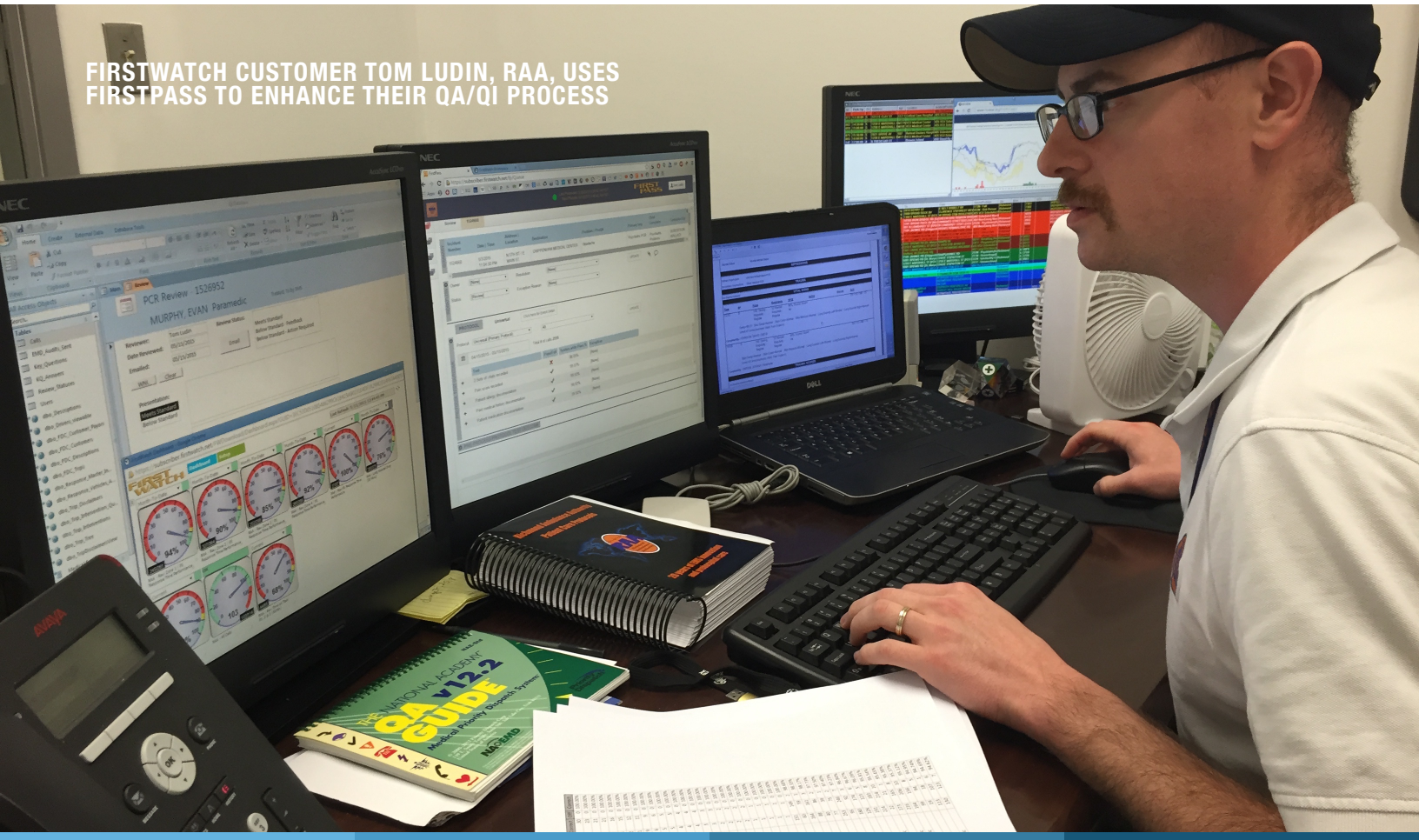


Know what's happening in your system to make improvements now

Review quality indicators most important to you

Collaborate among stakeholders within one view

Analyze system and individual protocol compliance

LET US SHOW YOU HOW FIRSTPASS CAN HELP.

Customers using FirstPass Include:

Alachua County Sheriff's Office, FL - Allina Health EMS, MN - AMR EMSA, OK - AMR San Bernardino, CA - AMR San Diego, CA - AMR Santa Clara, CA - AMR Santa Barbara, CA - AMR Sonoma, CA - AMR Ventura, CA - Anchorage Fire, AK - Charles County, MD - Clark County Fire, NV - Community Ambulance, NV - Community Ambulance, GA - Contra Costa County EMS and Fire, CA - Cy-Fair Volunteer Fire, TX - Eastside Fire, WA - FALCK (CARE, Northwest and Rocky Mountain) - Greenfield Fire, WI - Hawaii County, HI - Humboldt General Hospital, NV - HEMSI, AL - Jersey City EMS, NJ - JFK EMS, NJ - Johnson County MedAct, KS - Lake EMS, FL - Lassen County, CA - Las Vegas Fire Rescue, NV - LifeCare Ambulance, MI - Life EMS, MI - Littleton Fire, CO - Louisville Metro EMS, KY - McCormick Ambulance, CA - MAAS, GA - Medic Ambulance, CA - MedStar, TX - Mercy Medical Transport, CA - Montgomery County, MD - Mountain Valley EMS, CA - Nature Coast EMS, FL - Niagara EMS, Ontario, Canada - North Shore Fire Rescue, WI - Northwell Health, NY - Orange County Fire /EMS, VA - Pinellas County, FL - Prince George's County, MD - REMSA, NV - Richmond Ambulance Authority, VA - Riggs Ambulance/SEMSA, CA - San Marcos Hays County, TX - San Mateo County, CA - Santa Barbara County, CA - Sedgwick County EMS, KS - SNOPAC, WA - St. Charles County Ambulance District, MO - Suffolk FRES, NY - Trinity EMS, MA - Tucson Fire, AZ - Vancouver Fire, WA - Williamson County EMS, TX - Winnipeg Fire Paramedic Service, Manitoba, Canada

FIRST WATCH®

A WORD FROM OUR IMPROVEMENT GUIDE

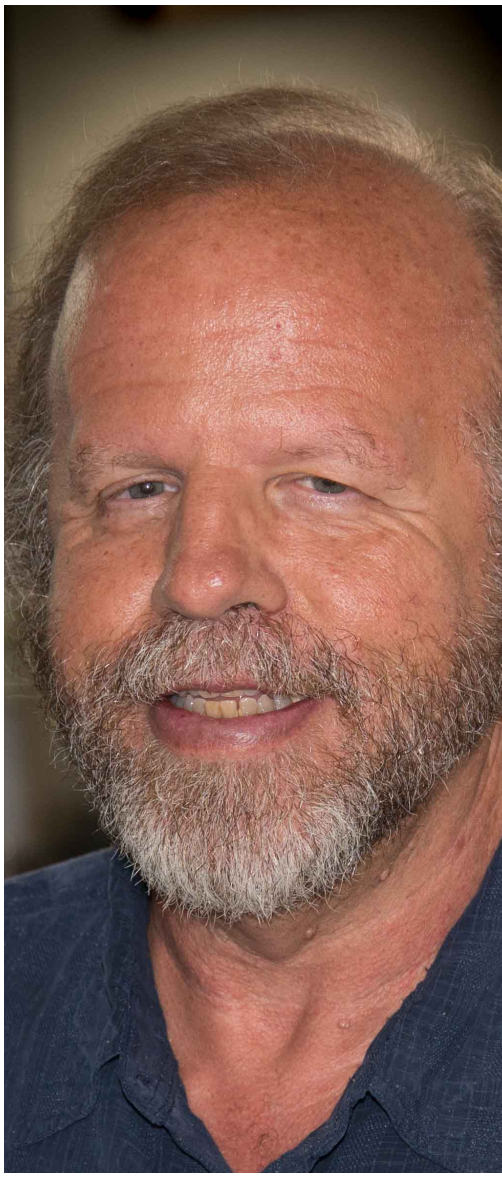
Almost every EMS system has something with the word quality in it: a quality plan, a peer review QI committee or a quality improvement manager. Yet when you ask EMS leaders what their quality program has made better, shoulders shrug and the subject changes. Somewhere along our path we seem to have forgotten the improvement part of quality improvement. So how do we put the missing 'I' back into Quality Improvement?

