



## Lean Thinking: Questions and Answers

### Question:

We are working on some Lean training and have been mapping our provider visits looking for waste. One question came up, however, that we hope you can help us with.

Per your original recommendations, we reduced our scheduling types to 20 and 40 minute appointments. In our mapping, we've been looking specifically at all the components of a 20-minute visit. In your opinion, should the 20-minute visit be the entire amount of time the patient is with us. In other words if they are scheduled for 10:20, should their check-in, rooming, provider and check-out components all be included in that time? Right now, our check-in takes 3 minutes, rooming is 8 minutes, red zone is 15 minutes and check out is 3 minutes for a total of 29-30 minutes. Our providers don't want their time cut any less, but we're looking for a definition of what a 20-minute appointment is or should be. Any thoughts?

### Answer:

The quick answer is that the "scheduled visit" is the time you schedule for the patient to be with the provider. The patient's journey time includes this scheduled visit but also includes time within other value added steps either in front of or behind the scheduled visit itself.

The Lean approach is good. However, be very careful. When using the Lean methodology, the tendency within healthcare organizations is to focus on Lean through the visit. But you really have to "lean" the system as well, that is, lean the process for getting the work into the practice (the access and delay for an appointment) as well as the leaning the process during the visit. Too many people focus solely on the "at the visit" issue and neglect the access and delay to get an appointment.

As you know, Lean focuses on waste identification. Waste of time and resources are two large forms of waste. Lean eliminates inventory (the piles of waiting work) during the visit but also must focus on the inventory of those waiting to be seen. This is the part that most Lean healthcare efforts neglect. It does not do you any good to "lean" the office visit and create or ignore the inventory waiting to get in the front door.

### Recommendations:

Do a map of the patient's journey across the office. The map looks at the entire journey from check in to check out, a series of steps interspersed with delays (waste). There is also waste within each of the steps.

The "schedule" is the pace - the rhythm - that you set for the provider. This is the red zone length.

There are, in a sense, two intersecting maps - or journeys - at play here. One is the patient journey and the other is the provider pace. Map the patient journey horizontally through these steps and map the provider journey diagonally, across the steps.

The time scheduled with the provider is called the "red zone" - just one of the steps in the patient's journey. The red zone is the scheduled time for the provider to be with the patient - the scheduled rhythm or pace for that provider. In the best systems, the red zone time needs to include all the work associated with the visit, at least all the work that can be done right away to complete that visit. Most lab and radiology work, while "ordered" as part of the visit, is not completed within the visit. If such investigations are "ordered" to be done on the day of the visit, for the most part these are not scheduled and can be seen as a split red zone, which is a red zone that starts, is interrupted, and then starts and finishes again. This is an exception. At the same time, there are other tasks associated with the scheduled visit: documentation, completion of paperwork and referrals etc. The most efficient approach is to complete that work right away. The scheduled visit should include the time needed for these tasks. Don't batch anything. As a result, the scheduled visit time (the provider red zone) may be longer than the patient's visit experience with the provider (the patient red zone). When we map the patient's journey, we map and calculate measures for the time spent with the provider. This actually may be shorter than the scheduled time. Some groups schedule the provider every 20 minutes but tell the patient that they are scheduled for 15. The most effective providers will do as much as possible in the room with the patient present and not "save" the work for another time. If the visit work is batched, we see errors, mostly due to forgetting, and the time to complete the work is actually longer.

When we do a retrospective workload analysis (look backward to see how the provider spends his or her time), we divide the time into non-patient care work and patient care work and then sub-divide the patient care work into direct patient care work (appointments) and indirect patient care work, which includes work that supports the visit: documentation, referrals, lab reviews, refills etc. The goal here is to drive as much of the work into direct patient care. This means we want to do as much of the indirect work as possible within the visit, either with the patient or within the scheduled time for the visit. The most efficient providers will see the patient and finish all the associated work within the scheduled time and avoid having to batch work to be done later. At the same time, there will be associated work - indirect patient care - that is done days after the visit (refills, review of labs, etc.). This associated indirect patient care work can be batched and scheduled within the day's scheduled non-appointment time, or, better yet, "scheduled" as an inherent part of the day by having the provider's visit time scheduled for longer than the patient's scheduled visit.

