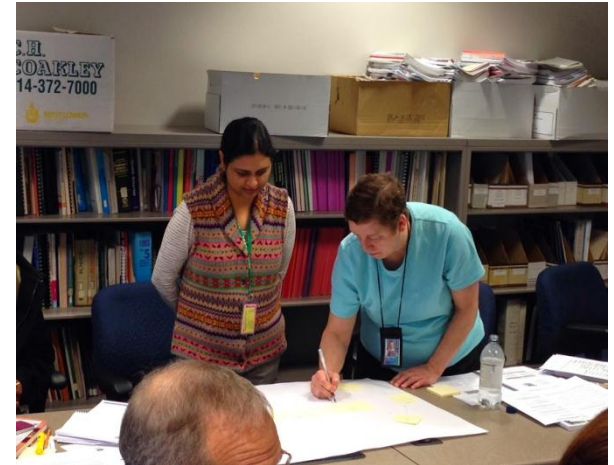


# Quality Systems Training for a Satellite Laboratory

Milwaukee Health Department,  
Public Health Laboratory

# ASQ Quality 101 Course



Fourteen members of our Public Health Laboratory completed Quality 101 training offered by the American Society for Quality (ASQ). Here we learned about; Pareto Charts, Run Charts, Control Charts, Histograms, Cause and Effect Diagrams, Check Sheets.

# ASQ Quarterly Article



Mayor Barrett used our lab as a shining example of how a partnership between the City of Milwaukee and the American Society for Quality (ASQ) can increase the efficiency of delivering public services.

## A Great Tool for Cities - Milwaukee's ASQ

Mayor Tom Barrett



As part of our commitment to performance excellence, the City of Milwaukee has taken its quality aspirations to the next level through an exciting collaboration with the American Society for Quality (ASQ). I am proud to call ASQ Milwaukee's own, and we are proud to be the first city in America to join ASQ.

In August 2012, ASQ CEO Paul Borawski joined me at City Hall to make the official announcement. Also involved in our collaboration is the city's Common Council. Because every council member recognized the value and benefits of using ASQ tools, ideas, and expertise to help meet strategic goals with limited resources, the Common Council passed a resolution endorsing our partnership by a unanimous vote.

The city had already been working to promote and implement quality improvement tools and techniques within all departments such as the Accountability in Management (AIM) program. AIM is my primary tool for overseeing the operations of city government, managing for results based on performance-driven and outcome data, and guaranteeing superior service.

Through AIM, the city has significantly boosted childhood immunization rates to suppress outbreaks of various vaccine-preventable diseases such as measles, mumps, and pertussis as well as ensure protection of community health during seasonal influenza epidemics. After examining data that showed Milwaukee was falling short in meeting national public health childhood immunization goals, we worked with Milwaukee Public Schools and community-based organizations to target school readiness efforts on a broader childhood and student population, including those residing in our poorest neighborhoods. For example, in 2006, the immunization rate for public school students K-12 hovered around 61 percent. As of the 2013-14 school year, Milwaukee has achieved an approximately 87 percent immunization compliance rate for students in this same cohort. Similarly, primary series vaccination rates for children under three years of age are now at approximately 56 percent citywide as compared to 38 percent in 2006.

The AIM process has led to significant reductions in the number of workers' compensation claims, recordable cases, incidence rates, and lost work days. The number of claims took a sharp dip from 3,097 in 2006 to 2,224 in 2010, just a year after the development and implementation of a risk management program that was sparked by the AIM process. The program requires department heads and safety personnel to develop annual safety plans, return-to-work programs, accident investigation protocols and policies, and other prevention measures.



Promoting Quality Through AIM

# Invitation to speak before the Mayor's Cabinet



## JOURNEYS IN PARTNERSHIP

Creating a Culture of Quality at the Milwaukee Health  
Department, Public Health Laboratory



Mayor Barrett asked our Lab to present our Quality Improvement efforts at their monthly "Accountability in Management" Cabinet Meeting

# APHL Lab Matters Article

APHL Lab Matters featured our efforts in The Laboratory Systems and Standards Section of the Spring 2014 edition.

