

REDUCING OUTPATIENT NON-ATTENDANCE

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Please find following a summary of a literature search and relevant results. All articles can be provided in full – email <u>library@monashhealth.org</u> for a list of the articles you require.

QUESTION

What is the evidence on failure to attend rates and reducing outpatient non-attendance

SEARCH LIMITS

English-language, last 5 years.

SEARCH METHODOLOGY

A systematic search was conducted for literature. The results were screened using <u>Covidence</u>. See the Appendix (pp. 10-11) for the Medline search strategy and search terms.

DATABASES SEARCHED

- Medline index of peer reviewed articles across health sciences and medicine.
- Embase index of biomed and pharmacological peer reviewed journal articles.
- Cochrane Library collection of databases containing high-quality independent evidence.
- Grey literature Google, Google Scholar, Trip database, Biomed Central Proceedings.

LITERATURE RESULTS

All articles can be provided in full text - email <u>library@monashhealth.org</u> a list of articles you require.

GENERAL RESOURCES

ONLINE RESOURCES (GREY LITERATURE)

NHS England. (2023). Reducing did not attends (DNAs) in outpatient services. Link.

- Lists Initial actions providers should take to reduce DNA rates
- Provides <u>case studies</u> from NHS trusts that have successfully reduced DNA rates, via e.g.
 - Implementing new booking management software, efficenC
 - o Introducing a patient-led booking system, DrDoctor
 - o Engaging patients via electronic portals

Victorian Department of Health. (2023). Specialist clinics communication toolkit for health services: A guide to improving written communication to patients and referrers. Link.

- Provides guidance on effective letter (p. 11) and SMS reminders (p. 13).
- Includes four case studies from Victorian health services (pp. 14-19).



NSW Health. (2021). Using behaviourally-informed reminders cuts missed hospital appointments by more than a third. <u>Link.</u>

• Reports on how "behaviourally-informed" text message reminders were used to successfully reduce FTA rates. Includes a copy of the text message content.

The Royal Children's Hospital. Quality Account 2016-2017. Link to PDF.

- The RCH and Healthcare Resource Optimisation developing a software application that can analyse appointment data and forecast cancellations. An initial 12-week trial in General Medicine outpatient clinics resulted an 8% increase in patients seen (p. 61).
- Reductions in FTA rates subsequently mentioned in the <u>Strategic Plan 2019-2021</u>: "Reduced our Failure to Attend (FTA) rates in Specialist Clinics by using predictive data, leading to reduced wait times and increased access" (p. 9).

PEER-REVIEWED LITERATURE - MOST RECENT FIRST

Articles are grouped as follows:

- Systematic reviews & scoping reviews (various interventions)
- Making the appointment scheduling practices
- Making the appointment patient input
- Before appointment SMS reminders
- Before appointment phone call reminders
- Before appointment phone call reminders CALD patients
- Day of appointment transport assistance

Each article summary contains excerpts from the abstract and an online link.

SYSTEMATIC REVIEWS & SCOPING REVIEWS

S. Mohammed Selim, et al. (2023). Digital health solutions for reducing the impact of nonattendance: A scoping review. *Health Policy and Technology*, 12(2), 100759. <u>Click for full-text</u>.

This review included studies that report on implementing one or more digital solutions to reduce the impact of non-attendance in the outpatient setting. Result(s): Of the total of 3,730 records, 55 articles were included in the analysis. These papers reported on automated reminder systems (n=24), prediction models coupled with a targeted intervention (n=4), telehealth (n=21) and booking systems (n=6). The effectiveness of the digital health-related solution was seen across several studies: 12 reminder systems, 3 prediction models, 14 telehealth, and 6 booking systems. Only nine studies reported costs and one study reported cost-effectiveness. Conclusion(s): While reminder systems were the most commonly investigated intervention in the field, there is emerging evidence to support other digital health-related solutions that have the potential to reduce the impact of non-attendance across outpatient healthcare settings. Further investigations of these emergent technologies, including economic evaluations, are needed to provide appropriate policy and practice guidance.



