

INFOGRAPHIC // Why Wait?

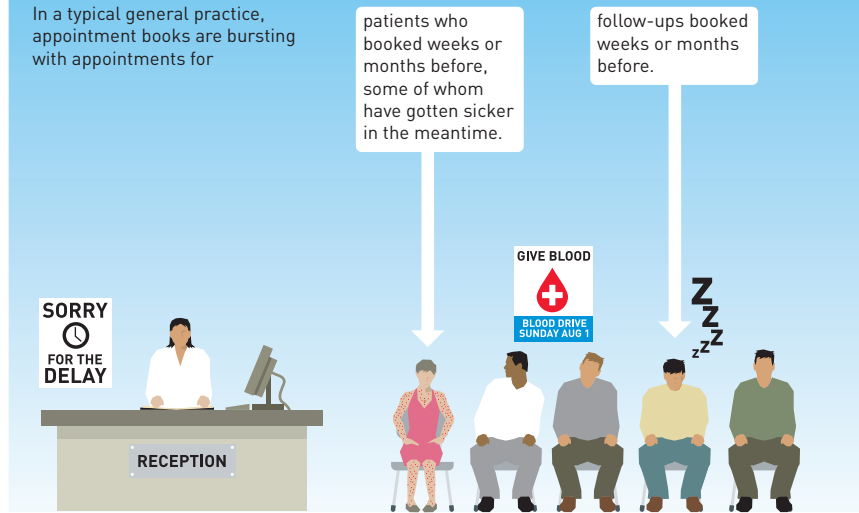
BY MARINA KRAKOVSKY // INFOGRAPHIC BY FLYING CHILLI

Fed up with patient backlogs at Kaiser Permanente in Roseville, Calif., family practitioner Mark Murray thought, If other industries can balance supply and demand, why can't health care professionals?

Murray's implementation of same-day scheduling—in which patients can be seen on the day they call—reduced waits for routine appointments from 55 days to one. Though many primary care clinics now practice some form of it, specialists have resisted, citing doctor shortages, the need for regular follow-ups and the risk of time slots going unused. Another turnoff: Making the switch requires a significant amount of work up front in careful workload calculations and extra staff time. Yet Murray and others would argue that the outcome is well worth the effort, for both patient and physician. Here's how it's done.

Behind as Usual

In a typical general practice, appointment books are bursting with appointments for



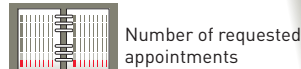
Crunching the Numbers

To convert to same-day scheduling, Columbia Business School professors Linda Green and Sergei Savin have determined that physicians must

1) Identify current panel size (active patients) by counting the number of patients who requested appointments during a sufficiently long period—say, the past 18 months



2) Estimate the current rate of demand

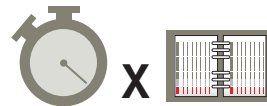


Current panel size X Number of days

3) Estimate the number of daily appointment slots

Average length of a visit

Average number of hours devoted to appointments daily



4) Calculate the frequency with which physicians currently work overtime to meet patient demand (overflow frequency)



$$\text{Overflow frequency} = 1 - (1 - p)^N - \sum_{k=1}^C \frac{(N - k + 1) (N - k + 2) \dots \times N}{1 \times 2 \times \dots \times k} p^k (1 - p)^{N-k}$$

Bridging the Gap

To convert to same-day scheduling, physicians and their staff may need to work overtime for several months not only to clear out already full schedules but also to begin offering same-day appointments. Murray recommends that physicians set a date by which all of their appointments will be same day (though patients are still permitted to prebook follow-up appointments).

