

## Methods, Tools, and Strategies

# What Is the Best Way to Schedule Patient Follow-up Appointments?

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**A**ppropriate follow-up is good health care. But in a clinical setting, is 100% follow-up compliance always the norm? The Preferred Practice Pattern (PPP) of the American Academy of Ophthalmology (San Francisco) specifies recommendations for follow-up for primary open-angle glaucoma.<sup>1</sup> Hertzog et al found that the patients with the greatest risk—those with uncontrolled glaucoma—were the least likely to be seen within PPP-recommended time intervals.<sup>1</sup> Aprahamian et al discovered that almost half of the patients at risk for blindness due to retinopathy of prematurity were not scheduled for timely outpatient follow-up appointments on leaving the hospital.<sup>2</sup> They noted the significant additional effort required by staff to schedule necessary follow-up appointments.

Reminder postcards have been shown to be effective in improving patient appointment rates in a variety of situations.<sup>3,4</sup> Studies have found that specific patient contact modalities such as telephone calls, letters, and computerized reminders also improve appointment rates.<sup>5-7</sup> Although there is evidence that additional patient reminders are useful, there is not a consensus on which method is best. Ore et al noted that letter type, signature, and degree of aggressiveness had little impact on mammography screening appointments but found a threefold increase in compliance when the routine angiogram invitation contained a specific appointment time.<sup>8</sup>

What is the best way to schedule patient follow-up appointments? The most popular model requires the patient to negotiate a follow-up appointment time on leaving the health care setting. This process accounts for the majority of follow-up patient scheduling. There are circumstances when this immediate appointment arrangement is not possible, however:

## Article-at-a-Glance

**Background:** What is the best way to schedule follow-up appointments? The most popular model requires the patient to negotiate a follow-up appointment time on leaving the office. This process accounts for the majority of follow-up patient scheduling. There are circumstances when this immediate appointment arrangement is not possible, however. The two common processes used to contact patients for follow-up appointments after they have left the office are the postcard reminder method and the prescheduled appointment method.

**Methods:** In 2001 the two methods used to contact patients for follow-up appointments after they had left the clinic were used for all 2,116 reappointment patients at an ophthalmology practice at Dartmouth-Hitchcock Medical Center. The number of completed successful appointments, the no-show rate, and patient satisfaction for each method were calculated.

**Results:** A larger number of patient reappointments were completed using the prescheduled appointment procedure than the postcard reminder system (74% vs 54%). The difference between completed and pending appointments (minus no-shows) of the two methods equaled 163 patients per quarter, or 652 patients per year. Additional revenues associated with use of the prescheduled appointment letter method were estimated at \$594,600 for 3 years.

**Summary:** Using the prescheduled appointment method with a patient notification letter is advised when patients do not schedule their appointments on the way out of the office.

- The patient's personal or business schedule may not be available;
- Transportation may need to be arranged;
- The computer scheduling system may not book that far in advance;
- The patient may forget to make a follow-up appointment when leaving; or
- The physician may be running late and the appointment secretary may have departed for the day.

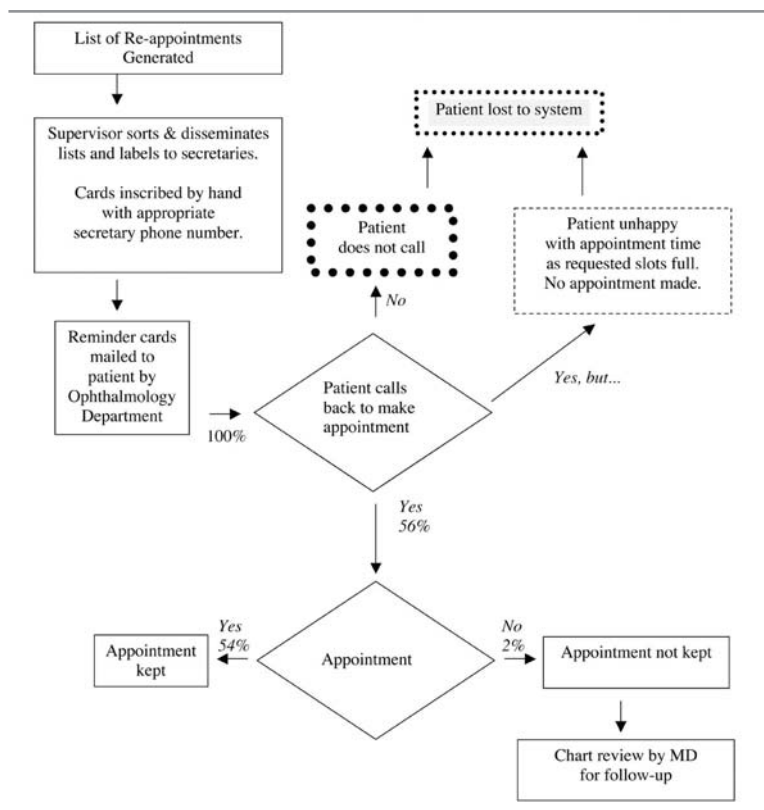
For these and a variety of similar reasons, most practices find that they need to contact a significant population of established patients to schedule follow-up appointments.