T. Oikonomidi, et al. (2023). **Predictive model-based interventions to reduce outpatient noshows: A rapid systematic review**. *Journal of the American Medical Informatics Association*, *30*(3), 559-569. <u>Click for full-text.</u>

Predictive models of no-shows could be used to target intervention delivery to reduce no-shows. We reviewed the effectiveness of predictive model-based interventions on outpatient no-shows, intervention costs, acceptability, and equity. Result(s): We included 7 RCTs and 1 non-RCT, in dermatology (n = 2), outpatient primary care (n = 2), endoscopy, oncology, mental health, pneumology, and an magnetic resonance imaging clinic. There was high certainty evidence that predictive model-based text message reminders reduced no-shows. There was moderate certainty evidence that predictive model-based phone call reminders and patient navigators reduced no-shows. The effect of predictive model-based overbooking was uncertain. Discussion and Conclusion(s): Predictive modeling plus text message reminders, phone call reminders, and patient navigator calls are probably effective at reducing no-shows. Further research is needed on the comparative effectiveness of predictive model-based interventions addressed to patients at high risk of no-shows versus nontargeted interventions addressed to all patients.

MAKING THE APPOINTMENT – SCHEDULING PRACTICES

D. A. Ellis, et al. (2022). A weekday intervention to reduce missed appointments. *PloS One*, *17*(9), e0274670. <u>Click for full-text.</u>

One factor that providers do control is appointment scheduling. We previously reported that appointments at the beginning of the week are more likely to be missed than appointments at the end of the week. This observation suggests a simple intervention to reduce DNA rate: schedule appointments for later in the week. Using data from a UK mental health hospital, we compared attendance rates for 12-months before and 12-months after the intervention began (916 appointments in total). Overall DNA rate fell from 34.2% pre-intervention to 23.4% post-intervention [chi2 (1, N = 916) = 13.01, p < 0.001; Relative Risk Reduction, 31.6%]. This effect was carried mainly by female patients, for whom more appointments could be moved to later in the week. Our findings confirm that DNA rate can be significantly reduced by loading appointments onto high-attendance days.

T. Margham, et al. (2021). Reducing missed appointments in general practice: Evaluation of a quality improvement programme in East London. *British Journal of General Practice*, 71(702), E31-E38. <u>Click for full-text.</u>

Method: Fourteen out of 25 practices implemented DNA reduction projects, supported by practice-based coaching. Results: In total, 25 out of 32 practices engaged with the programme. The mean DNA rate at baseline was 7% (range 2-12%); 2 years later the generic intervention DNA rates were 5.2%. This equates to a reduction of 4030 missed appointments. The most effective practice intervention was to reduce the forward booking time to 1 day. The practice that made this change reduced its mean DNA rate from 7.8% to 3.9%. Conclusion: Forward booking time in days is the best predictor of practice DNA rates.

M. Dusheiko, et al. (2018). Choosing and booking—and attending? Impact of an electronic booking system on outpatient referrals and non-attendances. *Health Economics*, 27(2), 357-371. <u>Click to request full-text</u>.

In the English National Health Service, around 7% of patients who are referred by their general practice for a hospital outpatient appointment fail to attend. An electronic booking system (Choose and Book-C&B) for general practices making hospital outpatient appointments was



introduced in England in 2005 and by 2009 accounted for 50% of appointments. It was intended, inter alia, to reduce the rate of non-attendance. Using a 2004-2009 panel with 7,900 English general practices, allowing for the relaxation of constraints on patient of hospital, and for the potential endogeneity of use of C&B, we estimate that the introduction of C&B reduced non-attendance by referred patients in 2009 by 72,160 (8.7%).

