

Computer program to deal with patients who fail to keep appointments

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A problem faced by patients seeking medical attention is often getting a clinic appointment at a time convenient to them. Conversely, cancellations and more crucially "no-shows" by patients can disrupt the day-to-day scheduling of a medical practice leading to frustration for patients and staff alike as well as affectively efficiency in a negative manner and leading to lost revenue.

Raid Al-Aomar of Abu Dhabi University in United Arab Emirates and colleague Mahmoud Awad of ALHOSN University, also in Abu Dhabi have now developed a [computer model](#) that could help practice management cope more effectively with "no shows" by establishing an optimal rate of overbooking.

"The healthcare industry has been going under intense pressure recently to change its current practices and undergo major reforms due to its contribution to national economic growth and the ever increasing demand for better patient quality service," the researchers say. They explain that dynamic process modeling (DPM) is commonly used for management of healthcare systems including hospitals, clinics, scheduling, and other related operations. Nevertheless inefficiencies due to walk-in and no-show patients add to costs without resolving health issues. Researchers have estimated the cost of no shows at up to 14% of the income of a health practice. Indeed, the team points out that a high no-show rate of 30% can almost half clinical efficiency to around 55%.

To counter this problem, the researchers have developed and tested a

dynamic DPM that can take into account no shows and last-minute cancellations by incorporating a degree of overbooking into the system. The same model can be applied to a healthcare practice of various sizes, the team says. They have demonstrated that for practices with a high no-show rate, then the best strategy is to overbook [patients](#) periodically and allocate double the treatment time. In some cases this can resurrect efficiency bringing it back up to about 73% from the low of 55%.

Dynamic DPM provides practice managers with a flexible platform on which to model the operation of a clinic and to assess performance measures, it allows them to optimize the overbooking strategy given historical patient no-show rates for that practice.

More information: "Dynamic process modeling of patients' no-show rates and overbooking strategies in healthcare clinics" in *Int. J. Engineering Management and Economics*, 2012, 3, 3-21

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