



"WALK BEFORE YOU RUN": THE GEMBA WALK IN THE PRACTICE OF RADIOLOGY: METHOD OF IMPROVEMENT

Monica Rizkalla MD¹, Yehuda Herman², Ekramul Gofur MD¹, Kevin
Thompson MD¹, Cyril Varghese MD¹, Jared Meshekow MD MPH³,
Perry Gerard MD MBA FACR^{1,2}



DISCLOSURES

No disclosures.

Westchester Medical Center, Valhalla, NY¹

New York Medical College, Valhalla, NY

Temple University Hospital, Philadelphia, PA³

Learning Objectives

- ❑ To learn the meaning and purpose behind a gemba walk, and its place in lean management philosophy.
- ❑ To understand how to effectively perform a gemba walk.
- ❑ To understand the various ways that a gemba walk can be implemented into a radiology department, and the manifold benefits it provides.
- ❑ To see a practical example of the gemba walk put into practice by a breast imaging center.
- ❑ To learn how the gemba philosophy extends beyond the walk itself.

The Gemba Walk

- ❑ 'Gemba' comes from the Japanese word "*gembutsu*," which means the 'real place', 'actual place', or the place where 'value-added activities occur'.
- ❑ The Gemba walk is a management practice which involves going to the frontline to observe and understand how work is being performed.
- ❑ When done correctly, the Gemba walk is a powerful tool used to identify areas of process improvement.

現場
GEMBA



WALK

The Gemba Walk: One of the Many Lean Tools

- ❑ The Japanese word for waste is '*muda*', which is defined as 'uselessness' or any process which does not add value to an organization's ultimate purpose.
- ❑ Some examples of waste or muda include overproduction, surplus inventory, rework/correction, motion, processing, waiting and conveyance.
- ❑ Lean tools are quality improvement tools designed to reduce and eliminate waste and invaluable processes in organizations.
- ❑ The gemba walk is an example of a lean tool.
- ❑ Lean tools are utilized across many organizations and industries.



A Brief History



The Gemba walk was created by Taiichi Ohno, one of the founders of the Toyota Production System. The Toyota Production System is a management system which was a major precursor for the larger 'lean manufacturing' movement.



As early as the 1900s, lean management tools were used by Henry Ford in American to create the Model T assembly line.

7 Steps to an Effective Gemba Walk

1. **Pick a Theme:** Make a plan. Choose an area of your department to explore or one aspect of workflow that you'd like to improve.
2. **Prepare your Team:** Let team members know what a Gemba walk is and what to expect during the process.
3. **Focus on Process, not on People:** Gemba walks are not employee performance evaluations; they are purely observational.
4. **Be Where the Value Stream Is:** Identify key areas or processes that add value, and observe areas with a high potential for waste that can be optimized.
5. **Record your Observations:** Make sure to log any observations or findings.
6. **Have an Extra Pair of Eyes:** Gemba walks are especially effective in teams, particularly multidisciplinary teams.
7. **Follow Up:** Follow-up with employees to share what you have learned and plan ahead for your next steps.



Golden Rules of Gemba

- ❑ When problems arise, do a Gemba walk. Do not hypothesize first, but go, look, and see.
- ❑ Ideally, actions should not be taken during Gemba walk, but should come after sufficient observation has been made. However, temporary countermeasures may occasionally be taken on the spot.
- ❑ Find the root cause by asking questions during your walk.
- ❑ Gemba walks should be taken frequently.

The Need for the Gemba Walk in Radiology

Radiology is a Significantly Customer-Service Oriented

Two principal activities that add direct value to patients are **image acquisition** and **exam interpretation**. A Gemba walk includes visiting all the places and people involved in the workflow of image acquisition and exam interpretation (e.g., reading rooms, patient registration, patient experience in the CT or MRI rooms, scheduling process, to name a few). Without seeing these processes live at the front line, management has only hypothetical perceptions and anecdotal knowledge to rely on.

Employee Appreciation and Development.

Routine Gemba walks help break down deep-rooted hierarchical barriers between employees and their supervisors, and open up a forum of free communication, ultimately boosting employee morale.

The Radiology Front line: Potential Areas of Improvement

Wait Times

Patient wait times have received increasing scrutiny as an important metric for patient satisfaction.