MAKING THE APPOINTMENT – PATIENT INPUT

V. F. Kershaw, et al. (2022). **Patient initiated follow up in Obstetrics and Gynaecology: A systematic review**. *European Journal of Obstetrics, Gynecology, and Reproductive Biology, 272*(e4l, 0375672), 123-129. <u>Click for full-text.</u>

Patient Initiated Follow-Up (PIFU) provides an alternative to traditional hospital instigated followup, by which patients have autonomy in their future care, allowing them to make appointments based on their own perception of need. PIFU has proved successful when implemented in Rheumatology, Inflammatory Bowel Disease and Oncology, with trends towards reduced burden on outpatient appointments, improved patient satisfaction and lower costs. CONCLUSION: PIFU was received largely positively and was well accepted by women across these studies. It was also shown to be cost-effective, without a negative impact on health outcomes. PIFU also has the potential to offer additional benefits including reducing diagnostic delay and increasing patient engagement with their own health status. This review found a paucity of data for PIFU in Obstetrics and Gynaecology, with the exception of gynaecological oncology, and further evaluation is required before more widespread implementation.

R. E. Berger, et al. (2019). **Measuring patient preferences and clinic follow-up utilizing an embedded discharge appointment scheduler: A pilot study**. *Joint Commission journal on Quality and Patient Safety*, *45*(8), 580-585. <u>Click for full-text</u>.

A needs assessment was conducted to quantify clinician time spent making discharge appointments and to identify barriers to successful appointment scheduling. A four-week pilot intervention subsequently embedded a discharge scheduler responsible for scheduling discharge appointments into five house staff teams. RESULTS: Patients expressed a strong preference to be involved in scheduling follow-up appointments. In the intervention, there was a statistically significant increase in successfully scheduled appointments (66.7% vs. 87.7%; p < 0.0001) and attendance at follow-up appointments (43.9% baseline vs. 62.9% intervention; p = 0.011), a statistically significant reduction in rescheduled appointments (16.7% baseline vs. 4.9% intervention; p = 0.008), a nonsignificant trend toward increased number of canceled appointments (7.6% baseline vs. 17.5% intervention; p = 0.088), and no significant difference in noshow rates (18.2% baseline vs. 14.7% intervention; p = 0.544). Of residents involved in the pilot, 100% reported that the scheduler improved their ability to care for patients.

BEFORE APPOINTMENT – SMS REMINDERS

E. Ulloa-Perez, et al. (2022). Pragmatic randomized study of targeted text message reminders to reduce missed clinic visits. *The Permanente Journal*, *26*(1), 64-72. <u>Click for full-text.</u>

We conducted a randomized quality improvement project at Kaiser Permanente Washington among patients with primary care and mental health visits with a high no-show risk comparing the effect of one text message reminder (sent 2 business days prior to the appointment) with 2 text



message reminders (sent 2 and 3 days prior) on no-shows and same-day cancellations. RESULTS: Between February 27, 2019 and September 23, 2019, a total of 125,076 primary care visits and 33,593 mental health visits were randomized to either 1 or 2 text message reminders. For primary care visits, an additional text message reduced the chance of no-show by 7% and same-day cancellations by 6%. In mental health visits, an additional text message reduced the chance of noshow by 11% but did not impact same-day cancellations. We did not find effect modification among subgroups defined by visit or patient characteristics. CONCLUSION: Study findings indicate that using a prediction model to target reminders may reduce no-shows and spend health care resources more efficiently.

