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### Reducing the Percentage of "No-Show" for Appointments

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The problem of "no show" of patients to fixed appointments is an issue that a lot of healthcare organisations have to face. Moreover, it keeps increasing because it is self-perpetuating, and the overbooking principle, while helping, does not really solve the problem.

What alternatives exist to tackle this problem?

### Queue Management + IVR

A first, simple, independent and cost-effective solution to the issue consists of installing an IVR ('Interactive Voice Response') system in the front-end of the telephone system. Several proposals exist for this, being dependant or independent from the installed PBX ('Private Branch Exchange'). In general, the latter are less expensive solutions.

Basically, the principle consists in partly automating the management of the calls related to appointments: when a caller is connected to the desired service, he/she is first invited to select between cancelling and registering an appointment. In the first case, the caller is directed to an automated system inviting him/her to leave a message. Such a message will then be routed, as a voice e-mail, towards the processing agents, who could process it during non-peak hours. The corresponding slot can then be freed-up in the appointment agenda, which offers a better management of the service. In the second case, the caller is, as before, connected to the waiting queue of the said service.

### Appointment Reminder Service

The second alternative is an automated service, contacting the patient for an appointment reminder a few days before the visit. Such a service can be implemented as a multi-modal one, making use of one or several modes, depending on the hospital or patient preferences. Confirmation can be implemented by phone, e-mail or SMS.

When confirmation is requested, different levels of insistence can be implemented. For instance, if the order is e-mail first, SMS second and phone-call third, then if no confirmation is received within X hours after sending the e-mail, the system will generate a reminder through SMS. If again there is no confirmation within the next Y hours, the system will call the person.

This type of service is automated, quick, cheap, simple and precise. The knowledge by the healthcare organisation of the patient's communication infrastructure enables the system administrator to select the most appropriate information media.

The same service can be used for specific messages notifications:

• schedule changes, requested by the hospital,

• follow-up on missed appointments,

• recall regular blood donors when needed, and

• notification of any other type of information, such as overdue payments, non-delivery of documents, etc.

### Messaging Service Concept

Such a messaging system can be obtained as a service operated from an externally hosted platform (ASP mode), meaning that there is no physical installation, hence no capital investment, at the level of the healthcare organisation or office premises. The service is accessed through

an Internet link.

The interaction between the system and the hospital appointment database is organized as follows:

• A Web interface enables the hospital's administrator to set up service-specific configuration settings for one or several messaging task(s), such as reminder settings (how long before the visit must the reminders be sent, whether confirmation is requested or not, etc.), text of the different reminders, administrator's e-mail that will receive regular reports, etc.

• For each messaging task, the client extracts, from its main database, the data to be processed: there is no direct interaction between the hospital appointment database and the messaging system.

• These data include patient name, date, time and location of the appointment, optional instructions or notes from the doctor, preferred language and communication channel, etc.

• They are then posted on a URL of the Web interface of the messaging system; the received data will then be used by the system to automatically generate the different reminders, notifications and/or confirmations, following the rules selected by the hospital for specified messaging rules (e.g. phone calls, SMS and/or e-mails).

**Conclusions**

The solution presented here, especially the appointment reminder and confirmation one, is the most efficient answer to the problem. It offers an automated while flexible way to contact the patients to remind and/or notify them of given events. Moreover, it is well accepted by both the patients and the hospital; it gives the former the feeling of receiving better (follow-on) service and it improves the image of the latter.

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