Patient-Staff Interaction

Safety Incidents

Errors in Diagnosis

Scheduling Back-Logs

Finance and Billing

Staff Resources

Quality of Care

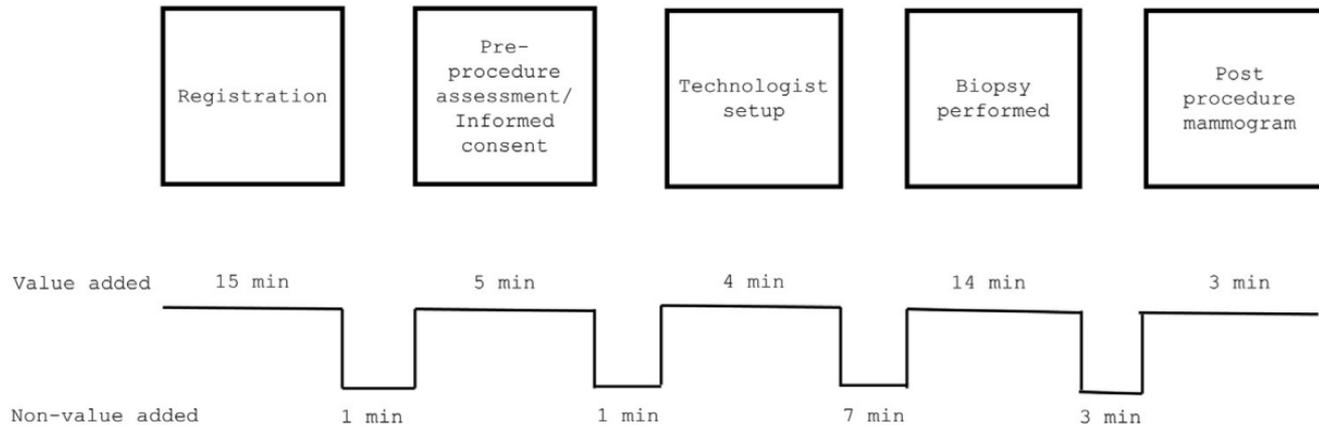
Staff Burnout

Facility Appearance

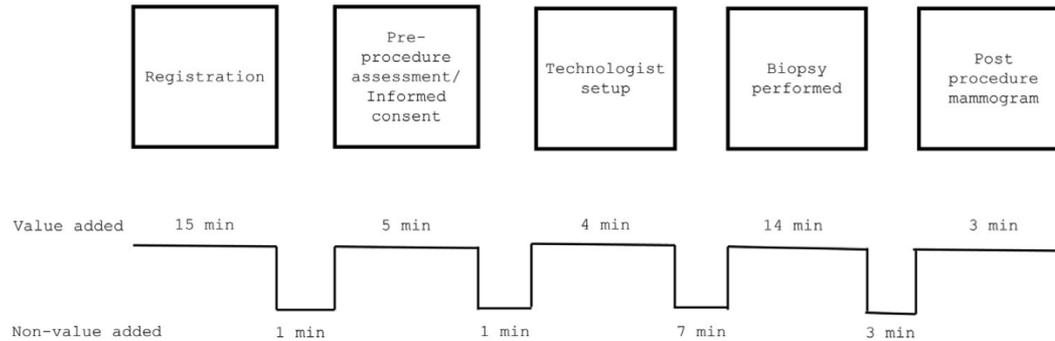
Radiologist Availability for Consultation

A Sample Evaluation of Patient Wait Times using the Gemba Walk

As discussed in Loving et al., a fictitious radiology organization delineates each step of the breast biopsy service workflow. By engaging in a Gemba walk, the team was able to observe and time all of the tasks below, and virtually map out a patient's journey through the department.



A Sample Evaluation of Patient Wait Times using the Gemba Walk, Cont;d



“Value-added” time indicates tasks spent moving the patient towards the desired outcome, whereas “non-value added” time is wasted time where patients await the next task. To improve efficiency and decrease patient wait times, the non-value added time should be brought to a minimum. In this case, patient registration was found to be a bottleneck process which requires improvement.

Gemba Philosophy Beyond the Walk

The true success of any single Gemba walk is the implementation of frequent and routine Gemba walks.

Gemba walks should be the precursor to any quality improvement project.

Any successes in improvement should be communicated to the staff.

References

Bremmer M. Walk the Line: The Effective Way to Do a Gemba Walk. Quality Progress. Published online March 2015:18-22.
<https://inlac.org/ve/wp-content/uploads/2020/08/2015-03.pdf#page=20>

Fishman MDC, Mehta TS, Siewert B, Bender CE, Kruskal JB. The Road to Wellness: Engagement Strategies to Help Radiologists Achieve Joy at Work. Radiographics. 2018;38(6):1651-1664. doi:10.1148/rg.2018180030

Kade Jansson. 11 Steps to an Effective Gemba Walk. Kainexus.com. Published 2017. <https://blog.kainexus.com/improvement-disciplines/lean/gemba-walks/11-steps-to-an-effective-gemba-walk>

Loving VA, Ellis RL, Rippee R, Steele JR, Schomer DF, Shoemaker S. Time Is Not on Our Side: How Radiology Practices Should Manage Customer Queues. J Am Coll Radiol. 2017;14(11):1481-1488. doi:10.1016/j.jacr.2017.06.006

McClam Liebengood S, Cooper M, Nagy P. Going to the gemba: identifying opportunities for improvement in radiology. J Am Coll Radiol. 2013;10(12):977-979. doi:10.1016/j.jacr.2013.08.016

Purdue University. Lean Tools and Principles and Their Applications. Lean Six Sigma Online Certification & Training at Purdue University. Published July 16, 2020. <https://www.purdue.edu/leansixsigmaonline/blog/lean-tools/#:~:text=What%20Are%20Lean%20Tools%3F>

van den Berg PF, Yakar D, Glaudemans AWJM, Dierckx RAJO, Kwee TC. Patient complaints in radiology: 9-year experience at a European tertiary care center. Eur Radiol. 2019;29(10):5395-5402. doi:10.1007/s00330-019-06158-z