N. Stormon, et al. (2022). SMS reminders to improve outpatient attendance for public dental services: A retrospective study. *Health & Social Care in the Community*, *30*(5), e2255-e2263. <u>Click for full-text.</u>

This paper studied the effectiveness of SMS reminders in increasing appointment attendance at outpatient public dental services in Queensland. Data were sourced from the adult service and the children and adolescent oral health service (CAOHS) at West Moreton Hospital and Health Service, a public dental service in Queensland. A total of 63,238 appointments pre-implementation of SMS reminders and 55,028 appointments post-implementation over a period of 2 years were analysed for rates of attendance, unable to attend (UTA) and FTA. For the CAOHS, the attendance rate decreased 4% following SMS implementation. The UTA rate also increased by 20%. Following SMS implementation in the adult service, the attendance rate increased from 73.5 to 77.7 per 100 appointments. The FTA rate post-implementation was 1.08 times that from pre-intervention, and the UTA rate decreased from 21.7 to 17.1 per 100 appointments.

N. Mahmud, et al. (2021). Effect of text messaging on bowel preparation and appointment attendance for outpatient colonoscopy: A randomized clinical trial. *JAMA Network Open*, *4*(1), e2034553. <u>Click for full-text.</u>

Objective: To determine if an automated text messaging intervention with a focus on informational and reminder functions could improve attendance rates and bowel preparation quality for outpatient colonoscopy. This randomized clinical trial was conducted in an endoscopy center at an urban academic medical center. Interventions: After enrollment, patients were randomized in a 1:1 ratio to usual care (ie, written instructions and nurse telephone call) or to the intervention (ie, usual care plus an automated series of 9 educational or reminder text messages in the week prior to scheduled colonoscopy). Conclusions and Relevance: This randomized clinical trial found no significant difference in appointment attendance or bowel preparation quality with an automated text messaging intervention compared with the usual care control. Future work could optimize the content and delivery of text message interventions or identify patient subgroups that may benefit from this approach.

A. Berliner Senderey, et al. (2020). It's how you say it: Systematic A/B testing of digital messaging cut hospital no-show rates. *PloS One*, *15*(6), e0234817. <u>Click for full-text.</u>

In this study, we aimed to systematically compare the effects of several pre-appointment message formats on no-show rates. We randomly assigned members from Clalit Health Services (CHS), the largest payer-provider healthcare organization in Israel, who had scheduled outpatient clinic appointments in 14 CHS hospitals, to one of nine groups. Each individual received a pre-appointment SMS text reminder five days before the appointment, which differed by group. There were 161,587 CHS members who received pre-appointment reminder messages who were included in this study. Members who received a reminder designed to evoke emotional guilt had a





no-show rates of 14.2%, compared with 21.1% in the control group, and an advanced cancellation rate of 26.3% compared with 17.2% in the control group. Four additional reminder formats demonstrated significantly improved impact on no-show rates, compared to the control, though not as effective as the best performing message format.

L. Moran, et al. (2018). The effect of SMS (text message) reminders on attendance at a community adult mental health service clinic: Do SMS reminders really increase attendance? *Irish Journal of Medical Science*, *187*(3), 561-564. <u>Click for full-text</u>.

RESULTS: In the 6-month period prior to SMS reminders, 2170 outpatient appointments were offered and there was a 22.2% non-attendance rate. In the 6-months following the introduction of SMS reminders, 2092 appointments were offered and the non-attendance rate fell to 13.9%, with the lower non-attendance rate among those who did not receive SMS reminders (9.7%) rather than those who did (15.7%). There were 98 appointment cancellations during this period (73% via SMS messaging). In the 6-month period two and a half years after the introduction of SMS reminders, 2474 appointments were offered and the non-attendance rate rose to 19.3%; this did not differ between those who received SMS reminders (19.3%) and those who did not (19.1%) and was still lower than the rate prior to SMS reminders. During this period, 197 appointments were cancelled (75% via SMS messaging). CONCLUSIONS: The chief value of SMS reminders lies not in reminding patients of appointments but in providing a convenient way to cancel them, thus allowing more appointments to be offered.

