Quality and Productivity Commission

27th Annual Productivity and Quality Awards Program

"Saluting County Excellence"

2013 APPLICATION

Title of Project (Limited to 50 characters, including spaces, using Arial 12 point font):

NAME OF PROJECT: FACILITATING PCMH TEAM-BASED CARE INNOVATION

DATE OF IMPLEMENTATION/ADOPTION: FEBRUARY 1, 2012
(Must have been implemented at least one year - on or before June 30, 2012)

PROJECT STATUS: x Ongoing _____ One-time only

HAS YOUR DEPARTMENT PREVIOUSLY SUBMITTED THIS PROJECT? _____ Yes x No

EXECUTIVE SUMMARY: Describe the project in 15 lines or less using Arial 12 point font. Summarize the problem, solution, and benefits of the project in a clear and direct manner

The patient-centered medical home (PCMH) model delivers the right service in the right venue by the right care team member in the right timeframe. This requires team-based care, with functions optimally distributed among team members, and care delivered in novel means such as group clinics, telephone-outreach, and nurse-driven visits, in addition to traditional individual face-to-face visits with a licensed independent provider. The LAC DHS is spreading the PCMH model throughout its primary care clinics. DHS currently lacks a system-wide way to easily measure visit cycle time and non-traditional care volume and cycle time. Olive View-UCLA Medical Center (OVMC) was retiring the Advanced Triage and Emergency Medicine Triage (ATEMM) emergency department information system (EDIS) and OVMC's adult primary care teaching clinic requested ATEMM be adapted to measure cycle time. ATEMM was modified and introduced in clinic in February 2012. In July 2012, ATEMM spread to the adult and pediatric non-teaching clinic. This facilitated the development of group visits and nurse-driven visits, and allowed, for the first time, tracking volume and cycle time of medication refill visits and non-face-to-face lab checks and visit-related paperwork (eg, DMV forms).

(1) ESTIMATED/ACTUAL ANNUAL COST AVOIDANCE	(2) ESTIMATED/ACTUAL ANNUAL COST SAVINGS	(3) ESTIMATED/ACTUAL ANNUAL REVENUE	(1) + (2) + (3) TOTAL ESTIMATED/ACTUAL BENEFIT	SERVICE ENHANCEMENT PROJECT
$	$	$	$ 0	☒

SUBMITTING DEPARTMENT NAME AND COMPLETE ADDRESS Olive View-UCLA Medical Center Hospital Administration 14445 Olive View Dr. Sylmar, CA 91342	TELEPHONE NUMBER (818) 364-3001
PROGRAM MANAGER'S NAME Mark Richman, MD, MPH, FACP	TELEPHONE NUMBER (818) 364-3205 EMAIL mrichman@dhs.lacounty.gov
PRODUCTIVITY MANAGER'S NAME AND SIGNATURE (PLEASE CALL (213) 893-0322 IF YOU DO NOT KNOW YOUR PRODUCTIVITY MANAGER'S NAME) Gerardo Pinedo DATE 6/18/13	TELEPHONE NUMBER 213) 240-8104 EMAIL gpinedo@dhs.lacounty.gov
DEPARTMENT HEAD'S NAME AND SIGNATURE Mitchell H. Katz DATE 6/18/13	TELEPHONE NUMBER (213) 240-8101

We Support Plain Language

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FACT SHEET – LIMITED TO 3 PAGES ONLY: Describe the **Challenge, Solution, and Benefits** of the project, written in plain language. Include a discussion of the technology and linkage to the County Strategic Plan. The description should identify Performance Measures.

LINKAGE TO THE COUNTY STRATEGIC PLAN (DETAIL IS REQUIRED FOR COUNTY DEPARTMENTS): LAC DHS mission is to ensure access to high-quality, patient-centered, cost-effective care. The intervention described contributes to each of these by assisting in the delivery (and tracking) of the right service in the right venue by the right care team member in the right timeframe.