Improvement success comes from making the Model for Improvement a regular part of the EMS organization, and it comes from effectively measuring your efforts. In these EMS organizations, the principles and practices associated with the science of improvement have been integrated into their DNA. They monitor their performance data in all vital areas of their operations, so they are able to spot problems before they get out of control.

There is no one right process or theory for how to do this, but we must expose and train our employees to these ideas tin order to make improvement thinking automatic. We cannot simply say "we will now be a performance improvement oriented organization."

At FirstWatch it is our goal to help provide you with the tools to help your organization and employees become successful, improvement oriented systems, and to also help you understand how our FirstWatch real-time, quality improvement tools can fit into your organizations overall Quality Improvement program. The next time someone asks you those "What have you improved lately" questions, you can answer with confidence, and data!

- Mike Taigman, FirstWatch Improvement Guide



Automate performance measurement so you can focus on what matters most - your patients.

What is FirstPass?

The traditional approach to Quality Improvement in EMS is labor intensive, time consuming and often confusing, leaving little time to actually improve care. EMS agencies need the ability to monitor and analyze patient care data, identifying deviations rapidly, consistently and automatically.

FirstPass® is a Performance Improvement system that makes it easy for you to see your systems overall performance for clinical care and billing. It helps you quickly identify big areas that need improvement and then helps you figure out what improvement action will produce the best result. It also makes call review, protocol compliance monitoring, and pre-billing review fast and easy. With FirstPass you can let the computer do the initial review of all of your calls, saving your staff for the things computers can't do.

FirstPass does not only tell you when a call is flagged because it did not meet protocol, but it also tells you WHY the call flagged.

HOW DOES IT WORK?

FirstPass provides continuous monitoring of ePCR and other data. It quickly reviews each call based on your specifications and flags calls for review when based on the ePCR something is amiss, clinical issues, urgent patient safety issues, or missing data elements.

We offer a standard bundle of FirstPass protocols including ACS/STEMI, Stroke, Trauma, Airway Management, Cardiac Arrest, and Universal. All of these or other protocols that you'd like to monitor will be customized to meet your needs.

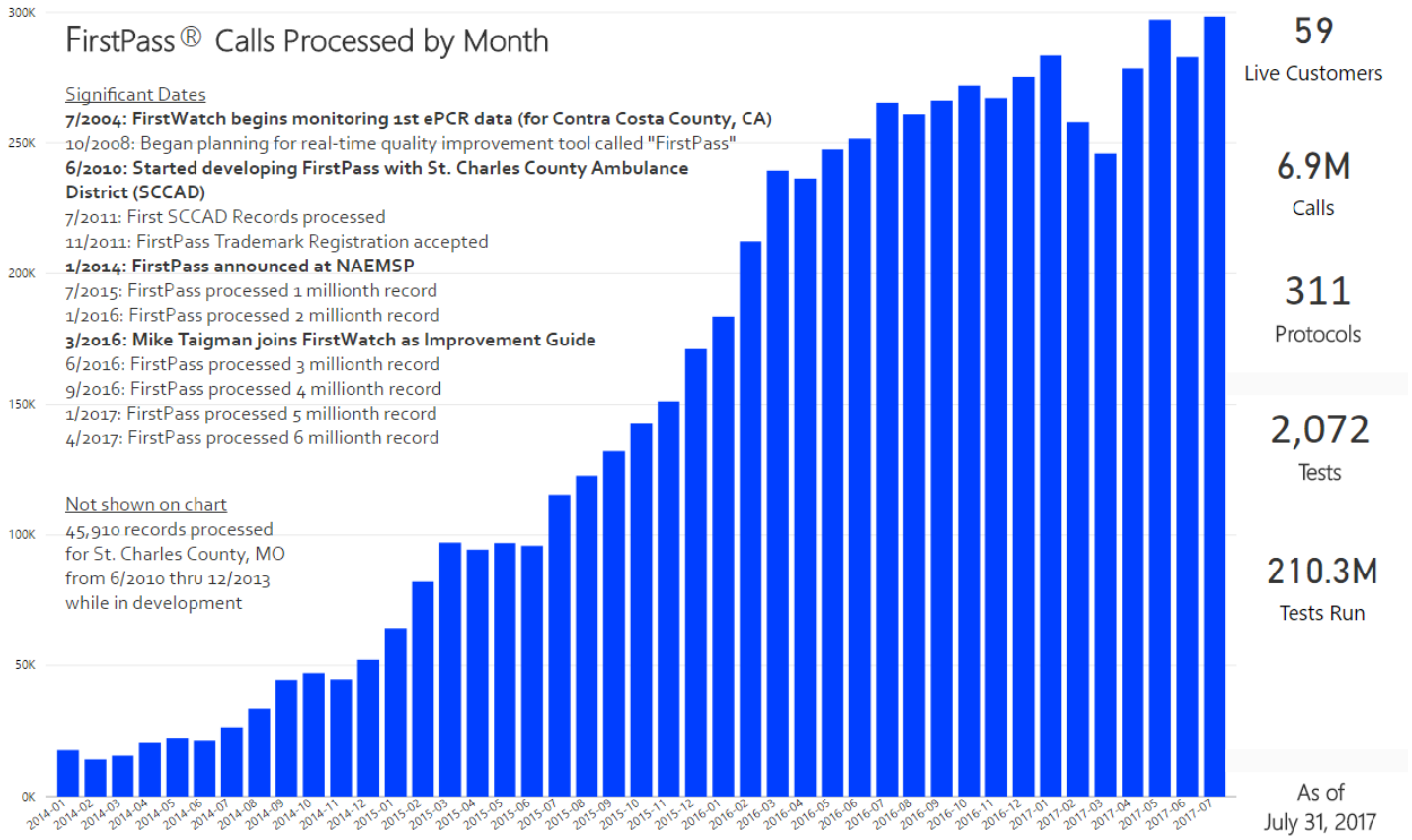
Each of your FirstPass protocols feeds data into a dashboard the displays all of your system performance on one constantly updating page. The display allows you to see how you've performed over time for the things that matter most. With one click you can drill into each protocol to see the performance of all of the sub components that make up a protocol. This allows you to fine-tune your performance improvement efforts like never before.