In April 2001 we arranged for an 11-provider ophthalmology practice at the specialty outpatient clinics at Dartmouth-Hitchcock Medical Center to use two common processes to contact patients for follow-up appointments after they had left the office. In the reminder postcard method, a reminder postcard requests that the patient contact the office (Figure 1, right). Whether contacted by card, letter, or phone, the patient is asked to be responsible for contacting the office to make future arrangements. This model usually offers no process for patient follow-up. Patients may not perceive an immediate need for a visit or may choose not to make an appointment for financial or other reasons. Patients who do not recontact the office are often lost to follow-up.

An alternative is the prescheduled appointment with notification letter method (Figure 2, p 311), a patient who is due for a follow-up appointment is scheduled for a specific date and time by the physician's office and are then sent a notification letter. The letter contains instructions on rescheduling or canceling the stated appointment. If the patient does not arrive for the appointment, the record reverts to no-show status, which is then resolved after physician chart review.

The study described in this article was conducted to determine which method results in greater reappointment compliance:

## The Reminder Postcard Process



**Figure 1.** This figure shows how reminder cards are used within the clinic. There are multiple ways for the patient to leave the system.

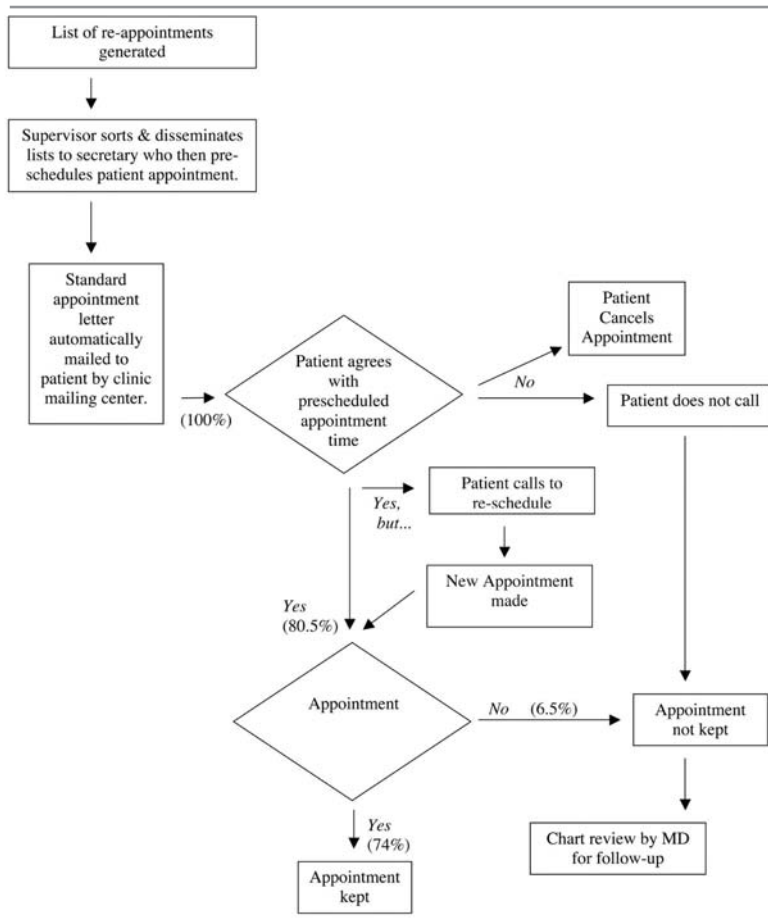
- Reminding the patient via a postcard which requests that he or she call for a follow-up appointment or
- Sending the patient notification of a prescheduled follow-up appointment.

