



The DNA Project: A study to reduce “did not attend” rates in Victorian alcohol and other drug treatment services

Background

“**Did not attend**” (DNA) is the term used when a patient or client unexpectedly fails to attend a health care appointment. DNAs are high across alcohol and drug (AOD) treatment services and are associated with a greater risk of treatment non-completion and poorer outcomes¹. There is international evidence that short message service (SMS) reminders improve general health care appointment attendance, compared to no reminder. The effectiveness of SMS appointment reminders might also vary by their *content*.

Research conducted in hospitals and general health care settings in Australia² and internationally³ has explored the use of **behaviour-change nudges** – small, inexpensive changes to reminder content that leverage automatic cognitive processes to generate a small increase in a desired outcome (e.g. personalising the message with the patient’s name and communicating reciprocity – e.g. “*one of our doctors has made a time in their diary, please call [number] if you cannot attend*”; communicating that the social norm is to attend the appointment; communicating the specific cost to the service of a missed appointment). Although conflicting results have been reported, adding behaviour-change nudges to SMS reminders has been shown to generate a small, significant increase in health care appointment attendance³.

There remains little evidence as to whether these small changes to the phrasing of SMS content are effective in reducing DNA rates among clients of AOD treatment services.

Method

We conducted three phases of research to explore the utility of nudge SMS reminders implemented within the AOD treatment service context:

1. Focus groups were conducted with AOD treatment consumers to explore the acceptability of a range of SMS appointment reminders, which varied by nudge content.
2. A multi-site interrupted time series study was conducted to test the impact of a positive-framed nudge SMS, “**attending this appointment takes you one step closer to achieving your treatment goals**”, on DNA rates among outpatient clients of four Victorian AOD services. The positive-framed nudge SMS content was developed by Turning Point’s Clinical and Social Research Team in collaboration with BehaviourWorks Australia, and was preferred by AOD treatment consumer focus groups and participating AOD services. This nudge SMS was implemented for six months, with DNA rates from this time period compared to a three-month baseline (no-nudge SMS) period.
3. Semi-structured qualitative interviews were conducted with Managers and Program Leads from AOD treatment services who participated in the DNA Project, as well as those who commenced participation but could not complete the project, to gain an understanding of the factors that facilitated and/or hindered the implementation of the nudge SMS reminder.

Results

This project found that the positive-framed nudge SMS content, ***“attending this appointment takes you one step closer to achieving your treatment goals”***, was acceptable to both AOD treatment consumers (determined by way of the focus groups) and participating treatment services. Despite international literature demonstrating ‘specific cost’ nudges (i.e. *“not attending this appointment costs our service \$__”*) to generate the greatest reduction in DNAs in hospital settings, this approach was not acceptable to AOD treatment consumers or treatment services.

Results from the multi-site interrupted time series study revealed no overall effect of the positive-framed nudge SMS reminder in reducing DNA rates. While no overall effect was found when grouping data from the four participating AOD treatment services, a significant effect of nudge SMS was observed for one service when individual results were examined. This service comprised a higher proportion of female clients, who were more likely to be receiving counselling on a voluntary basis, and were more likely to be presenting with alcohol as their primary drug of concern.

Several factors may have contributed to the overall lack of effect for nudge SMS, including the heterogeneity and complexity of the AOD client population, low statistical power, and inconclusive client exposure to the nudge SMS content (i.e. whether the client received/read the SMS). Clients who were recorded as a DNA during this study were significantly more likely to be forensic clients, younger, and with methamphetamine or opioids as their primary drug of concern, suggesting a group of people with more complex needs for whom treatment attendance cannot be adequately addressed using this form of messaging.

While behaviour-change nudges are small, inexpensive interventions that have the potential to generate small improvements in appointment attendance (equating to health care cost savings and improved patient care at the population level), whether they improve appointment attendance in the AOD treatment setting remains to be seen. Alternative nudges to positive-framed messaging could be explored. Feedback from the Managers and Program Leads of participating AOD treatment services indicated that nudge SMS reminders are feasible to implement when client management systems are in place. The majority of Managers and Program Leads endorsed the use of positive-framed nudge SMS reminders as a simple process that kept the issue of DNA rates “on the radar”. While the importance of other factors such as rapport-building in facilitating client attendance was highlighted, some anecdotal benefits of this messaging was reported by Managers/Program Leads, for example:

“Clients have enjoyed the reminder, the feedback has been positive. If anything, it has improved our practice, and we’re looking to implement it on a permanent basis.”

An important direction for future research exploring nudge approaches in the AOD treatment setting, therefore, may be to compare different messages (e.g. other framing techniques, social norms, salience) to optimise appointment attendance. However, based on the feedback we received from AOD treatment consumer focus groups and participating AOD services, there may be unique challenges to the uptake of some nudge approaches by the AOD sector. For example, despite the evidence base for nudges such as *“not attending this appointment costs our service \$__”*, the majority of AOD treatment services and all AOD

treatment consumers objected strongly to our proposition to use this type of nudge in the current project. This indicates that there may also be objection to the use of other nudge approaches, such as negative framing (e.g. “if you don’t attend treatment, you will fail to take advantage of a [percentage] chance at recovery”) and loss aversion (e.g. “if you do not attend, an appointment may not be available for [number] weeks”). It is, however, important to keep in mind that the perceived appropriateness of nudge content may be a poor predictor of actual behavioural response – while a nudge message may not be ‘liked’, it might still prompt appointment attendance by influencing decision-making at the less conscious, automatic level.

An additional direction for future research is to test approaches for optimising treatment attendance that are matched to client characteristics or goals, or that directly address barriers to attendance. For example, participants from the AOD treatment consumer focus groups cited anxiety as a substantial barrier to attending scheduled appointments for AOD treatment, which indicates the potential benefits of pre-appointment messaging or other strategies that work to reduce appointment-related anxiety. It is anticipated that further research will generate new knowledge on AOD treatment engagement and retention, and the extent to which these can be addressed using simple low-cost and scalable strategies.

Please contact jasmin.grigg@monash.edu for a copy of the full report.

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