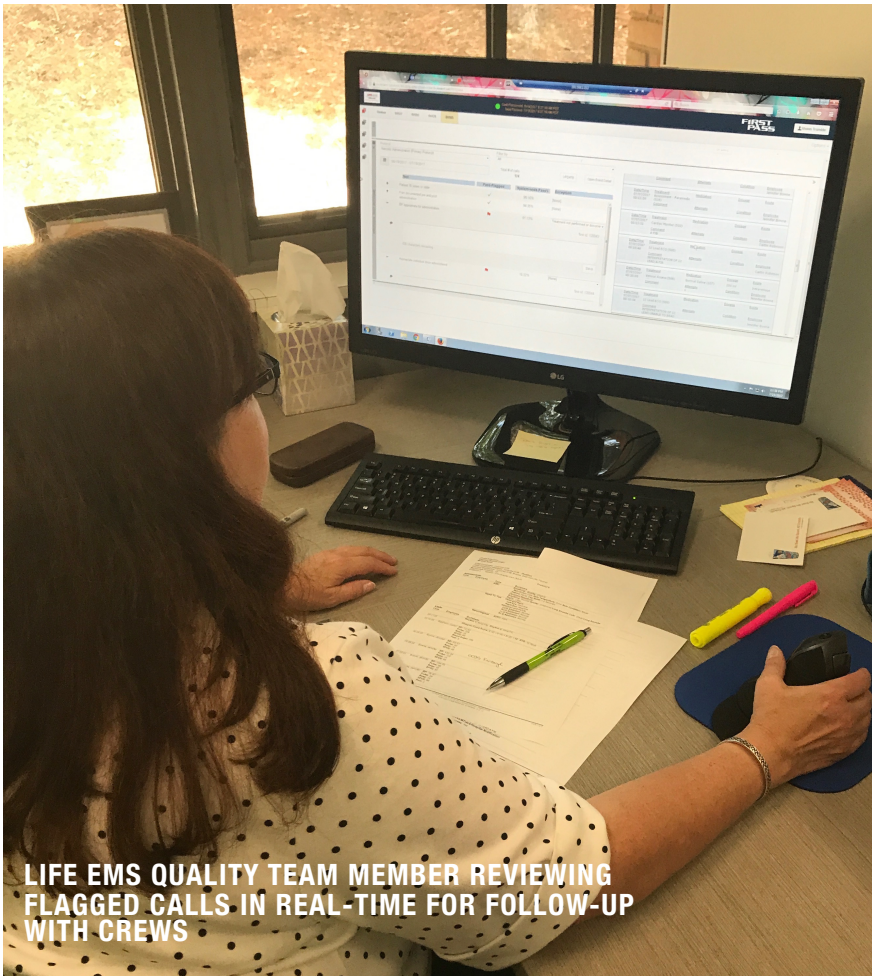
You have the data. Now what you need is a way to understand what it means quickly and confidently.

KEY BENEFITS

- *Real-time Automated Performance Improvement- use one tool to monitor protocol compliance, documentation, and improvement success*
- *Measure Protocol Compliance - prioritize and monitor the protocols that are most important to your system*
- *Enhance Documentation Quality - real-time review of completion of required ePCR fields*
- *Provide Meaningful Feedback - ask questions and provide medics with feedback before they end their shift*
- *Save Time & Resources - Let the computer do the work, and save the human for what is most important*
- *Monitor Medic Performance - Track individual performance to overall system objectives*

FirstPass has processed more than 6 *million* ePCR records and performed more than 210 *million* tests for deviations from protocols





LIFE EMS QUALITY TEAM MEMBER REVIEWING FLAGGED CALLS IN REAL-TIME FOR FOLLOW-UP WITH CREWS

"By using FirstPass, our team has saved a minimum of 20 hours a week by reviewing only those charts flagged as needing to be reviewed. FirstPass has created significant efficiencies for us with a long term annual savings of a half FTE."

- FirstPass User

Tony Sorensen, Life EMS

FIRSTPASS REPORTS

Our FirstPass module comes with the following standard "Bundle" of Standard Reports:

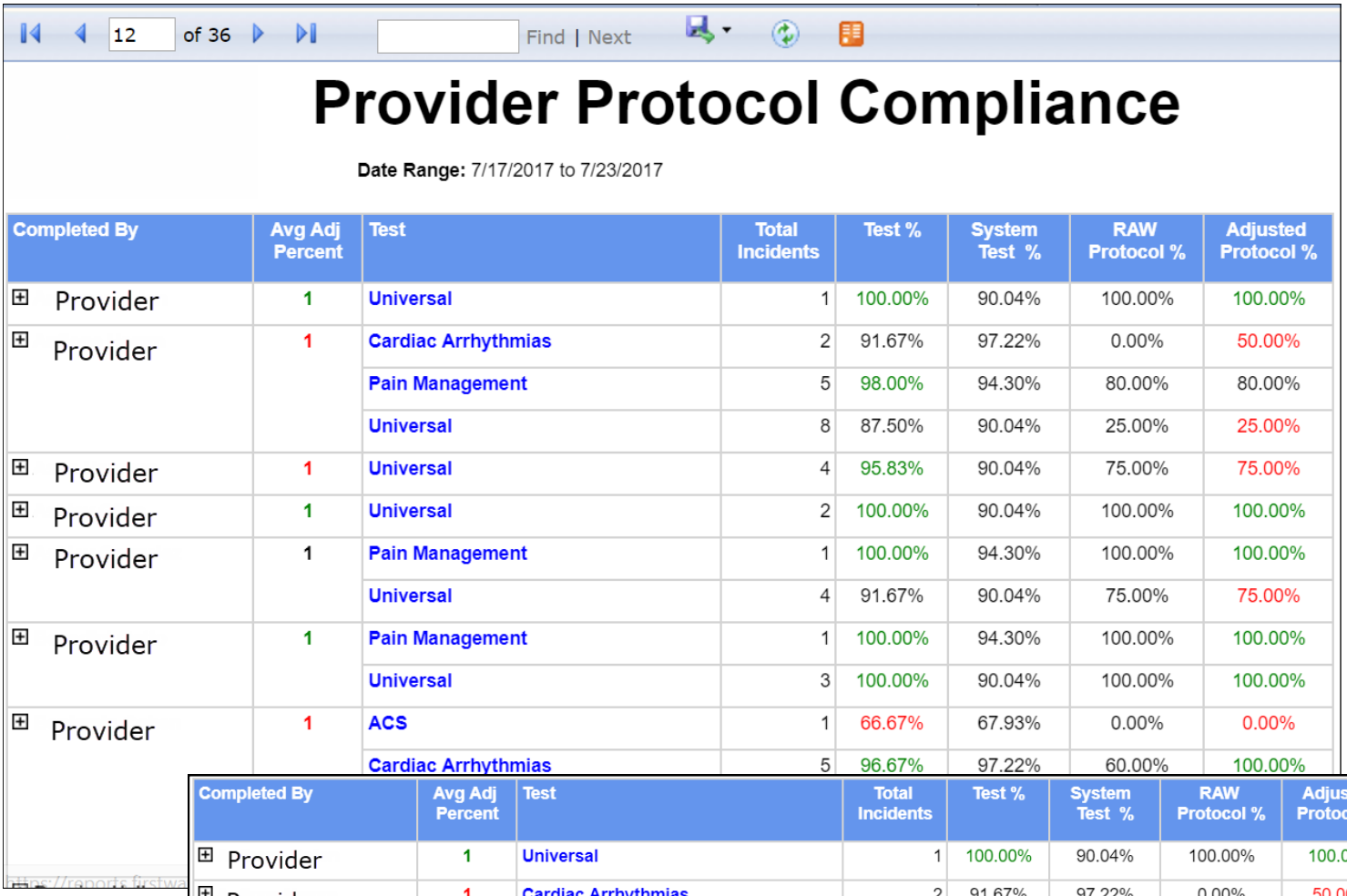
1. *Provider Protocol Compliance*
2. *System Protocol Compliance*
3. *Summary of Tests by Protocol*
4. *Protocol Compliance Graph*
5. *Protocol Summary Report*
6. *Call Review Status Report*

*Additional reports are available on request and at an additional charge. Examples of these types of reports might be: Top 10 Not Completed, Employee Scorecard, Practice Variation by Medic etc.

FirstPass Standard Reports

Provider Protocol Compliance

Display compliance of protocols and compare them against the system for the same time frame selected. Individual tests can be selected to view the incidents used for compliance reporting.