This study, the lead author's first quality improvement project, was conducted under the auspices of the Dartmouth-Hitchcock Medical Center Quality Research Grant Program.<sup>9</sup>

## Methods

We used a controlled, staggered, prospective study to evaluate the two reappointment methods in two successive quarters—Quarter Two (Apr–Jun 2001) and Quarter Three (Jul–Sep 2001)—at an 11-provider ophthalmology practice at the specialty outpatient clinics at Dartmouth-Hitchcock Medical Center. These follow-up appointments were distributed among a variety of eye care professionals. Six ophthalmologists

## The Prescheduled Appointment with Notification Letter Process



**Figure 2.** If a patient does not respond to the letter or attend his or her appointment, his or her status is evaluated by a health care professional.

(1 comprehensive/neuro-ophthalmologist, 1 cornea/external disease/uveitis specialist, 1 glaucoma specialist, 1 pediatric ophthalmologist, and 2 retina specialists) and 3 optometrists participated. Two ophthalmologists (1 comprehensive cataract ophthalmologist and 1 comprehensive oculoplastic ophthalmologist) did not participate.

Reasons for follow-up appointments ranged from contact lens and spectacle checks by optometrists to yearly diabetic retinopathy checks by retinal specialists and follow-up for ocular surgery.

In Quarter Two, we identified 1,062 patients who required scheduling for follow-up. A reminder postcard was sent to each patient, as had been the practice for 9 of the 11 providers; the remaining 2 providers were mailing

reappointment letters. The appointments made by this group of patients within 3 months of the mailing of the initial reminder cards were tallied. A simple patient satisfaction survey was completed by 129 patients chosen randomly when checking in for their follow-up appointments (Figure 3, p 312).

In Quarter Three, we identified 1,054 patients who required scheduling for follow-up. A follow-up appointment date and time was scheduled for each patient by the provider's secretary. This action led to a computer-generated letter, which was sent to the patient 4 weeks before the appointment time. The letter contained contact information and instructions for canceling or rescheduling the pre-made appointment. The appointments made by this group of patients within 3 months of mailing the appointment letter were tallied. The patient satisfaction survey was completed by 143 randomly selected patients checking in for their follow-up appointments.

An appointment was considered successful if it was either completed or pending.\* An appointment was completed if the patient arrived at the office. An appointment was considered pending if, on review 3 months after the mailing, the patient had a follow-up appointment scheduled. The rate of no-shows from each group was recorded.

We chose to count the actual plus scheduled appointments because in our practice, the no-show rate is steady and within single digits. One might argue that a future appointment cannot be counted the same as "cash in hand," but we suggest that in this instance the future

appointment was counted because in our practice, the no-show rate is steady and within single digits. One might argue that a future appointment cannot be counted the same as "cash in hand," but we suggest that in this instance the future

\*The grant under which this study was performed required completion of the project within a single year. The study design therefore stipulated precise cutoff dates for information gathering. Follow-up appointments in a multispecialty ophthalmology practice can vary from next day (surgery follow-up) to a year (uncomplicated diabetes and glaucoma follow-up). Our time line prevented measurement of the actual completion of each specific follow-up appointment.

## The Patient Satisfaction Survey

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**PATIENT SATISFACTION SURVEY  
FOR CARD/LETTER SCHEDULING**

*Please help us improve our appointment process by answering the following questions. Return the survey to the receptionist*

1. On a scale of 1-5, how satisfied were you with the reappointment process here in Ophthalmology?

1	2	3	4	5
NOT SATISFIED				VERY SATISFIED

2. On a scale of 1-5, how satisfied were you with your reappointment date and time?

1	2	3	4	5
NOT SATISFIED				VERY SATISFIED

3. Are there any appointment problems we should be aware of?      Yes       No

*Comments?*

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**Figure 3.** The patient satisfaction survey was completed by 272 randomly selected patients when checking in for their follow-up appointments.

appointment should be counted equally, insofar as it had a > 90% chance of occurring.