BEFORE APPOINTMENT – PHONE CALL REMINDERS

C. Braschi, et al. (2022). Impact of automated reminder calls in a safety-net setting on surgical clinic no-show rates. *The American Surgeon*, 43e, 0370522), 31348221142573. <u>Request full-text.</u>

Automated reminder calls (robocalls) have replaced live staff phone calls in many systems as a cost-saving measure. This study aims to evaluate whether robocalls reduced the outpatient appointment no-show rate for surgical patients in a county hospital. Demographic and clinic data from two surgical clinics at a safety net hospital were collected over two time periods: 3-months immediately before robocalls went live and 3-months immediately after robocalls went live. No-show rates were compared between time periods. Multivariate analysis confirmed that robocalls were independently associated with reduced no-show rates (OR: 1.32; 95% CI: 1.0-1.7; P = .032). In addition, new appointments were independently predictive of higher no-show rates (OR: 1.32; 95% CI: 1.0-1.7; P = .048). Robocalls appear to be an effective tool for improving appointment attendance overall.

R. L. Lagman, et al. (2021). "If you call them, they will come": A telephone call reminder to decrease the no-show rate in an outpatient palliative medicine clinic. *The American Journal of Hospice & Palliative Care*, *38*(5), 448-451. <u>Click to request full-text</u>.

In an effort to reduce the no-show rate at a busy palliative medicine outpatient clinic, a quality improvement project was launched consisting of a telephone call made by clinic staff prior to appointments. Starting January 1, 2016, patients received a telephone call reminder 24 hours prior to their scheduled outpatient appointment for confirmation. No-show rate was again measured for the calendar year 2016. RESULTS: Of the 1224 completed visits from September 1 to December 31, 2015, 271 were no-shows with an average rate of 11.8%. After the intervention, there were 4368 completed visits and 562 no-shows. The no-show rate for 2016 averaged 6.9% (p < 0.001), down 4.9% from the last 4 months of 2015. Estimated opportunity costs were about 396 no-show





visits avoided, equivalent to an annual savings of about \$79,200.

R. C. Lance, et al. (2021). Comparison between short text messages and phone calls to reduce noshow rates in outpatient medical appointments: A randomized trial. *The Journal of Ambulatory Care Management*, 44(4), 314-320. <u>Click to request full-text.</u>

The objective of this study was to evaluate the impact of telephone calls and short text messages (SMS) on no-show rates regarding scheduled appointments with a general practitioner. In a prospective, intervention-controlled, and randomized study, we divided 306 patients into 3 groups: telephone call, SMS, and no intervention. We compared no-show rates, as well as variables that influenced it. The lowest percentage of no-show (9.5%) occurred in the telephone call group, while the SMS group presented at 21% and the no-intervention group at 22.8% (P = .025). Telephone calls proved to be a superior strategy to text messaging.

E. Hannan, et al. (2021). Outpatient endoscopy: Addressing the problem of non-attendance for scheduled appointments. *Irish Medical Journal*, *114*(5), P350. <u>Click for full-text PDF.</u>

Methods: A retrospective observational cohort study of non-attendances for gastrointestinal endoscopy was performed in the endoscopy unit over three-months. Results: During the observation period, 1472 patients were scheduled to attend for outpatient endoscopy, with a non-attendance rate of 12.9% (n=191). Discussion: Patients are more likely not to attend for left-sided procedures, procedures scheduled as non-urgent, procedures booked via direct access and procedures listed on either a Monday or Friday. Younger patients and those without private health insurance are also more likely to not attend. Mandatory confirmation is an effective means of improving patient attendance for scheduled endoscopy appointments.