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Provider Protocol Compliance

Date Range: 7/17/2017 to 7/23/2017

Completed By	Avg Adj Percent	Test	Total Incidents	Test %	System Test %	RAW Protocol %	Adjusted Protocol %
⊞ Provider	1	Universal	1	100.00%	90.04%	100.00%	100.00%
⊞ Provider	1	Cardiac Arrhythmias	2	91.67%	97.22%	0.00%	50.00%
		Pain Management	5	98.00%	94.30%	80.00%	80.00%
		Universal	8	87.50%	90.04%	25.00%	25.00%
⊞ Provider	1	Universal	4	95.83%	90.04%	75.00%	75.00%
⊞ Provider	1	Universal	2	100.00%	90.04%	100.00%	100.00%
⊞ Provider	1	Pain Management	1	100.00%	94.30%	100.00%	100.00%
		Universal	4	91.67%	90.04%	75.00%	75.00%
⊞ Provider	1	Pain Management	1	100.00%	94.30%	100.00%	100.00%
		Universal	3	100.00%	90.04%	100.00%	100.00%
⊞ Provider	1	ACS	1	66.67%	67.93%	0.00%	0.00%
		Cardiac Arrhythmias	5	96.67%	97.22%	60.00%	100.00%

Completed By	Avg Adj Percent	Test	Total Incidents	Test %	System Test %	RAW Protocol %	Adjusted Protocol %
⊞ Provider	1	Universal	1	100.00%	90.04%	100.00%	100.00%
⊞ Provider	1	Cardiac Arrhythmias	2	91.67%	97.22%	0.00%	50.00%
		Pain Management	5	98.00%	94.30%	80.00%	80.00%
		Universal	8	87.50%	90.04%	25.00%	25.00%
⊟ Provider	1	Universal	4	95.83%	90.04%	75.00%	75.00%
		Two sets of vital signs > four minutes apart		100.00%	83.06%		
		If ALS SpO2 measured and if <95% O2 administered		100.00%	97.50%		
		AVPU or GCS documented		100.00%	94.71%		
		At least one Pain Scale if patient alert		100.00%	96.41%		
		Impression documented		100.00%	91.69%		
		Medical History, Medications, and Allergies documented		75.00%	76.88%		

Expand Provider Name to view compliance to individual test within each protocol

FirstPass Standard Reports

System Protocol Compliance

System compliance of clinical performance over a chosen time frame (one protocol in expanded view will display all tests and further drilldown with display incidents). Displays raw percentage (original results of QA) versus adjusted compliance (after thorough review and assigning of exemptions).

1 of 1 Find | Next

System Protocol Compliance

Date Range: 7/17/2017 to 7/23/2017

Protocol	Test	Total Incidents	Yes	System Test %	RAW Pass	ADJ Pass	RAW Protocol Compliance	Adj Protocol Compliance
⊞ ACS		145	98.50	67.93%	57	57	39.31%	39.31%
⊞ AMS		133	124.67	93.73%	77	92	57.89%	69.17%
⊞ Behavioral		114	99.00	86.84%	62	62	54.39%	54.39%
⊞ Cardiac Arrest		17	11.88	69.85%	0	0	0.00%	0.00%
⊞ Cardiac Arrhythmias		180	175.00	97.22%	139	170	77.22%	94.44%
⊞ Pain Management		632	596.00	94.30%	419	421	66.30%	66.61%
⊞ Respiratory Emergencies		125	117.40	93.92%	75	111	60.00%	88.80%
⊞ STEMI		4	3.33	83.33%	1	1	25.00%	25.00%
⊞ Stroke/CVA		16	14.67	91.67%	11	13	68.75%	81.25%
⊞ Trauma		31	26.80	86.45%	9	19	29.03%	61.29%
⊞ Universal		2,119	1,908.00	90.04%	1,371	1,371	64.70%	64.70%

Expand protocol to view system compliance to individual tests within each protocol

Protocol	Test	Total Incidents	Yes	System Test %	RAW Pass	ADJ Pass	RAW Protocol Compliance	Adj Protocol Compliance
⊟ ACS		145	98.50	67.93%	57	57	39.31%	39.31%
	If ALS 12-lead EKG done within 10 minutes of Patient Contact?		115	79.31%				
	If ALS Was Oxygen administered to the patient if indicated (<95% SpO2)?		139	95.86%				
	Aspirin administered if not allergic		83	57.24%				
	If ALS Was Nitroglycerin administered if appropriate; OR was it not appropriate, or contraindicated?		109	75.17%				
	If ALS Was the 12-lead positive for STEMI?		18	12.41%				
	If ALS 12-lead EKG done within 15 minutes of Patient Contact?		127	87.59%				

Drill down into each test to view all calls that fell within this Protocol

Incident Number	Run ID	Test Result	Inc Date	Problem	Unit	Chief Complaint	Documented By	Status
0625	43893861	No	7/22/2017 3:18:23 AM	CARD - Cardiac Condition	11Y3	Chest Pain		Under PI review
074502	43818402	No	7/17/2017 6:30:44 AM	32B3 Unknown Problems	4M07	Syncope/Fainting		Under PI review
074733	43825889	No	7/17/2017 4:41:43 PM	19C7 Heart Problems/AICD	4M13	Cardiac Symptoms		Under PI review
074825	43830058	No	7/17/2017 10:38:54 PM	06C1 Breathing Problems	6M01			Under PI review
074915	43837005	No	7/18/2017 10:40:56 AM	31C1 Unconscious/Fainting	4H51	Syncope/Fainting		Under PI review
074981	43839206	No	7/18/2017 1:16:22 PM	19D4 Heart Problems/AICD	4M11	Cardiac Symptoms		Under PI review
075195	43848494	Yes	7/19/2017 2:28:00 AM	17B3 Falls	6M01	Unconscious		Complete - Passed

FirstPass Standard Reports

Summary of Tests by Protocol

This displays the system protocol compliance. When the protocol is expanded, the individual protocol test information and compliance is displayed. When expanded, this displays the protocol and the associated tests with their system-wide compliance.

Summary of Tests by Protocol

Date Range: 7/17/2017 to 7/23/2017

Protocol	Test	Total	Yes		No	
⊞ ACS		145	98.50	67.93%	46.50	32.07%
⊞ AMS		133	124.67	93.73%	8.33	6.27%
⊞ Behavioral		114	99.00	86.84%	15.00	13.16%
⊟ Cardiac Arrest		17	11.88	69.85%	5.13	30.15%
	Was CPR performed if HR absent or <30?		14	82.35%	3	17.65%
	If ALS, was IV/IO access established within two attempts		17	100.00%	0	0.00%
	If ALS Was an Advanced Airway established within two attempts?		9	52.94%	8	47.06%
	If ALS If Advanced airway placed, was ETCO2 documented to confirm placement?		17	100.00%	0	0.00%
	If patient transported, did ROSC occur?		7	41.18%	10	58.82%
	If ALS If patient transported with Advanced Airway, was ETCO2 measured after patient was in the ambulance?		15	88.24%	2	11.76%
	If ALS If patient transported with an advanced airway, was ETCO2 measured upon arrival at the hospital?		14	82.35%	3	17.65%
	If patient transported, did they have pulses upon arrival at the ED?		2	11.76%	15	88.24%
⊞ Cardiac Arrhythmias		180	175.00	97.22%	5.00	2.78%
⊞ Pain Management		632	596.00	94.30%	36.00	5.70%
⊞ Respiratory Emergencies		125	117.40	93.92%	7.60	6.08%
⊞ STEMI		4	3.33	83.33%	0.67	16.67%
⊞ Stroke/CVA		16	14.67	91.67%	1.33	8.33%
⊞ Trauma		31	26.80	86.45%	4.20	13.55%
⊞ Universal		2119	1,908.00	90.04%	211.00	9.96%

