^{2,3,4}
4	Transport problems, including cost ^{2,6,7}
5	Patient was admitted to hospital ^{2,5}
5	Appointment not scheduled at a convenient time ^{8,9}
6	Hospital changed the appointment ³
6	Patient was frustrated with structure and delivery of outpatient care, e.g. waiting times in the clinic were too long, clinics were poorly organised, patients disliked seeing different doctors at each visit ⁸
6	Patient was on holiday ³
6	A family member was ill ⁶
6	Patient was fearful of being seen by a junior doctor ⁵

3. Reasons categorised as service user or service provider factors

Table 3.1 categorises the reasons for non-attendance by individual patient (service user) factors, service provider issues, and the interaction between the service user and the service provider.

This shows that half of the reasons reported for DNAs can be categorised as patient factors, i.e. due to patients forgetting, being too unwell, feeling better, or being on holidays, or patients' economic or family circumstances (transport problems, trouble getting off work, illness of a family member). Nevertheless, some commonly cited reasons for non-attendance are service provider errors and the results of unsatisfactory interactions (the patient feeling apprehensive or fearing the appointment will be of no benefit).

Table 3.1. Reasons for Non-Attendance by Service User/ Service Provider Factors

Service User	Service Provider	Service User and Service Provider
Patient forgot ^{1, 2, 4, 5, 6, 7, 8, 9}	Service error ^{5, 6, 7}	Patient felt the appointment appeared to have no benefit ^{2, 3, 4}
Too unwell ^{1, 2, 3, 6, 7, 8, 9}	Admitted to hospital ^{2, 5}	Not at a convenient time ^{8, 9}
Felt better ^{1, 4, 6, 8, 9}	Hospital changed the appointment ³	Patient was fearful of being seen by a junior doctor ⁵
Transport problems ^{2, 6, 7}		Frustrated with structure and delivery of outpatient care ⁸
Trouble getting off work ^{3, 7, 9}		
Patient was on holiday ³		
Illness of a family member ⁶		

4. Reasons for non-attendance and the desired behaviour

Taking into consideration the reasons for the undesired outcome (DNA) shows that the desired behaviour depends on the nature of the reasons for the DNA. There are three types of desired behaviour which, given the circumstances, would not have resulted in a DNA.

1. The patient attending. This applies where the reason reported by the patient for not attending was:
 - forgot
 - felt appointment had no benefit
 - transport problems
 - fearful of being seen by a junior doctor
 - frustrated with structure and delivery of outpatient care.

2. The patient rescheduling or cancelling. This applies where the reason reported by the patient for not attending was:
 - too unwell
 - illness of family member
 - felt better
 - trouble getting off work
 - not at a convenient time
 - was on holidays.

3. The event was not recorded as a DNA. This applies where the reason reported by the patient for not attending was:
 - service error
 - admitted to hospital
 - hospital changed the appointment.

5. Conclusions

Analysing the reasons for DNAs suggests interventions or changes that may help, as follows:

- better communication (e.g. more effective appointment letters, the use of reminders) and reducing barriers to attendance (e.g. addressing transport problems);
- providing patients with a choice of appointment times and/or providing an easy means for rescheduling or cancellation;
- improving hospital processes to reduce events being inappropriately recorded as DNAs.

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Author	Year	Sector	Questions							
			Differences in profiles missed v. attended	Differences in practices	Reasons for missed appointments	Attend re-schedule	Location	Methods	Source of information	Number
Bottomley et al.	1994	Outpatient	N/A	N/A	Forgot; felt better; illness; inadequate communication with hospital	N/A	General hospital	Prospective study	Patients and hospital records	282 patients
Collins et al.	2003	Outpatient	Non-attenders younger, less distance to travel, slightly longer symptom duration and wait in clinic, in full employment. Previous DNA a predictor. Attenders more likely consider it easy to attend.	N/A	Forgetting; unaware of the appt; too sick; no parking; too long to see a doctor; in hospital; mixed up dates	N/A	General hospital	Survey questionnaire	Patients	100 attenders, 100 non-attenders
Frankel et al.	1989	Outpatient	Non-attenders were younger and slightly more likely to be male, no significant difference in scale of urgency or severity of symptoms. More likely to have received short notice of appt, less likely to understand purpose of appt.	N/A	Being on holiday, thinking treatment unnecessary, difficulties getting off work, hospital changing the appt, feeling too unwell on the day	Twice as many non-attenders admitted previous DNAs	General Hospital	Questionnaire	Patients	286 responses

Author	Year	Sector	Differences in profiles missed v. attended	Differences in practices	Reasons for missed appointments	Attend re-schedule	Location	Methods	Source of information	Number
Mason	1991	Outpatient	N/A	N/A	Hospital error, forgot, felt better, did not think appt was of benefit	N/A	General hospital	Qualitative: open-ended interviews; semi-structured interviews	Patients and health professionals	11 GPs, 18 other health professionals, 19 responses from non-attenders
Murdock et al.	2002	Outpatient	N/A	N/A	Forgot; no reason; clerical errors; felt better; fearful of seeing junior doctor; inpatient in another hospital	45% would attend another appt; 20% would not	General hospital	Questionnaire	Patients	100 responses
Pal et al.	1998	Outpatient	N/A	N/A	Patient forgot, felt better, too ill, member of family ill, transport problems	N/A	General hospital	Questionnaire	Patients	983 responses
Stone et al.	1999	Outpatient	N/A	N/A	Forgot; unaware of appt; already cancelled; work commitments; too ill; no transport; inconvenient time; previous engagement; family commitments	N/A	General hospital	Questionnaire	Patients and health professionals	Audit of 176 clinics; responses from 250 non-attenders

Author	Year	Sector	Differences in profiles missed v. attended	Differences in practices	Reasons for missed appointments	Attend re-schedule	Location	Methods	Source of information	Number
Van Baar et al.	2006	Outpatient	Attenders motivated by desire to maintain/improve disease control, and not to impair relationship with doctor.	N/A	Forgetting; too well or ill to attend; frustrated with structure and delivery of outpatient care	N/A	General hospital	Interviews	Patients	19 patients
Verbov	1992	Outpatient	N/A	N/A	Illness, forgot, trouble getting off work, felt better, not at convenient time	All non-attenders who attended later date	General hospital	Interviews/questions	Patients	100 patients