BEFORE APPOINTMENT – PHONE CALL REMINDERS – CALD PATIENTS

K. B. Flower, et al. (2020). Improving satisfaction and appointment attendance through navigation for Spanish-speaking families. *Journal of Health Care for the Poor and Underserved*, *31*(2), 810-826. <u>Click for full-text.</u>

Monolingual Spanish-speaking families face linguistic barriers to care. Volunteer bilingual navigation (VBN) may increase appointment attendance and satisfaction. METHODS: Volunteer bilingual navigation was implemented in a children's multispecialty clinic and included way-finding, non-medical interpretation, and pre-visit phone calls. RESULTS: Trained VBNs provided navigation during the nine-month intervention. In-person navigation was associated with non-significantly decreased no-shows (-0.95%; [-2.43, 0.53]) from baseline (9.32%). Addition of pre-visit phone calls was associated with no-show decrease of -2.82% (-3.97, -1.66). CONCLUSION: Bilingual navigation is an effective complement to formal medical interpretation, may improve Spanish-speaking families' appointment attendance and satisfaction, and can be implemented sustainably.

M. Pasha, et al. (2020). Reducing missed appointments in patients with limited english proficiency. *Journal of General Internal Medicine*, 35(SUPPL 1), S686. <u>Link to conference abstract.</u>

Work by our group previously showed a higher percentage of missed appointments in patients with limited English proficiency(LEP) than in English speaking patients, and we identified a salient gap in practice as current automatic appointment reminders to all patients are in English. During the 1 year intervention period, interpreters called patient using language congruent services the day before their primary care appointments. When calling patients, they informed the patient of location, date, time of their appointment. Our preliminary results (data over 6 months) show an

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increase in attended appointments after interpreter reminder calls. Prior to the intervention, 80.5% of patients attended their appointment, and after the intervention 90.6% (p<0.00001). The no-show percentage decreased from 19.5%, to 9.37% percent of total appointments.

BEFORE APPOINTMENT – ELECTRONIC PATIENT PORTAL

A. R. Bhashyam, et al. (2022). In-hospital enrollment into an electronic patient portal results in improved follow-up after orthopedic surgery: Cluster randomized controlled trial. *JMIR Perioperative Medicine*, *5*(1), e37148. <u>Click for full-text</u>.

Electronic patient portal (EPP) use is associated with lower no-show rates and increased patient satisfaction. However, there are disparities in enrollment into these communication platforms. METHODS: We performed a randomized controlled trial of 229 adult patients who were admitted to the hospital for an orthopedic condition that required a 3-month follow-up visit. Patients were cluster-randomized by week to either the control or intervention group. The control group received information on how to enroll into and use the EPP in their discharge paperwork, whereas the intervention group was actively enrolled and taught how to use the EPP. At 3 months postdischarge, the patients were followed to see if they attended their follow-up appointment or used the EPP. RESULTS: Of the 229 patients, 83% (n=190) presented for follow-up at 3 months (control: 93/116, 80.2%; intervention: 97/113, 85.8%; P=.25). The likelihood of EPP use was significantly higher in the intervention group (control: 19/116, 16.4%; intervention: 70/113, 62%; odds ratio [OR] 8.3, 95% Cl 4.5-15.5; P<.001). Patients in the intervention group who used the EPP were more likely to present for postsurgical follow-up.

DAY OF APPOINTMENT – TRANSPORT ASSISTANCE

A. M. Bove, et al. (2019). Providing no-cost transport to patients in an underserved area: Impact on access to physical therapy. *Physiotherapy Theory and Practice*, *35*(7), 645-650. <u>Click to request full-text</u>.

Barriers to accessing outpatient health care services are common and contribute to poor health outcomes. We describe the efforts of a private practice physical therapy (PT) clinic to reduce these barriers by offering a door-to-door van service at no cost to patients. Results: Use of the van service increased significantly over time, from a mean of 83 riders per month in 2010 to 205 riders per month in 2013 (p < 0.001). Overall clinic attendance rate increased from 80.1% to 84.1% after implementation of the service (p = 0.002). Following introduction of the van service, 48% of patients using the van, compared to 25% of clinic patients overall, were uninsured or insured by Medicaid. Conclusion: Use of the van service increased over time, and availability of no-cost van transportation was associated with increased visit attendance for patients at an outpatient PT clinic.