One of the reasons patients are scheduled with just enough time for the direct patient care work to be completed (for example every 10 or 15 minutes) is driven by the desire to save staff time and "overtime" - "we want all the staff to go home at 5 PM and not pay overtime so if the provider has to stay late to finish the batched work that could not be completed within the visit, that's fine because we don't pay for that." In my view, this scenario represents inadequate support for the provider and is a set-up for errors and mistakes. Often this approach does not save staff time since the work done late during "after hours", is just pushed to the staff first thing the next day. This commonly guarantees poor synchronization and a late start on the second day.

In a sense, then, we can see that the term "red zone" has different meanings. If we map the patient's journey, we map a series of steps across the practice. One of those steps is the "red zone"- the step that represents the time the patient and provider are together. We add measures to the map retrospectively and calculate just how long this time was. This is the classic meaning of the term.

On the other hand, when we schedule the provider, we are building and setting a pace or rhythm for the provider work. This scheduled set of rhythms is the scheduled set of consecutive red zones. If we want to avoid batching of the indirect patient care work, we need to see that these two red zones do not completely overlap. The provider scheduled time is indeed longer than the patient actual red zone because some indirect patient care work for patient #1 needs to be completed before moving on to patient #2. We can reconcile these differences by a commitment to starting each visit at the scheduled time, so the patient does not "get" all the time that is set aside on the provider schedule.

This approach drives us towards a "we all work until done" philosophy. We start on time, work on time and finish on time. However, if the standard visit is lengthened to accommodate more work per rhythm unit (visit length) by recognizing that the red zone needs to accommodate both direct patient care work and indirect patient work associated with that visit, we have to be cautious about reducing the total visits per day due to longer lengths. Efforts to finish all the work at the time of the visit needs to be accompanied by efforts to discover what work is really provider work and what work can be done by others on the staff. I expect that much of the indirect patient care work batched and pushed to the end of the day is work that could be done by others. What we commonly see is 7-8 hours of direct patient care work completed by the providers within 7-8 hours of a fully staffed day but at the expense of 2 hours of provider "overtime" needed to complete the indirect work. What we want is 7-8 hours of direct plus indirect patient care work completed by the entire "team" (staff and provider) but not at the expense of a reduced number of visits. Accomplishing this requires teamwork and an explicit care team workload analysis (and probably a commitment to everyone working until all the work is done to accommodate variation).

The start of the red zone needs to be synchronized. All the critical components - patient, provider, information, staff and equipment need to harmonically converge on an open room at the scheduled appointment time. This requires that each of these components may need a different lead time to get there on schedule. The patient has to arrive in enough time to go through the reception and other steps in advance of the scheduled time with provider. Thus, you need both a scheduled arrival time and a scheduled time with provider. The red zone is 20 minutes (or whatever time you choose) but the journey time will be longer than the scheduled red zone time and will include all the other steps and delays in between those steps. Initially you want to minimize or eliminate the delays between all the steps: reception to medical assistant, to provider to out, etc. Then you want to eliminate the delays within all steps, including within the red zone itself.

In your numbers you did not account for any delay between steps - this is good and bad. Good in the sense that you imply that you want to eliminate it and bad that you may have forgotten about it. Remember you have to walk the patient between steps - this takes some time.

Once you get the office flow improved by eliminating delays between the steps, you can focus on the delays within the steps. You did start this by standardizing the reception step, etc. You can look within the 20-minute red zone for elimination of waste. And it sounds like there is some provider resistance.

Just don't neglect to "lean" the system. I have seen far too many groups that lean the visit at the expense of the patient. They try to make the perfect standard provider day, allowing for no flexibility. Honestly, the key to Lean is to see all the work today and as a consequence eliminate the waste of time and inventory at the system level. Because of variation, this means that the office day may have to be flexible. Some days you have to see more and some days less. One error in Lean in healthcare is to start too close to the ground and to try to "Lean" the visit. This creates rigidity. If the day is rigidly controlled and limits the number of encounters, any demand variation increase results in a delay for patients. The patients are thus forced to bear the brunt of the demand variation. The real Lean approach is to minimize delays for the customer (patient) - and have the day flex if the demand rises or falls. If demand rises the practice sees more patients. If demand falls, the practice sees less. This issue is neglected in most Lean approaches. The real problem is that if we focus on making the perfect day (often in a failed attempt to maximize revenue) then the customer is mistakenly identified as the provider. If we focus on the patient as the customer we eliminate the delays FOR the appointment and AT the appointment and we flex the day to meet increased or decreased demand.