Challenge: The patient-centered medical home (PCMH) model delivers the right service in the right venue by the right care team member in the right timeframe. This requires team-based care, with functions optimally distributed among team members, including CMAs, NAs, LVNs, RNs, NPs, and/or MDs. Patient care is delivered in novel means such as group clinics, telephone-outreach, and nurse-driven visits (by protocol), in addition to traditional individual face-to-face visits with a licensed independent provider (NP or MD). In preparation for full implementation of the Affordable Care Act in January 2014, the LAC DHS is transforming the way it delivers and measures care and productivity to fulfill its mission of providing high-quality, patient-centered, cost-effective care, and to better recruit and retain patients. Key to this transformation is spreading the PCMH model throughout its primary care clinics. Full PCMH roll-out is hindered by DHS's lacking a system-wide way to easily measure visit cycle time and non-traditional care volume and cycle time. This has hindered proper staffing and other aspects of clinic operations/management. Not knowing how much effort is expended in unmeasured aspects of care does not allow staffing commensurate with such effort (ie, "if it's not measured, it didn't happen", though it really did happen). Cycle time measurement is critical in efforts to improve this important aspect of patient satisfaction (and, thereby, retention). A proper mechanism to measure cycle time would do so in granular fashion. For example, it would not only measure arrival/discharge times, but also various steps within a visit (eg, time between arrival and exam room, time for MD to see patient, time between end of MD portion of visit and discharge). This would allow for quality improvement programs to address specific problems contributing to prolonged cycle times (eg, excessively-long nursing intake process, inefficient room utilization by MD, etc.). Lack of means to measure volume and cycle time has also prevented implementation of non-traditional care venues (eg, group clinic visits, telephone-based care, and nurse-driven visits). And it has also undercounted/undervalued activities such as medication refills, laboratory checks, and care-related paperwork. Again, if there's no way to measure them, there's no way to show efficiency: output produced (volume)/input. **Solution:** Olive View-UCLA Medical Center (OVMC) was retiring the Advanced Triage and Emergency Medicine Triage (ATEMM) emergency department information system. ATEMM had been used for 10 years in OVMC's ED and Urgent Care and in Martin Luther King, Jr. MACC's Urgent Care. This DHS-managed application captures cycle time in a granular manner and has the capability to add functions to measure non-traditional care volume and cycle time. OVMC's adult primary care teaching clinic requested ATEMM be adapted to measure cycle time. ATEMM was modified to include primary care clinics and non-traditional visits, and was introduced in

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clinic in February 2012. In July 2012, ATEMM spread to the adult and pediatric non-teaching clinic. Since then, it has spread to all OVMC clinics, other than Eye/ENT (which is awaiting a prescription printer). **Benefits:** The introduction of ATEMM in OVMC's primary care clinics allowed, for the first time, granular cycle time tracking and facilitated the introduction of non-traditional visits and means of capturing non-face-to-face workload. ATEMM cycle time calculations facilitated performance improvement/patient satisfaction projects. OVMC has chosen a target clinic cycle time of 60 minutes. Prior to ATEMM, it was difficult to demonstrate cycle time at all, as patients would not reliably be logged out of Affinity. The only way to do so with granularity was through manual documentation on sheets that followed the paper chart or were posted on walls. Reports were difficult to generate. ATEMM captures all important events and quickly produces reports showing median and 25th/75th percentile cycle times, which can be aggregated at any time interval (daily, weekly, monthly, quarterly, etc.) and stratified by clinic venue, clinic service/code, and level of provider/trainee. ATEMM allowed creation of a cycle time dashboard which OVMC's leadership uses to track this important performance improvement metric.