J. Comstock, et al. (2018). **One burn center's efforts to reduce no show rates and facilitate access to outpatient care**. *Journal of Burn Care and Research*, *39*(Supplement 1), S93. <u>Link to conference abstract</u>.

Research has shown that transportation is one of the most common barriers faced by low income populations in accessing necessary medical care. This paper aims to highlight the practices our burn center has implemented to minimize no show rates and promote outpatient return visits. Result(s): Beginning in 2013 our no show rate was 14.6% and steadily decreased to 12.2% in 2016. Clinic visits, defined as a total count of individual nursing and therapy visits, steadily increased





from 5,799 visits in 2014 to 6,150 visits in 2016. There were 9 re-admittances in 2014, 3 in 2015 and 3 in 2016. Approximately 100 gas cards and 20 bus passes were issued each year. Conclusion(s): Collaboration amongst multidisciplinary team members to evaluate barriers for returning to clinic throughout the episode of care improves attendance in outpatient clinic. This is evidenced by low no-show rates and increasing clinic visits noted with consistent provision of transportation resources. Applicability of Research to Practice: Recognizing and responding to transportation barriers helps improve access to outpatient burn care services.

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APPENDIX

MEDLINE SEARCH STRATEGY

Ovid MEDLINE(R) ALL <1946 to July 18, 2023>

- 1 exp Outpatient Clinics, Hospital/ or Outpatients/ or exp Ambulatory Care Facilities/ or Fertility Clinics/ or Physicians' Offices/ or Health Facilities/ or Dental Clinics/ or Health Services/ or Ambulatory Care/
 - 168763
- 2 "Appointments and Schedules"/ 9841
- 3 1 and 2 2074
- 4 ((hospital or hospitals or clinic* or outpatient* or out-patient* or ambulatory) adj4 (appointment* or follow-up* or followup)).mp. 71603
- 5 3 or 4 73154
- 6 No-Show Patients/ or Absenteeism/ 10012 2870
- 7 ("did not attend" or fail* to attend).mp.
- 8 appointment failure.ti,ab. 17
- 9 ((miss or missed or missing) adj3 appointment*).mp. 1540
- 10 ((outpatient* or appointment*) adj2 attendance).mp. 805
- 11 (attendance adj2 rate*).mp. 2557
- 12 (nonattendance or non-attendance or no-show*).mp. 2974
- 13 (appointment* adj3 fail*).mp. 230
- 14 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 19239
- 15 ((improv* or increas*) adj3 attendance).mp.2549
- ((reduce* or reducing or reduction* or decreas* or lower* or minimi?e or mitigat*) adj 16

(nonattendance or non-attendance or no-show*)).ti,ab. 220

- 17 15 or 16 2735
- 18 5 and 14 and 17 241
- 19 limit 18 to (english and last 5 years) 97

SEARCH TERMS

Concept	MeSH headings	Keywords
Clinic appointments	exp Outpatient Clinics, Hospital/, Outpatients/, exp Ambulatory Care Facilities/, Fertility Clinics/, Physicians' Offices/, Health Facilities/, Dental Clinics/, Health Services/, Ambulatory Care/, "Appointments and Schedules"/	Hospital(s) or clinic(s) or outpatient(s) or out-patient(s) or ambulatory + appointment(s) or follow-up(s) or followup.
Non-attendance	No-Show Patients/, Absenteeism/	"did not attend" or fail(ure/s)(ed) to attend. Appointment failure. Miss or missed or missing + appointment(s). Outpatient(s) or appointment(s) + attendance. Attendance + rate(s). Nonattendance or non-attendance or no- show(s). Appointment(s) + fail(ed)(ure/s)).





Improved attendance / reduced nonattendance Improve(d)(ment/s) or increase(d)(ing) + attendance. Reduce(d) or reducing or reduction(s) or decrease(d)(ing) or lower(ed)(ing) or minimis(z)e or mitigate(d)(ing) + nonattendance or nonattendance or no-show(s).

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