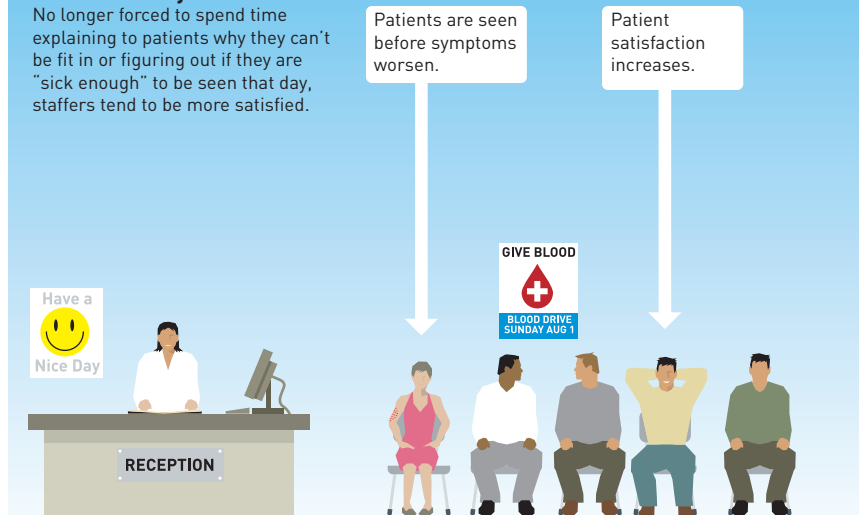


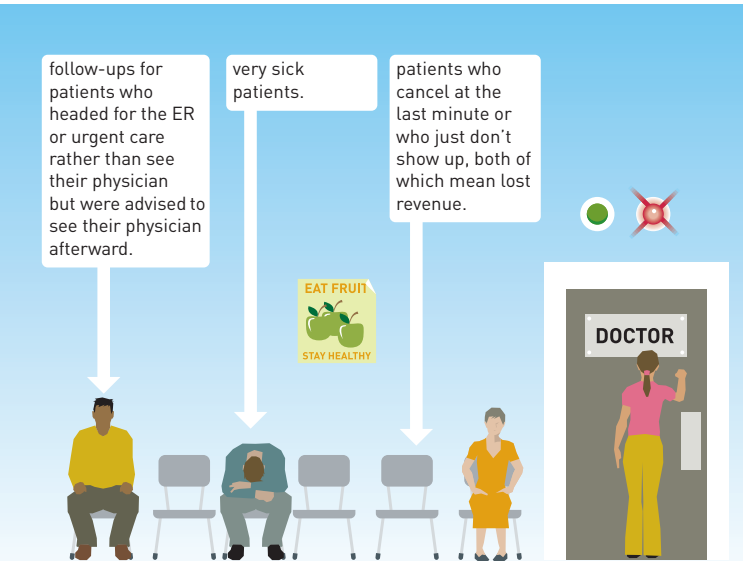
A Healthier System

No longer forced to spend time explaining to patients why they can't be fit in or figuring out if they are "sick enough" to be seen that day, staffers tend to be more satisfied.

Patients are seen before symptoms worsen.

Patient satisfaction increases.





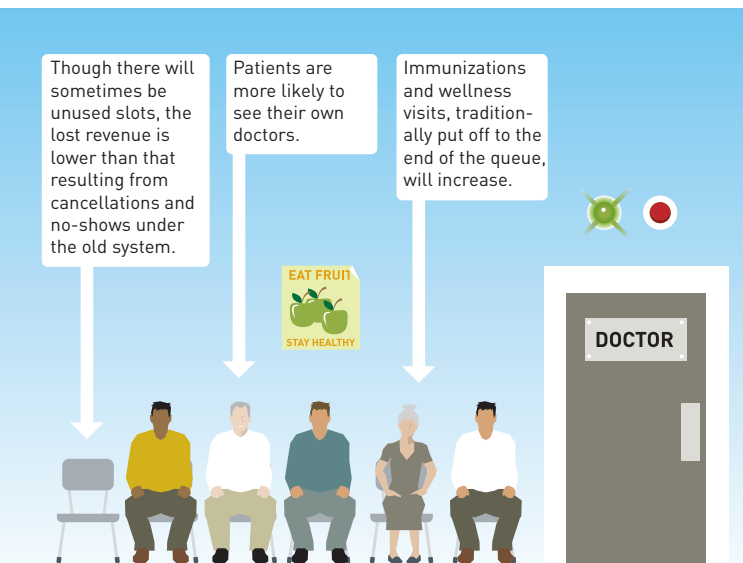
5) Decide whether they are comfortable with their current overflow frequency (20%, for example, means working overtime once a week). If not, they must adjust the number of daily slots or the size of their panel, if possible.

For example:
 If a physician uses 24 daily slots five days a week
 and is comfortable working overtime twice a week
 the panel shouldn't exceed 2,515.

X 24

X 2

2,515



MILESTONE // Curious Medicine

Three hundred twenty-five years ago, medicine was in flux, with old beliefs in magical healing coexisting with notions of new treatments based on observation and evidence. In 1684, within decades of the discovery of red blood corpuscles and the first microscopic look at spermatozoa, a London printer and bookseller named Thomas Basset began running off copies of *Medicina Curiosa*



or, a Variety of new Communications in Physick, Chirurgery, and Anatomy, from the Ingenious of many Parts of Europe, and Some other Parts of the World. It was the first medical journal published in English.

Earlier medical journals had appeared elsewhere in vernacular languages, including the *Journal de Médecine* in France. In England the *Philosophical Transactions of the Royal Society of London for Improving Natural Knowledge* and *Weekly Memorials for the Ingenious* reported on scientific discoveries, but fewer than a third of their pages focused on medicine.

The first issue of *Medicina Curiosa*, probably aimed at lay healers, mixed the technical and the practical. It featured articles on the anatomy of the inner ear and treating ear pain, as well as case histories from an English physician, including the anguished account of a patient's death from the bite of a rabid cat. Fearful of antagonizing

England's physicians by disclosing trade secrets, Basset prefaced his journal with a disclaimer that his articles were no substitute for a properly trained physician's care.

Despite Basset's cautions, *Medicina Curiosa's* second issue was its last, for reasons unknown. The swirl of progress eventually consumed all the earliest medical journals as established medical societies realized the value of printing medical news. By the middle of the nineteenth century, medical journals catered to physicians; one of the oldest still in circulation, *The Lancet*, was founded in 1823.

By 1900, many journals with characteristics familiar to today's readers—peer-reviewed articles and scientifically reported studies—were being published. Today, tens of thousands bombard subscribers. In 325 years, we have advanced from a scarcity of information to a surfeit. ■

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