### Results

The prescheduled appointment letter procedure resulted in significantly more patient follow-up appointments than did the reminder postcard method (Table 1, p 313). The chi-square test and Fisher's exact test for comparison of two proportions yielded a *p* value of 0.000, indicating a significant difference between the two appointment systems.

Of the original 1,062 patients sent postcard reminders, only 599 (56%) went on to successfully schedule and keep appointments. Twenty-seven (2%) of the 1,062 patients became appointment no-shows.

Of the original 1,045 patients notified by letter of prescheduled appointments, 780 (74%) went on to keep their appointments. Sixty-nine (6.5%) of the 1,045 patients became appointment no-shows. Another 205 (19.5%) resolved their prescheduled appointments either by rescheduling follow-ups outside the 3-month appointment time window or by canceling their appointments.

A patient satisfaction survey containing three questions (Figure 3) was administered to members of each patient group at the follow-up appointments. Scores were comparable for the reminder postcard and prescheduled appointment letter methods in terms of satisfaction with

the reappointment process (Table 2, p 313) and with appointment time and date (Table 3, p 314); the *p* values for the chi-square test and Fisher's exact test were nonsignificant.

The comments section elicited a mix of positive and negative suggestions about various practice and medical center issues, but few patients offered specific feedback related to the scheduling issues. Comments that were not directly related to the scheduling process were forwarded to the practice manager for action.

### Discussion

Before we conducted this study, the eye care providers at the clinic were divided

on the comparable efficacy of the two methods for contacting patients for follow-up appointments. The nine proponents of reminder postcards suggested that this "tried and true" method was less expensive than the other method (it's cheaper to prepare and mail postcards than letters) and stated that it was their belief that almost the entire patient population (this "loyal group") replied to the reminder cards.

The two proponents of prescheduled appointment with notification letters suggested that a number of patients had been lost to follow-up because they had not responded to the single postcard mailing. They argued that generating the prescheduled letters would be more efficient because it would be performed by the computerized central clinic mailing system as opposed to the practice-based secretary handwork required by the postcard method. The clinic appointment secretaries also favored the letter system, citing a significant increase in incoming telephone responsibilities following each appointment postcard mailing.

It was this dichotomy of opinion among providers that inspired the authors to undertake this study, which, as stated, has shown that a larger number of patient reappointments were completed using a prescheduled reappointment procedure than using the patient reminder system. We have therefore converted our practice to the prescheduled reappointment procedure.

A survey of the other practices at the specialty outpatient clinics at Dartmouth-Hitchcock Medical Center,

**Table 1. Completed, Pending, and No-Show Patient Follow-Up Appointments for the Reminder Postcard and Prescheduled Appointment Methods**

	Reminder postcards		Prescheduled appointments	
Total patients	1,062	100%	1,054	100%
Appointments made	599	56%	1,054	100%
Appointments completed + pending	492 + 83 = 575	54%	720 + 60 = 780	74%
No-show	27	2%	69	6.5%

which was undertaken at a monthly practice manager meeting, revealed that seven of the other practices mail reminder postcards, three preschedule appointments, and one uses a combination method. We are currently in the process of sharing our results with the practice managers at the clinic.

As stated earlier, the prescheduled appointment method was associated with more no-shows for appointments than the postcard method (6.5% versus 2%). We know that 56% of the patients sent postcards scheduled appointments and that of these, 2% did not show, which yields 54% successful patient appointments.

Of the patients sent prescheduled appointment letters, 74% successfully completed appointments and 6.5% were no-shows. As stated previously, the remaining 19.5% of these patients called to either reschedule or cancel their appointments. Although this reschedule/cancel rate is high, an important point is that these rescheduling

patients remained in contact with the office, unlike the 44% of the postcard patients who did not reply.

The prescheduled appointment letter population's 6.5% no-show rate was consistent with the ophthalmology practice's 2001 average monthly computer-tabulated no-show rate of 6.1% (range, 5.0%–7.7%). A low no-show rate of 2% was seen in the clearly more motivated postcard-method patients who chose to contact the office—a success in marked contrast to the 44% of the postcard-method patients who did not respond.

Another advantage of prescheduling appointments is that no-shows are tracked within the clinic's computerized mailing system (Figure 2). If a patient misses a scheduled appointment, the health care provider reviews the patient's chart and may recommend contacting the patient. The postcard reminder system does not provide for follow-up for patients who do not respond, and those patients become lost to the system.