02/01/2013 - 02/28/2013 Dispositioned from: Clinic M Median (25%, 75%)

	#	%	Arrival Time to Bring Back		Bring Back to MD Sign-up		MD Sign-up to Attending Sign-up		Attending Sign-up to Disposition		Disposition to Discharge Time		Total Clinic Length of Stay	
20G (Group Diabetes Clinic)														
Discharge														
Discharge - Home	14	3.3%	0:00	(0:00, 0:00)	0:32	(0:21, 0:50)	0:00	(0:00, 0:00)	1:32	(1:17, 1:45)	0:28	(0:23, 0:29)	2:27	(2:17, 2:53)
Total All	14	3.3%	0:00	(0:00, 0:00)	0:32	(0:21, 0:50)	0:00	(0:00, 0:00)	1:32	(1:17, 1:45)	0:28	(0:23, 0:29)	2:27	(2:17, 2:53)
20MN (New Visits)														
Discharge														
Discharge - Home	2	0.5%	0:01	(0:01, 0:01)	0:51	(0:02, 1:39)	0:00	(0:00, 0:00)	0:00	(0:00, 0:00)	0:00	(0:00, 0:00)	1:55	(1:42, 2:09)
Total All	2	0.5%	0:01	(0:01, 0:01)	0:51	(0:02, 1:39)	0:00	(0:00, 0:00)	0:00	(0:00, 0:00)	0:00	(0:00, 0:00)	1:55	(1:42, 2:09)
20MR (Return Visits)														
Continued Care														
Continued Care	2	0.5%	0:46	(0:12, 1:20)	0:14	(0:00, 0:29)	0:00	(0:00, 0:00)	0:27	(0:00, 0:55)	0:24	(0:16, 0:31)	1:53	(0:59, 2:46)
Total All	2	0.5%	0:46	(0:12, 1:20)	0:14	(0:00, 0:29)	0:00	(0:00, 0:00)	0:27	(0:00, 0:55)	0:24	(0:16, 0:31)	1:53	(0:59, 2:46)
Discharge														
Discharge - Home	228	54.2%	0:11	(0:06, 0:22)	0:10	(0:02, 0:22)	0:00	(0:00, 0:00)	0:26	(0:14, 0:47)	0:00	(0:00, 0:15)	1:31	(1:10, 2:01)
Total All	228	54.2%	0:11	(0:06, 0:22)	0:10	(0:02, 0:22)	0:00	(0:00, 0:00)	0:26	(0:14, 0:47)	0:00	(0:00, 0:15)	1:31	(1:10, 2:01)
20MV (Visit with Nurse)														
Discharge														
Discharge - Home	27	6.4%	0:24	(0:15, 0:42)	0:10	(0:00, 0:37)	0:00	(0:00, 0:00)	0:00	(0:00, 0:12)	0:00	(0:00, 0:00)	1:08	(0:49, 1:37)
Total All	27	6.4%	0:24	(0:15, 0:42)	0:10	(0:00, 0:37)	0:00	(0:00, 0:00)	0:00	(0:00, 0:12)	0:00	(0:00, 0:00)	1:08	(0:49, 1:37)

ATEMM also facilitated development of group visits and nurse-driven visits, and allowed, for the first time, tracking volume and cycle time of medication refill visits and non-face-to-face care coordination, lab checks, and visit-related paperwork (eg, DMV forms). ATEMM's capturing of non-traditional workload demonstrated that nearly 50% of the managed care medical home clinic's workload consists of effort outside face-to-face visits, including nurse visits, faxed medication renewal requests, and care-related paperwork. About 55% of workload occurs face-to-face. This has important implications in determining staffing ratios and optimizing roles for spread of the PCMH model.

Clinic M Face-to-Face and Care Coordination Visit Volume and Percentages				
	12-Aug	12-Sep	12-Oct	12-Nov
Face-to-Face Total	234	205	257	227
Care Coordination Total	207	273	160	163
Combined Total	441	478	417	390
% Face-to-Face	53%	43%	62%	58%
% Care Coordination	47%	57%	38%	42%
Cumulative Face-to-Face %	54%			