## Partners – People – Processes: LEAN Practices for Laboratory Efficiency Improvement in Milwaukee

by Kwadwo Owusu-Ofori, PhD, public health laboratory operations manager,  
City of Milwaukee Health Department

*Armed with new quality improvement tools offered by APHL's National Center for Public Health Laboratory Leadership (NCPHLL) and the Laboratory Efficiencies Initiative (LEI), the Milwaukee Health Department (MHD) Laboratory has been busy executing LEAN initiatives such as uncluttering work areas, measuring key performance indicators and streamlining laboratory workflow.*

Each morning, the entire staff meets for five minutes to check in with each other and address issues such as scheduling, equipment maintenance, upcoming departmental events and employee accomplishments. A display board at a central location in the laboratory captures "hot-button" issues and quality improvement success stories.

These huddle meetings ensure that the entire lab is informed on a daily basis about the ongoing issues that may impact work. It better prepares the lab to handle potential interruptions and delays to completing its testing workload.

In addition to daily "huddle meetings," they used LEAN 5S techniques, which focus on good housekeeping to remove unused equipment, expired supplies and clutter from the laboratory. The lab's first 5S project focused on the conference room.

"Our conference room is the first impression that visitors get of the lab. We knew we had to start here," says Julie Becker, office assistant.

Led by Owusu-Ofori as part of his APHL-sponsored LEAN Leader certification training, the group first established a system to distinguish trash from treasure. Once staff agreed on this system, they proceeded to recycle outdated journal publications, discard unused equipment, and organize the rest. The conference room project inspired staff to apply 5S techniques to other areas, including the break room and waterborne pathogens laboratory.

"We will definitely build upon this experience to ensure our lab continues to maintain a culture of quality in decades ahead."

- Sanjib Bhattacharyya, PhD, deputy laboratory director

Then, in November 2013, the NCPHLL LEAN Leaders group came to consult on a project designed to reduce the cost of Gonorrhea-Chlamydia Aptima Combo testing. The group applied Value-Stream Mapping and Root-Cause Analysis tools to reduce the number of steps necessary to accession and load patient samples into the Hologic-GenProbe's Panther platform.



Photo taken in front of MHD's primary visual display board after a huddle meeting. 1st row: Andy Liskow, Doris Kuehn, Ben Hui, David Orskow; 2nd row: Sarah McKeon, Diab Gadeh, Norma Avila; 3rd row: Joan Wojnar, Kwadwo Owusu-Ofori, Elizabeth Zambrowski, Julie Becker; 4th row: Lance Prosser, Slawa Gradus, Brad Krause, Mark Zornik; 5th row: Valde Kales, Sanjib Bhattacharyya, Steve Schulteis

"We will definitely build upon this experience to ensure our lab continues to maintain a culture of quality in decades ahead," said Sanjib Bhattacharyya, PhD, deputy laboratory director.

The MHD Laboratory's LEAN team continued their quality improvement training through the City of Milwaukee's existing partnership with the American Society for Quality (ASQ). With APHL funding, ASQ provided professional training in the basic tools of quality improvement. Several members from the LEAN group completed the training course and exam to become ASQ-Certified Quality Improvement Associates (CQIA).

The LEAN process is an example of a quality improvement practice related to LEL. For more information, visit [www.aphl.org/lei](http://www.aphl.org/lei).

### Newly Released from the Laboratory Efficiencies Initiative

The Laboratory Efficiencies Initiative's (LEI) Annual Report highlights the program's principal achievements in 2013 and designates goals for 2014. All LEI activities were guided by a strategic plan delineating products and tools, planning and leadership, and partnership and outreach.

The newly published Policy Guide for Public Health Laboratory Test Service Sharing can help laboratory directors address legal questions about test service sharing. In addition, samples of test service sharing contracts and memoranda of agreement are accessible in the Member Resource Center under the search term "Policy Guide." The policy guide is a companion tool to A Practical Guide to Assessing and Planning Implementation of PHL Service Changes, released in 2012.

The LEI's annual report and policy guide are available at [www.aphl.org/lei](http://www.aphl.org/lei).



# Keenan SharePoint Dashboard

**Lab - Keenan Dashboard**  
City of Milwaukee Health Department Lab Site

Instructions. The Keenan Health Center Lab dashboard is a communication tool that can be used by MHD Lab Staff stationed at KHC to inform the Laboratory Management about workload stats and administrative concerns. In addition to these data, a corrective action form is also available for KHC staff to submit Corrective Actions to the appropriate laboratory manager(s). When the workload numbers or corrective action has been filled out and submitted, an email will automatically be sent to MHD lab managers for review and comment. Please upload new stats by Close of Business on Friday of each week. An alarm will be sent to your email account each Friday to remind KHC staff to update these forms.