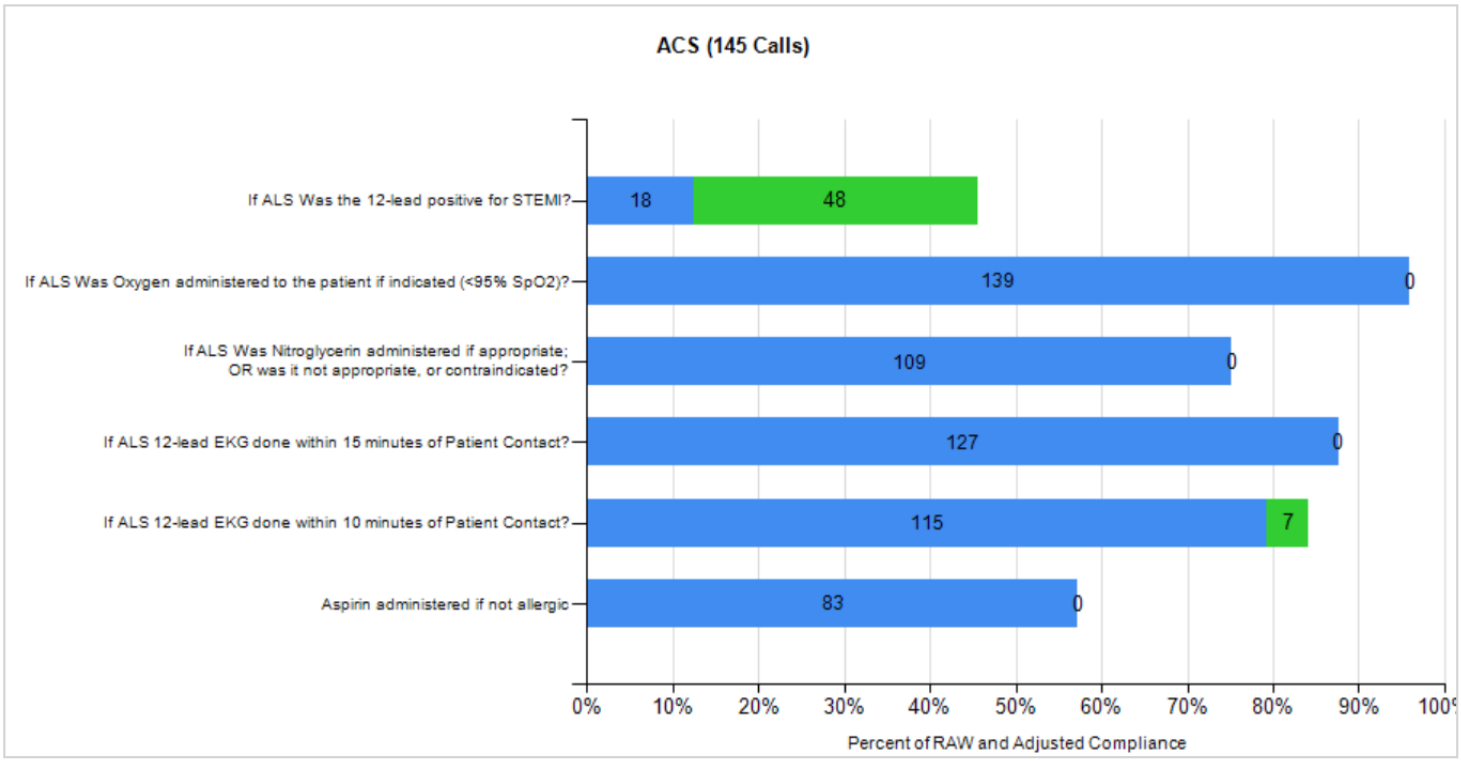
FirstPass Standard Reports

Protocol Compliance Graph

This is a graphical representation of the tests for each protocol. The bar graph can be clicked to provide a detailed summary of all incidents that failed a particular test within a protocol. Drill through the graph to display incident information for each incident that failed within a protocol.

Protocol Compliance Graph

Date Range: 7/17/2017 to 7/23/2017



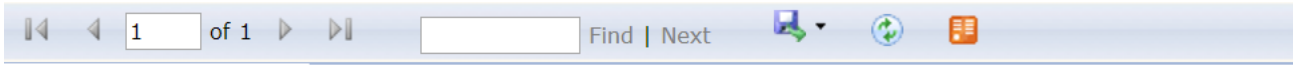
Drill-down:

Number of Incidents: 127			**Protocol:** ACS		**Test:** If ALS Was the 12-lead positive for STEMI?				
Incident Number	**Run ID**	**RAW Test Result**	**Inc Date**	**Status**	**Problem**	**Unit**	**Chief Complaint**	**Crew 1**	**Crew 2**
074491	43817518	FAIL	7/17/2017 4:18:32 AM	Under PI review	06D1 Breathing Problems	4M03	Syncope/Fainting		
074502	43818402	FAIL	7/17/2017 6:30:44 AM	Under PI review	32B3 Unknown Problems	4M07	Syncope/Fainting		
1202	43820381	FAIL	7/17/2017 9:11:00 AM	Under PI review	UNC - Unconscious Patient	11Y2			
1251	43820188	FAIL	7/17/2017 9:22:00 AM	Under PI review	CARD - Cardiac Condition	11X2	Syncope/Fainting		
1730	43821537	FAIL	7/17/2017 11:13:39 AM	Complete - Passed	DIFF BREATHING WITH CHEST PAIN	46Y2	Chest Pain		

FirstPass Standard Reports

Protocol Summary Report

Provides a count of incidents and displays the raw pass and count percentage as well as the adjusted pass count and percentage of incidents in FirstPass. Adjusted refers to incidents that were reviewed and found to have passed due to predetermined exception criteria.



Protocol Summary

Criteria:

Date Range: 7/17/2017 to 7/23/2017

Protocol(s): All

Protocol	Total Incidents	RAW Pass Count	Adj Pass Count	RAW Protocol Compliance	Adj Protocol Compliance
ACS	145	57	57	39.31%	39.31%
AMS	132	77	91	58.33%	68.94%
Behavioral	113	62	62	54.87%	54.87%
Cardiac Arrest	14	0	0	0.00%	0.00%
Cardiac Arrhythmias	178	137	168	76.97%	94.38%
Pain Management	612	402	404	65.69%	66.01%
Respiratory Emergencies	124	75	110	60.48%	88.71%
STEMI	4	1	1	25.00%	25.00%
Stroke/CVA	16	11	13	68.75%	81.25%
Trauma	31	9	19	29.03%	61.29%
Universal	2,015	1,319	1,319	65.46%	65.46%
Total	**3,384**	**2,150**	**2,244**		

FirstPass Standard Reports

Call Review Status Report

This report displays which incidents in FirstPass have been assigned to individual reviewers and displays how long they have been in the queues for review. It is designed to track the time an incident is assigned in FirstPass and includes each of the users which can review incidents.

