

# Discovering lean thinking at Progressive Healthcare

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## *"Where is the stack of books I set aside?"*

I ASKED in a panic, *"You mean those diet books? They are over here. I had to move them"*, said one of my co-workers helping pack up my office for a move to a new location. *"Diet books? Oh, you mean my lean thinking books!"*

*"Thanks, I like to keep them close for reference."* I chuckled.

That's a new definition of lean. I wondered what Taiichi Ohno, the developer of lean, would have thought of it? Lean is removing waste. Ah well, I need to think about how to introduce lean to Progressive Healthcare.

Progressive just called me. They accepted my proposal to use lean to improve their primary care delivery processes. Progressive has done many innovative things in the past. It promises to be a fun and fulfilling assignment.

## **About Progressive Healthcare**

Progressive Healthcare is a large multi-specialty group practice with more than 100 primary care physicians and about 50 specialists. Progressive has 1,600 employees and several locations throughout a large southern U.S. city.

We set up a two-day value stream mapping event for them to plan the changes they want to make. It is being held in one of their large primary care facilities. On the first day of the event, the conference room atmosphere is one of expectancy, skepticism, and hope.

The attendees are the senior managers (clinical and nonclinical) of the practice which includes marketing, two patients from a patient advisory group, and representatives from primary care management from various Progressive facilities.

It is important that all stakeholders be represented so they have a voice in the outcome of the event. We start with a very brief introduction about lean thinking and the types of waste in health care.

## Focus is on the patient process

The scope of the value stream Progressive wants to work on is from the time a patient requests an appointment for primary care until they come in for it and leave the facility. Everyone has a pad of paper and a pencil. We go out as a group and walk the value stream.

### We begin in scheduling

I discuss with the schedulers what we are doing and that we are looking at the workflow, not at people—we try to help people be comfortable about being observed by us.

#### Lean Thinking Definition and Background

Lean thinking is a process to create value from the patients' point of view. Lean also focuses on removing waste from work (processes) that is performed by everyone at all levels in the organization. Lean thinking was developed by Ohno in the Toyota production line. Ohno referred to waste as muda. He identified seven types of waste in manufacturing:

- Overproduction.
- Correction.
- Material and information movement.
- Processing.
- Inventory.
- Waiting.
- Motion.

Lean has been used extensively in the automotive industry. However, it is new to service and health care industries. General Motors, through a supplier development program, teaches its health care providers how to do lean thinking events. The Institute for Healthcare Improvement promotes lean thinking in its improvement collaboratives and conferences. Lean thinking is a manufacturing tool that focuses on adding value from a patient point of view and removing waste from processes/workflows.

We observe for 15-20 minutes how scheduling works and make notes on the muda or waste we observe. It takes between three and seven minutes to take a phone call and then schedule an appointment.

Before we leave, we ask questions of the schedulers about what we have observed and for their ideas for improvement. Mary Wecandoit, R.N., manager of this center, tells the value stream group it takes an average of 10 days for a patient to see a physician.

These are data we use when we make our value stream map.

Then the group moves into the waiting room. Each person follows at least one patient through the process. Visits vary in length. So, we agree that we will follow patients from the time they enter the door until they leave the facility for about 90 minutes.

When each person is following a patient they are timing when the patient waits, timing how long it takes to do each of the steps in the visit process, as well as noting the waste they are seeing.

#### Lean Design Principles

##### Value

Value is what a patient is willing to pay for. What adds value from a patient's viewpoint?

##### Value stream

A value stream is the flow of a specific service from a patient's point of view. The scope of a value stream can be defined at the process level, facility level, organization-wide, or across many providers in the continuum of care for a patient.

##### Flow

Ignoring functional boundaries of work (or silos) how can care delivery be done without the patient waiting and without interruption?

## Pull

Pull is doing work as it is requested or needed by a step in a value stream. A push system does work without regard for whether the next step needs the work done or if it is ready to receive the service or product of the previous step/work.

## Perfection

Perfection is striving for incremental elimination of waste and implementing radical redesign of processes to add value from a patient point of view. Perfection is also taking waste out of the care delivery flow.

Perfection is creating transparency so that all stakeholders can see how a value stream is functioning. Perfection is also competing against a vision of perfection, not a competitor.