### Keenan Health Center STD Clinic Microbiology Laboratory Report - 2014

Month	Microscopic Examination				UTRI			Endocervical (Females)			Wet Preparation			Darkfield			RPR		
	GC (Males) Total spec	No. Pos.	Total WTU (x5)	No. NSU	UTRI	No. Pos.	Total Spec.	No. Pos.	Total WTU (x5)	Yeast	Trich	Clue Cells	Total Examined	Total WTU (x10)	No. Examined	No. Pos.	Total WTU (x8)	No. Examined	No.
Jan	108	23	540	70	1	1	0	0	0	21	18	85	132	1320	1	0	30	8	
Feb																			
Mar																			
Apr																			
May																			
Jun																			
Jul																			
Aug																			
Sep																			
Oct																			
Nov																			
Dec																			
Total																			

### Keenan STD Clinic Notes and Inquires for MHDL

Month	Administrative Comments	Laboratory Comments	No. of Corrective Actions <a href="#">[Corrective Action Form]</a>	Supervisor Review by	Date of Review (Signature)
Jan					
Feb					
Mar					
Apr					
May					
Jun					
Jul					
Aug					
Sept					
Oct					
Nov					
Dec					

The Keenan Health Center dashboard allows us to; submit monthly workload stats, submit purchase orders, submit corrective actions, and passively communicate lab issues.

# Fox6 Morning News SegmentS



[LINK TO FULL ARTICLE AND VIDEO SEGMENTS](#)

ASQ's Public Relations Team heard about our Quality Improvement efforts and negotiated a local morning news segment featuring Laura Langemo

# APHL Annual Meeting Poster

## Workforce Certification in Quality Improvement Facilitates a "Culture of Quality" in a Local Public Health Laboratory.

K. Owusu-Ofori, S. Bhattacharyya, S. Gradus

City of Milwaukee Health Department, Public Health Laboratory

### Objective

A "Culture of Quality" generally refers to patterns of human activity that give significance and importance to maintaining a high quality of services. The objective of this study was to determine whether offering employees at a local public health laboratory (LPHL) training in the basics of quality improvement can create a "culture of quality" around the administrative tasks that accompany laboratory testing duties.

### Study Design

Sixty percent of Milwaukee Health Department Laboratory (MHD) employees spent 1 week completing coursework for Quality 101, a training program designed by the American Society for Quality (ASQ) to introduce participants to the basics of quality improvement methodology. MHD employees were trained in the 7 basic quality improvement tools including; cause and effect diagrams, check sheets, control charts, histograms, Pareto charts, scatter diagrams, and run charts. Afterwards, a survey was used to determine their attitudes towards quality improvement projects in the laboratory.

### Results

Eighty-percent of Quality 101 attendees continued their studies and became [ASQ] Certified Quality Improvement Associates (CQIAs), which ultimately resulted in 52% of MHD employees being recognized as CQIAs (Figure 1).



ASQ Training



of Milwaukee's Public Health Lab are Certified Quality Improvement Associates.

Figure 1. ASQ Certification. (A) MHD Employees participated in ASQ's Quality 101, where they learned the 7 Basic Tools of Quality. (B) Over half of the MHD staff completed Quality 101 and became ASQ Certified Quality Improvement Associates after certification testing.

The cohort went on to create a "culture of quality" that resulted in the initiation of several 5S projects to promote workspace cleanliness, daily huddle meetings to combat a "section silo" culture, and a primary visual display board that features run charts for workload analysis and "hot-button items" for effective lab communication (Figure 2).



Figure 2. ASQ Certification. (A) MHD Employees participated in a 5S exercise designed to clean and reorganize our Conference Room. (B) where over 15000 contaminated items were removed and discarded. (C) Every morning the MHD staff meets to agree, discuss to update each other on the status of lab testing, general administration, safety, and any other pending items.

### Conclusions

MHD employees certified in quality improvement increased the quality of communication and morale in the workplace environment. Training and certifying staff scientists in the 7 basic quality tools can inspire a "culture of quality" at a local health department

### Acknowledgements

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Tom Barrett, Mayor  
Ron K. Singer, Commissioner of Health  
www.milwaukee.gov/health

We presented our work with ASQ at the APHL Annual Conference