FirstPass Call Review Status

Date Range: 7/17/2017 to 7/23/2017

Status: All

Report set to auto-refresh every: **00:10:00**

Assigned To	Assigned At	Days Assigned	Status	Incident #	Incident Date/Time	Primary Protocol	1st Crew Member	2nd Crew Member
	2017-07-20 06:52:33	8	Pending Tng/Ed assignment	1382	2017-07-17 09:54:34	Stroke/CVA		
	2017-07-26 11:04:30	2	Pending Tng/Ed assignment	074557	2017-07-17 11:08:00	Respiratory Emergencies		
	2017-07-26 04:25:06	2	Pending Tng/Ed assignment	1144	2017-07-18 09:27:03	Trauma		
	2017-07-24 10:11:42	4	Complete	076497	2017-07-22 18:36:38	Cardiac Arrhythmias		
	2017-07-20 06:47:29	8	Under Tng/Ed review	074520	2017-07-17 09:16:37	Stroke/CVA		
	2017-07-17 12:50:40	11	Complete	074608	2017-07-17 12:55:59	Stroke/CVA		
	2017-07-27 15:01:10	1	Complete	076344	2017-07-21 23:31:18	Respiratory Emergencies		
	2017-07-27 14:44:13	1	Complete	4129	2017-07-21 20:33:12	Respiratory Emergencies		
	2017-07-27 14:15:38	1	Complete	3741	2017-07-21 18:52:06	Respiratory Emergencies		
	2017-07-27 11:56:37	1	Complete	065689	2017-07-20 11:36:26	Cardiac Arrhythmias		
	2017-07-27 10:59:53	1	Complete	075654	2017-07-20 10:25:51	Cardiac Arrhythmias		
	2017-07-27 08:46:03	1	Complete	1138	2017-07-20 08:47:03	Cardiac Arrhythmias		
	2017-07-27 08:42:34	1	Complete	075547	2017-07-19 21:49:39	Cardiac Arrhythmias		
	2017-07-27 08:39:22	1	Complete	2946	2017-07-19 16:26:39	Cardiac Arrhythmias		

FirstPass FAQ's

How is FirstPass different from FirstWatch?

FirstPass is an add-on, enhancement module that sits on top of FirstWatch. FirstWatch is the foundation for which the data is derived, where you define the things you want to look at and calls are pulled based on user-defined filters. FirstPass then takes that data through a very structured process of algorithms and logic to evaluate specific quality oriented protocols, tests and outcomes. A queue based tool, FirstPass allows mem-

Can FirstPass be customized to fit my system's protocols?

Providing that the data source (CAD, ePCR, ProQA, Hospital Data etc.) FirstWatch is interfaced with captures relevant data that can be used to evaluate against your systems protocols, FirstPass can have a high degree of customization. Once a customer defines what they want to measure, we can build custom protocols that look for quality metrics driven by customer focused initiatives as well as regional or state level mandates.

While FirstPass is highly customizable, we recommend starting with our "Bundle of Care" approach as envisioned by our Medical Director, Dr. Alex Garza. This initial set of evidence based protocols is designed to encompass recognized standards of care, the affordable care act and overall best practices. The Bundle of Care is made up of the following protocols: **ACS/STEMI, Stroke, Trauma, Airway Management, Cardiac Arrest, and Universal OR Billing. Additional metrics to consider might be: Pain Management, Patient Care Aspect, High Risk/Low Frequency Event or Non Transports/Refusals.**

How will my QA/QI department benefit from using FirstPass?

The overarching goal of FirstPass is to provide automated data analysis for clinical indicators and quality measures – all in real-time, at your fingertips. With FirstPass, QA/QI teams can now spend more time working to improve patient outcomes rather than filtering through every patient record to locate potential outliers that could indicate opportunities for improvement in patient care. FirstPass automates a process that is traditionally time, resources and labor intensive; you will now know right away when a call is outside the expected parameters occurs

.Real-time feedback and knowledge of what is happening within your system at all times allows for collaboration amongst crew members, managers, QI/QA analysts, the Medical Director and any other stakeholders involved. Ultimately, this will result in rewarding success to crew members for a job well done and improving patient outcomes by focusing on areas of improvement and continuing education in a timely and continuous manner. Additionally, FirstPass comes with real-time reporting tools; examples include Provider Protocol Compliance, System Protocol Compliance and Summary of Test by Protocol.

How is FirstPass connected to Healthcare Reform and the new focus on Quality Outcomes?

Healthcare is moving to quality measurement, bringing with it improved patient care – and financial implications. Simply stated, the components of the Affordable Care Act are directly related to controlling cost through a focus on quality of care. The same quality measures that are driving change in healthcare will soon be coming to EMS. Progressive EMS agencies are monitoring, measuring and managing quality to improve patient care and ensure success when financial incentives become realities. FirstPass helps agencies to define, automate and streamline their measures and monitor in a timely, consistent and reliable manner. This will allow systems to make corrections and demonstrate timely and effective care through the tracking of patient satisfaction and outcomes in real-time.

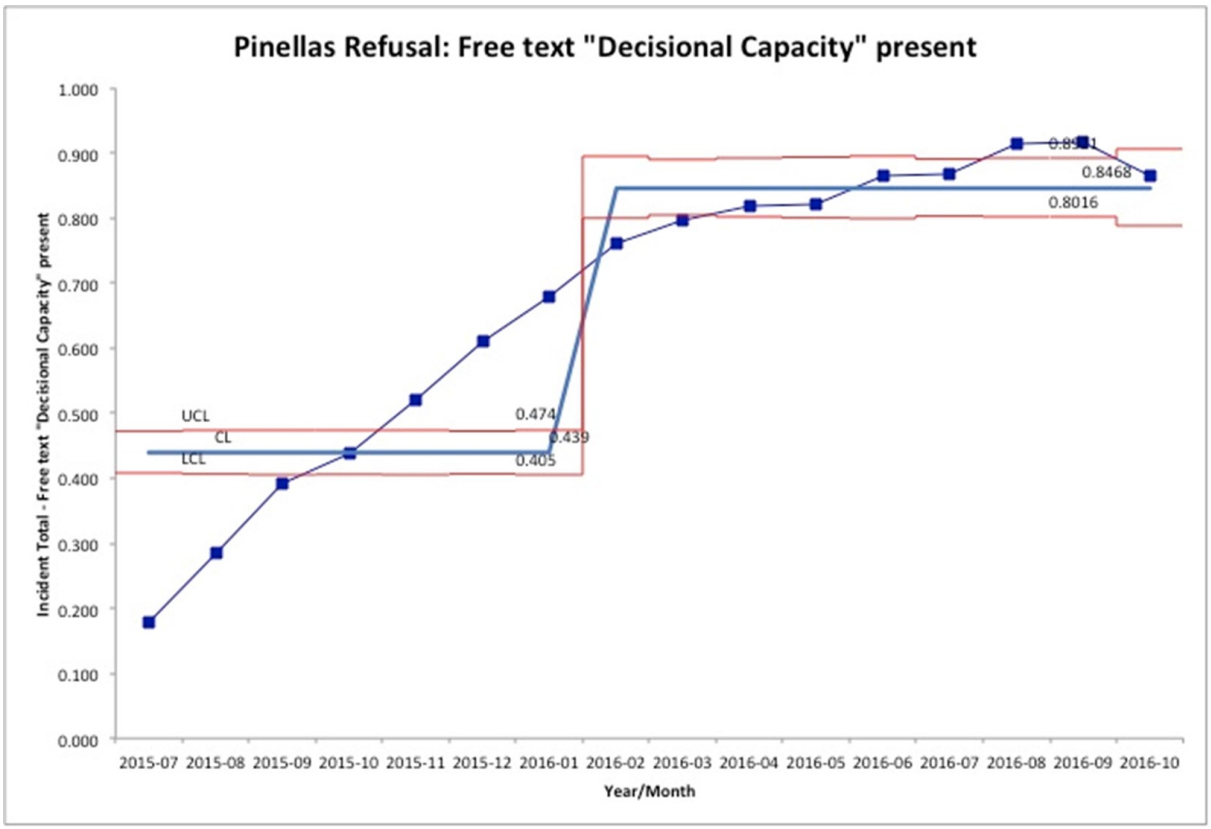
Customer Highlight: Pinellas

Pinellas County employee Provider Protocol Compliance report compares employee compliance to overall system compliance, including their raw and adjusted protocol compliance percentages.