## Types of waste in health care:

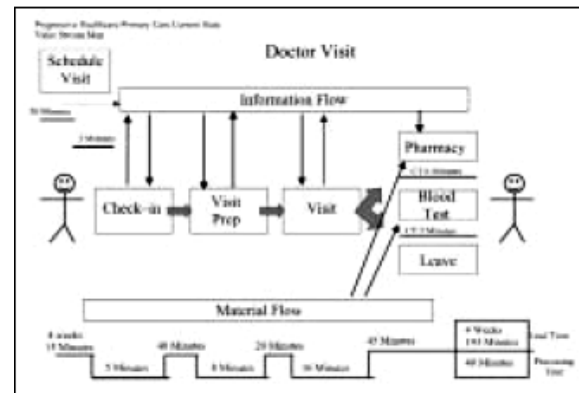
- Handoffs (separates knowledge, responsibility, and action).
- Errors.
- Waiting.
- Barriers to communication.
- Information not available.
- Wrong information.
- Wrong tool or no appropriate tool.
- Go see.
- Correction/rework/ inspection.
- Inefficient motion.
- Material and information movement.
- Policies and procedures not employee/customer focused or not flexible.
- Overproduction (too much, too fast, batches, etc.).

People in the value stream group are sharing what they are seeing as they wait for patients. It is interesting listening to them. Each is seeing it through new eyes—as waste:

- “Look at how long they have to wait in the exam room.”
- “Never saw that before and it is routine.”
- “Why are they doing that again?”
- “We ask patients the same thing how many times?”
- “Patients have to check-in again at the lab?”

We gather in the conference room. We identify the major steps in the value stream and write them on flip charts. We agree that this is Progressive’s current state value stream. Then everyone starts writing examples of waste and nonvalue-added things they observed.

Soon there is writing surrounding each step. Everyone steps back to look at the whole value stream.



We ask ourselves how can we design an improved future value stream? We start applying the design principles. We look for nonvalue-added observations.

The group takes a detour. What is value added? A patient might not be willing to pay for waiting. Would they be willing to wait to make sure an allergy shot does not cause them a problem? The group thinks they should.

I ask, “If the patient gets an allergy shot every week and has never had a reaction, would they think it adds value to wait?” The group defends the wait on clinical grounds. I ask, “How do you know you are correct?”

What is the latest scientific data or guideline for waiting after an allergy shot—especially over time? Are your

wait standards current with the evidence?" No one in the group knows for sure. They agree to investigate. I push them:

If you had an appointment to see your hair stylist and you had to wait 15 minutes every time, would that add value in your eyes? You have an appointment. You are on time. But you always have to wait. That is same thing we do to patients. They have an appointment. They have to wait. Sometimes we ask them to wait for 30 minutes.

The family practice department chair, Les Tryit, M.D., speaks up: *"We have designed everything we do for the convenience of ourselves, our doctors, and our work. This is new thinking for us. We need to think about what adds value from a patient's point of view. I am going to take this to our next family practice department meeting for discussion."*

I suggest that they talk about this in many forums to get people thinking about it. There is no right answer for what is value added. As they learn to use lean, the concept will change and be enriched.

The concept of value from a patient's view requires discussion to be understood. We move on.

## Thinking about the future state

The next step is to think about what they want the future state of the value stream to be. I suggest that we make two value streams—one for five years from now and one for a year from now. We start on the five-year value stream.

The group begins by thinking about how many times the patient had to check-in while in the facility. They could potentially check-in three times in one visit and wait each time.

Someone says, *"Let's do away with check-in!"* It resonates. All are excited about the idea. *"Incorporate the stop for the nurse to take their vital signs and find out why they want to see the doctor in the exam room."*

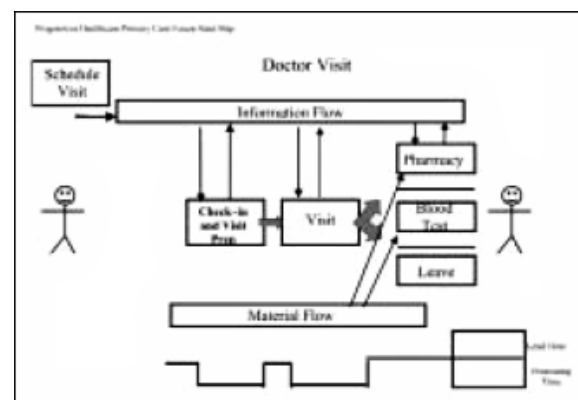
*"What if patients could go directly into the exam room?"*  
*"We would need different technology."* *"We could give them a smart card that they could swipe outside the exam room door when they arrived."*

*"They could make an appointment for an exam room."*

The ideas flowed on.

They ended up doing away with check-in and want to replace it with a process for patients to check themselves into an exam room. I drew a circle around the check-in box and the patient prep steps. They had identified a radical change. They were innovating from a patient point of view.