**Table 2. Patient Satisfaction with Reappointment Process\***

Appointment method	Survey scores					Total patients	Average score (SD)
	1	2	3	4	5		
Reminder postcard	1 (1%)	2 (1%)	5 (4%)	20 (16%)	101 (78%)	129 (100%)	4.69 (0.69)
Prescheduled appointment	2 (1%)	1 (1%)	6 (4%)	28 (20%)	106 (74%)	143 (100%)	4.64 (0.73)
Total patients	3 (1%)	3 (1%)	11 (4%)	48 (18%)	207 (76%)	272 (100%)	

\* Scale (1–5): 1 = not satisfied; 5 = very satisfied. SD, standard deviation.

**Table 3. Patient Satisfaction with Appointment Date and Time\***

Appointment method	Survey scores					Total patients	Average score (SD)
	1	2	3	4	5		
Reminder postcard	1 (1%)	1 (1%)	7 (5%)	19 (15%)	98 (77%)	126 (100%)	4.68 (0.69)
Prescheduled appointment	2 (1%)	2 (1%)	3 (2%)	23 (16%)	112 (79%)	142 (100%)	4.70 (0.71)
Total patients	3 (1%)	3 (1%)	10 (4%)	42 (16%)	210 (78%)	268 (100%)	

\* Three of the reminder postcard patients and one of the prescheduled appointment patients did not respond to the question regarding appointment date and time. Scale (1–5): 1 = *not satisfied*; 5 = *very satisfied*. SD, standard deviation.

Additional kept appointments by patients yields additional billing revenue—which we estimated for the additional appointments that could be attributed to the prescheduled appointment method. The difference between completed and pending appointments (minus no-shows) of the two methods equaled 163 patients per quarter, or 652 patients per year. Breaking down exam fees among four commonly used appointment types resulted in estimated incremental billing revenue of \$74,878 for the first year of the prescheduled method over the reminder postcard method.

There are other financial considerations. Statistically, one surgical case is generated from approximately 25 office visits, so that the additional 652 patients expected from the prescheduled method would be expected to yield 26 additional surgical cases. If approximately 18 (70%) of the cases are likely to be for cataracts, 2 are for retina, and the balance are for other procedures, \$94,128 for professional surgical fees would result from these additional visits. Further, if approximately 30% of these additional patients will receive a new refractive prescription for eyewear or contact lenses, and if about half of those patients will purchase \$200 worth of merchandise in optical dispensaries, another \$19,606 in revenue would accrue, for a total incremental billing revenue of \$188,612 for the first year.

Finally, if annual growth of 5% is projected for the next 2 years, increases in annual billing revenue would be \$198,043 and \$207,945, respectively. Therefore, the financial impact of the prescheduled appointment letter method is estimated at \$594,600 across the next 3 years—not including any hospital-based fees for the additional surgical cases.

The effort for each method (printing, labeling, and mailing individual postcards vs entering patient follow-up appointments in the computer and generating and mailing notification letters through the clinic’s computerized mailing system) is roughly equivalent in terms of labor. Although we did not track the exact amount of time secretaries spent on the phone with patients, our impression was that the prescheduled appointment method was more time-effective. The increased patient volume resulting from the prescheduled appointment method does translate into a greater demand for resources. Not only does this mean that ophthalmic medical personnel must see more patients, it also means that physicians must spend more time reviewing charts.

There are questions in the literature regarding follow-up appointments and their implications in terms of equality of care. For example, Kiefe et al said that the practice of “not giving patients written appointments at the time of discharge may constitute an implicit form of rationing by inconvenience.”<sup>10(p. 392)</sup> Each office must decide to structure its follow-up appointment system to allow equal access for all patients.

### Summary

This study documents that substantially more follow-up appointments are completed when patients are notified of a prescheduled follow-up appointment than when they are contacted with a postcard which requests that they contact the office to arrange an appointment. Patient preferences for the two methods were comparable. We recommend that offices evaluate their current

follow-up re-appointment procedures and that they adopt a prescheduled appointment method for patients who do not schedule their appointments on the way out of the office. We are currently looking at proactive ways to improve our checkout process. **1**

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