Pinellas Provider Protocol Compliance

Completed By	Avg Adj Percent	Test	Total Incidents	Test %	System Test %	RAW Protocol %	Adjusted Protocol %
	60.18%	**ACS**	2	90.00%	81.74%	50.00%	50.00%
		12 Lead Performed		100.00%	97.69%		
		Aspirin administered or allergic		100.00%	83.02%		
		NTG administered or Allergic or BP <90		100.00%	81.11%		
		Final pain score < Initial Pain Score		50.00%	49.73%		
		STEMI, Alert called and 12 lead transmitted		100.00%	97.15%		
		Airway Management	1	80.00%	75.32%	0.00%	0.00%
		Ventilation assistance provided		100.00%	74.63%		
		Single airway type used		100.00%	91.54%		
		Confirmation of placement with ETCO2		100.00%	100.00%		
		Airway re-confirmed		0.00%	33.33%		
		Multiple ETCO2 values		100.00%	77.11%		
		Cardiac Arrest	1	85.71%	81.09%	0.00%	100.00%
		PT Transported to hospital		100.00%	79.81%		
		ETCO2 Monitored		100.00%	91.55%		
		ROSC obtained		100.00%	30.05%		
		Extraglottic airway used		100.00%	69.01%		

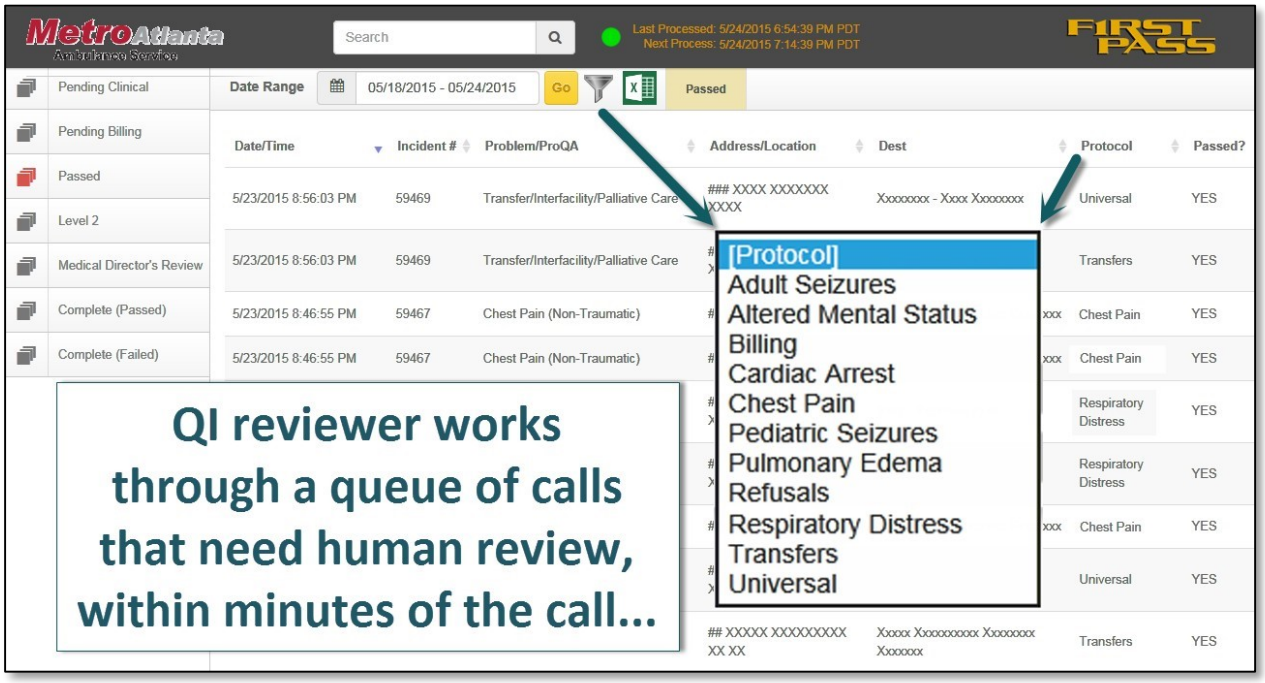
Using FirstPass, Pinellas County can monitor their performance over time.



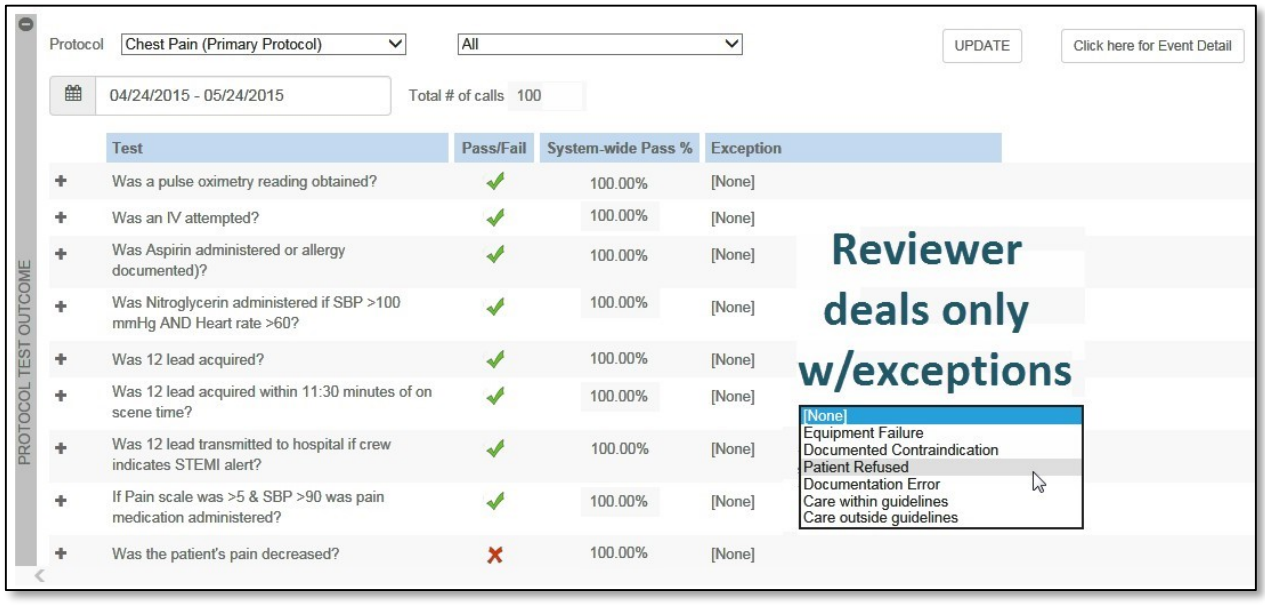
Customer Highlight: Metro Atlanta Ambulance Service (MAAS)

Metro Atlanta uses FirstWatch and the FirstPass Quality Improvement (QI) module to monitor our Zoll Dispatch and ePCR data, which automatically scans those records and compares them to goal times and clinical, operational and billing rules.

The graphic below shows the FirstPass module's main screen, with queues (on the left) showing calls that have passed or failed a series of detailed, automated ***tests***, based on the specific ***protocols*** (shown in the large inset zoomed rectangle) defined by our management team and our medical director, and implemented by FirstWatch.



The graphic below shows the specific tests that are automatically performed by FirstPass for the ***Chest Pain protocol***. Our QI staff reviews the calls that did not pass the mandatory tests, and when desired, can get more information about the call and provide feedback to crews during the same shift, or by the next shift while still fresh in their minds.