Then we drew the future-state map. It had scheduling an appointment, visit prep, and the exam on it with branches to diagnostic testing, if needed, for a visit. Very different. Much simpler for the patient.



Then we worked on the one-year value stream map. The group discussed where they could make changes that would support the five-year future-state value stream map. They decided to have two improvement events.

One for working on everything related to checking-in throughout the facility. The other one is for making the back office and patient prep step more efficient.

## Next steps

We spent the remaining time identifying next steps. There were budgets to be built for the two improvement events. Projects needed to be resourced for the five-year value stream map. Action plans were developed.

We reviewed all that we had done in two days. The group was amazed. We have a strategic plan for primary care delivery in two days! The atmosphere in the room is now one of excitement and enthusiasm.

This is why I love my work. Through this process people realize they can make dreams practical.

## The second lean introduction and workshop

Several months have passed since we created the Progressive Healthcare future-state value stream maps with the management team. I am on my way to Mary Wecandoit's facility to lead a two-day lean thinking improvement event for her team to work on their patient preparation and back office processes. (General Motors introduced me to the concept of lean thinking through a supplier development program they are conducting for their health care suppliers. The process described for this event is adapted from their workshop on lean thinking in health care.)

We have been preparing for today. I am mentally reviewing the preparations. She arranged for several temporary staff to fill in for the regular staff who are participating. One physician is participating. His schedule had been blocked.

She sent out flyers alerting the rest of the staff that we are looking at workflows, not at staff. We asked staff to give participants ideas for improvements. We have flip charts and markers. Seems like we are ready.

As I enter the building, I see Dr. Tryit. We chat for a few moments. She is looking forward to the wrap-up meeting. She seems very enthusiastic about making changes in primary care.

Mary is in the meeting room making coffee. We arrange the tables and chairs to enable good communication. People start arriving. They have invited a pharmacist from the pharmacy next door.

Of course, lab and radiology representatives are here as well. A patient advocate, a medical records tech, and a receptionist arrive. The physician brought his nurse.

Mary also invited the triage nurse. Everyone introduces himself or herself.

Mary and I present the scope of what we will be working on the next two days. We begin with an introduction about lean thinking principles and then move into defining waste.

The group needs to observe the waste. Many came with ideas about waste and changes. But there is something about actually seeing it in action! Everyone takes paper and pen to walk the processes.

We ask how things work, if it is not apparent. Notes are made. All look for waste. Staff are asked for their improvement ideas. We return to the meeting room. We write all the waste observations we saw and heard from staff.

Then the group identifies the specific areas and processes included in the scope of the lean event. I explain the lead-time analysis tool of measuring how long it takes to do each step in a process.

The tool also captures the distance people have to walk to perform each step in the process, and it asks them to determine if the step is adding value. The group is divided into pairs. The pairs go into the back office and do lead time analysis on the processes.

They return in shock and amazement. They saw how long it took to walk 79 steps to the inconveniently placed fax machine and how many people had to walk that far.

They discovered how many times the nurse had to hunt for the right tool because there was only one electronic thermometer for four nurses and how doctors and nurse teams were not located close to each other. They were seeing their work from a new perspective.

This was the first of many trips that morning. We looked at three more tools: standardized operations, workplace organization, and visual/audio controls. Standardized operations reduce variation and increase safety.

The group went out to look at the sequence of work and how the areas were laid out. They all came back with maps of the back office and lines showing the flow of work. They looked like floor plans with spaghetti on them.

We discussed the impact of sequence and layout on cycle time and efficiency.

We next discussed how to create a place for everything and everything in its place. The process is to clear, organize, label, and then to clean. The last step is to maintain it with a process for continuing to make sure everything is in its place.

The group also looked at audio and visual signals in the back office and how to improve them or start using new ones.

During the discussions after each trip the group learned more and more about how processes worked in other areas/functions in the health care center. This learning was the result of observations and the sharing by representatives from each of the functional areas.

There were many enlightening moments for all as they gained understanding for how the workflow across work areas functioned or was impaired.

It was time to look at what they had learned and at all the waste items to identify solutions. The group discussed what needed to be done and identified who should work on what.

They developed communication for the rest of the staff about the changes in their work.

Off they went to implement solutions. They had more than eight hours of the two days to do implementation. Mary and I worked along with them.

We also kept them supplied with what they needed to make the changes. Mary ran to the office supply store for more labeling tape and new desk organizers for one of the groups. I helped carry stuff out to the dumpsters. We had to run to keep up with the staff. They were energized.

At the end of the second day, the entire lean event group came back together to share what had been done. The rest of the staff in the facility was invited. Dr. Tryit attended along with the senior executive group that was involved in the value stream mapping event.