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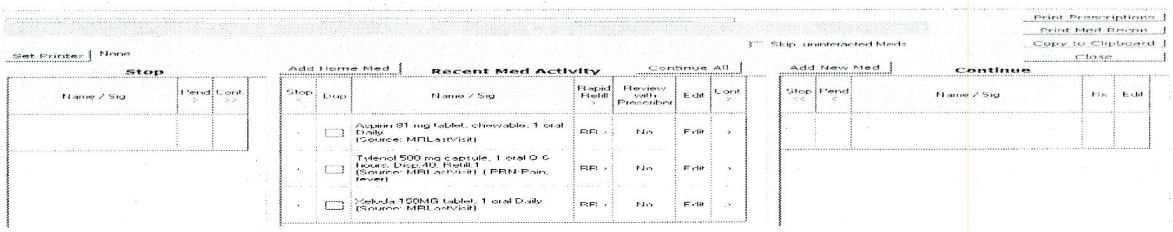
Cumulative Care Coordination %	46%			

ATEMM facilitated group clinic visits through cycle time capture and medication reconciliation and prescription printing. Group clinics (so far, diabetes and post-discharge heart failure) rely on rapidly processing 8 or more (sometimes up to 15) patients in a 1.5-2 hour visit. One aim is for patients not to have to return to clinic for discharge. Without real-time discharge in Affinity, it would be difficult to capture cycle time, as the provider must somehow electronically indicate the visit's end. Whereas providers do not Affinity discharge, they can in ATEMM. ATEMM's time stamps capture arrival and discharge time, allowing cycle time calculation without 8-15 patients descending on clinic for discharge processing. Additionally, through its medication reconciliation module (importing medications dispensed at any DHS pharmacy) linked to prescription printing, providers can rapidly perform medication reconciliation and prescription printing. A copy/paste feature allows providers to paste the medication reconciliation directly into their clinical note rather than type the medications there. These short cuts are vital for quickly processing medications for 8 or more patients.

ATEMM Medication Reconciliation Screenshot



ATEMM's granularity allowed easy calculation of provider productivity, both Attending and house staff (by PGY training year), which has proven useful in determining house staff panel sizes for their PCMHs.

Clinic A Attending Productivity					
Attending	**# of Patients**	**# of shifts**	**4 hrs/shift**	**# of hours**	**Patients/Hour**
Provider 1	260	26	4	104	2.5
Provider 2	30	3	4	12	2.5
Provider 3	194	11	4	44	4.4
Provider 4	14	1	4	4	3.5
Provider 5	316	20	4	80	4.0
Provider 6	33	2	4	8	4.1
Total	**847**	**63**	**24**	**252**	**3.4**

	# of patients seen/year by entire class	Sessions/year	House staff	# of half-day sessions/year	Current # patients/ half-day	Phase 1 - PCMH # pts/half-day	New Annual total	% change	Phase 2- IT-Enhanced PCMH # pts/half-day	New Annual total	% change
R1	3382	55	17	935	3.6	4	3740	14%	5	4675	43%
R2	2131	55	10	550	3.9	5	2750	33%	6	3300	60%
R3	2565	55	10	550	4.7	6	3300	33%	7	3850	55%
					12.2	15	9790	24%	18	11825	50%

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COST AVOIDANCE, COST SAVINGS, AND REVENUE GENERATED (ESTIMATED BENEFIT): If you are claiming cost benefits, include a calculation on this page. You must include an explanation of the County cost savings, cost avoidance or new revenue that matches the numbers in the box. Remember to keep your supporting documentation.

Cost Avoidance: Costs that are eliminated or not incurred as a result of program outcomes.

Cost Savings: A reduction or lessening of expenditures as a result of program outcomes.

Revenue: Increases in existing revenue streams or new revenue sources to the County as a result of program outcomes.

(1) ACTUAL/ESTIMATED **ANNUAL** COST AVOIDANCE	(2) ACTUAL/ESTIMATED **ANNUAL** COST SAVINGS	(3) ACTUAL/ESTIMATED **ANNUAL** REVENUE	(1) + (2) + (3) TOTAL **ANNUAL** ACTUAL/ESTIMATED BENEFIT	SERVICE ENHANCEMENT PROJECT
$	$	$	$	☒

ANNUAL= 12 MONTHS ONLY