The energy level in the room was high. The group shared the changes they had made and how they would measure the effectiveness of changes. Communication to staff for the changes was also shared.

There were a couple of things the group wanted to do that required construction. The plans were shared for that. Mary indicated that she had some capital funds for it. The executives and staff asked several questions of the group.

The executives wanted clarification on some of the details of the changes and measurements. They also wanted to hear how everyone felt about the work they had done in the lean event.

Mary and I were just as pleased and just as tired as the lean event group. We agreed to meet for lunch the next day for a debrief. Right now a bubble bath and a glass of wine sounded just fine.

Mary called. She couldn't make the debriefing. She e-mailed the following notes to me that included observations from another lean event we had done in medical records.

*"Sylvia, this is why I like lean thinking and what I think makes it unique, compared to other process improvement teams I have been on in the past. I don't know how you incorporate this in the work you are doing at Progressive, but these are my thoughts.*

*Thanks, Mary*

*Why I like lean thinking: It values diversity by bringing all stakeholders together to work on the solution. For example, it wasn't just the back office staff looking at their processes and presenting their improvements to administration.*



*It was everyone who interacts with the patient during the visit—front office, back office, providers, administration, medical records, pharmacy, lab, x-ray, and the patient, looking at all the ways they impact the patient visit.*

*In this way there was learning and sharing that created an interconnectedness across all departments and then a commitment for correction and improvement. Many of the important gains were around ‘what I do over here that affects you over there and ultimately defeats me.’*

*For example, special chart requests where I request the chart and I don’t get it by the end of the day. I request it again the next day. An out guide comes to me that says it is out to another center. I request it again.*

*In two days the chart comes. What the back office didn’t know is they are creating a lot of work for the record room. The record room had a process to get the chart to back office upon return from the other center; however, it seemed like it worked for the back office to request the chart many times because when they requested the chart that third time it came.*

*That sharing of information leads to understanding and decreased the rework and waste for everyone involved. We often did not have to change any process; just share information.*

*It is also set up to do observation, information sharing, and implementation immediately. That instant satisfaction and gratification of actually accomplishing concrete improvements right away is very powerful.*

*It is a large time commitment of two days; however, you have observable things to show for it right away. How many times do we go to two-day planning sessions and see no tangible effect of the large investment of time and resources? This is truly unique to this process.*

*You walk the process or flow you are working on. You don’t write down how you think it happens. You go out and observe it. Document it. For example, you follow the patient experience.*

*What it looks like when I walk into the center—how am I greeted, what am I asked for, how long do I wait, what am I told, how am I brought back to the exam room, what am I asked, is it repetitive, how far do I walk, etc.*

*I like this process because that is how I think. Start here—end there—how many side trips does it take to get there.”*

Dr. Tryit sent an e-mail after the wrap-up event with her thoughts on the value of applying lean thinking to primary care. She wrote:

*“Lean thinking gave the staff a feeling of control over their own lives.*

*Everyone is so busy that they sometimes feel victimized by company policies, procedures, processes, and workloads. The lean thinking process allowed them to see and actually experience that they do have some control over their own environment.*

*From physicians to nurses to front office staff, they feel some control. Even the medical records’ techs who felt everyone controlled them realized they could accomplish something to change their day-to-day processes and improve their work.*

*Lean thinking also forces you to stop and look at simple things that impact your daily work life such as standardization of supplies for all exam rooms. Without this process you might never take the time to fix the simple things that make a significant difference.*

*The fax machine stays in the wrong place, supplies aren’t labeled; so you continue to spend too much time looking for things. Locations of nurse/provider teams that are dysfunctional never get fixed, etc. Lean thinking forces you to find and address these issues.*

*Lean thinking also develops a team spirit. Remember the song one of the groups performed for a wrap-up meeting? Physicians, administrators, front and back office staffs all were joined together. Wow, that was impressive.”*

## Final thoughts

These e-mails are very encouraging testimonials for lean thinking and for the approach we are using to engage people in improving their work. I have 12 more lean events to do at Progressive Healthcare!

If the lean events continue as they have in engaging leaders, physicians, and staff, primary care will be very different at the end of the coming year. Next year when I meet with the Progressive executive group to review progress on realizing their one-year future-state map, it looks as if we will have accomplished much.

## Authors

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Dr. Joyce Mobley earned her medical degree from the University of Washington in 1975. Her residency was in family medicine at Good Samaritan Hospital in Phoenix, AZ. She has been employed at CIGNA Healthcare for 23 years starting as a primary care physician.

Her most recent position is department chairman for Adult Medicine and After Hours Care.

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