Customer Highlight: Metro Atlanta Ambulance Service (MAAS)

Calls where the treatment was appropriate, but not documented as expected, can be identified and marked as appropriate, and the adjusted pass/fail information is reflected in our Employee Scorecard Report, along with simpler Operations measures, including: Chute Time, Response Time, Scene Time, Hospital Offload Time, and Task Times.

Employee Scorecard

Employee Scorecard

MetroAtlanta Ambulance Service

Date Range: __/__/2015 to __/__/2015

Last, First

	Individual Scores		Goals
Operations	**Compliance %**	**Count of Calls**	**Compliance %**
Chute Time (1 min)	100.00%		90%
911 Response Time (11:59)	100.00%		90%
Total Scene Time - Trauma (10 min)	100.00%		90%
Total Scene Time - Medical (15 min)	100.00%		90%
Hospital Offload (20 min)	100.00%		90%
911 Time on Task (55 min)	100.00%		90%
FirstPass Protocols			
Billing	100.00%		90%
Refusals	100.00%		90%
Transfers	100.00%		99%
Universal	100.00%		92%
Altered Mental Status	100.00%		94%
Cardiac Arrest	100.00%		90%
Chest Pain	100.00%		96%
Respiratory Distress	100.00%		97%
Adult Seizures	100.00%		91%
Pediatric Seizures	100.00%		90%

The Employee Scorecard is a custom report that combines operational performance (chute times, time on task, etc.) as well as clinical performance (FirstPass protocol compliance) and displays it by medic. The summary page is the first page of the report and shows the overall system compliance for all elements. It is designed to be paged by provider for feedback purposes, and uses both CAD and ePCR data.

Customer Highlight: Metro Atlanta Ambulance Service (MAAS)

Billing in FirstPass

Protocol: Billing (Primary Protocol) | All

01/09/2016 - 02/08/2016

Total # of calls **13424**

PROTOCOL TEST OUTCOME

Test	Pass/Fail	System-wide Pass %	Exception
Do CAD incident number and PCR incident number match?	✓	100.00%	[None]
Does the PCR have an Incident Address, with City (and Apt number if one in CAD) and does it match the CAD information	✓	73.78%	[None]
If 911 Transport, is Dispo:Treated/Transported ALS;Level of Service: ALS and ALS Assessment documented	✓	55.94%	[None]
Does the PCR destination match the CAD destination	✗	90.46%	[None]
Loaded miles match transport time	✓	95.81%	[None]
Does the PCR have an Patient First and Last Name; and is the last name <> "Doe"	✓	98.93%	[None]
Does the PCR have an Patient DOB; complete, non-sequential and non identical (Track/Trend Only)	✓	98.77%	[None]
Does the PCR have a Phone#; complete, non-sequential and non identical (Track/Trend Only)	✓	54.40%	[None]
Does the PCR have an Patient Social Security#; complete, non-sequential and non identical (Track/Trend Only)	✗	58.94%	[None]
Does the PCR have an Patient Address, with City (Track/Trend Only)	✓	98.84%	[None]
Does the PCR have an Patient Zip and that is complete, non-sequential and non identical	✓	98.72%	[None]
Is there a Accepting Facility Name and Signature	✓	97.41%	[None]
Is there a Patient or Patient Representative Signature; or has the primary caregiver checked the affirmation that the patient could not sign, AND a reason patient unable to sign (PUTS) completed	✗	96.98%	[None]
If PUTS, is it confirmed by clinical condition/assessment	✓	100.00%	[None]
All Crew Members Signed	✓	93.87%	[None]
If O2 in Vital Signs, is it documented as a medication	✓	92.34%	[None]
Is the Narrative field size > 90 characters	✓	98.95%	[None]
Is the Validity >95%	✓	98.29%	[None]

PHOTO COURTESY ROB LAWRENCE/RICHMOND AMBULANCE AUTHORITY

TOTAL QUALITY MANAGEMENT

Richmond Ambulance Authority uses technology to enhance its QA/QI process

By **Michael Gerber**, MPH, NRP and **Rob Lawrence**, MCMI

Richmond, Va., Ambulance Authority (RAA) is well known for being a high-performance EMS system and for its community education efforts and implementation of a culture of safety.

But the agency has also recently taken a huge leap forward in the areas of quality assurance (QA) and quality improvement (QI). RAA, which serves as the sole provider of emergency ambulance service for the Virginia capital, has implemented the "Total Quality Management" (TQM) system. The system links quality management efforts in the clinical, operations and billing arenas in order to comprehensively improve RAA's service and efficiency.

Each month, RAA's TQM committee meets to discuss any potential areas for improvement. The director of reimbursement might mention a specific documentation issue that's causing delays in billing or collections. The chief clinical officer may discuss intubation rates and educational programs being implemented to improve them.

The idea behind TQM is that everything is interconnected. Dispatch and operations impact clinical care, clinical documentation impacts reimbursement, reimbursement impacts operations, and so on. Like many agencies, RAA has a clinical services committee that focuses solely on clinical issues, where the medical director is joined by the clinical officer, the QA/QI coordinator, the training staff and other paramedics. But the TQM meeting adds another layer.

Attendees at the TQM meetings include the chief operating officer, the director of operations, the chief clinical officer, the quality manager, the director of reimbursement, the compliance officer and the operations and communications supervisors.

Believing that each aspect of agency performance is connected and part of the cycle of providing high-quality services, RAA uses its TQM approach to measure and analyze outcomes and processes and make adjustments to training and policies to achieve its desired outcomes.

USING TECHNOLOGY TO FILL THE GAPS

Previously, RAA's clinical and documentation QI process focused on reviewing specific types of patient care reports (PCRs), such as all cardiac arrests; specific high-risk, low-frequency procedures (e.g., cricothyrotomy); and a certain percentage of other calls. The agency also would choose to review specific topics or themes during certain months—perhaps looking at reports written by new hires one month and field training officers the next.

The billing team would then review the report to identify documentation issues related to reimbursement.

Like most departments, RAA performed these focused PCR reviews because trying to review every PCR provides a limited return on a significant investment of manpower and resources. Either several reviewers read the reports with little consistency or guidance on what to look for, or one person attempts to review every PCR but eventually gets so far behind they scramble to catch up and can't provide effective feedback to providers or correct documentation errors in time to impact billing. Practitioners often didn't receive the feedback until several weeks after the call, when they might not even remember the patient.

In Richmond, agency leaders felt the process wasn't as effective as it could be. They began searching for other solutions, and found one right in their own headquarters.

In the dispatch center, supervisors had already seen how technology could provide real-time feedback and lead to improvements. At any time during the day, dispatchers can look at a monitor that shows whether they're meeting certain performance standards. RAA uses FirstWatch, a California-based data and technology firm, to monitor computer-aided dispatch (CAD) data and provide almost instant analysis.

In the dispatch center, that has helped drive improvements in areas like call processing times, where no dispatcher wants to be the one not meeting the goal that day.

On the clinical side, RAA recently began using FirstPass, a tool developed by FirstWatch to automatically evaluate PCRs for adherence to protocols. FirstPass works by running each PCR through a series of tests based on certain criteria as soon as the data is available. The tests are based on treatment bundles and tailored to the agency's protocols.

The software also compares each PCR to a universal protocol that checks reports for certain demographic and basic clinical data, such as baseline vital signs, signatures and other information RAA wants to collect for every patient.

Certain types of reports are screened further. For example, if the patient complaint is for chest pain or another cardiac-related problem, FirstPass will look for documentation of a 12-lead ECG. If none is documented, the incident is flagged. For chest pain patients, FirstPass will also look for appropriate documentation of specific treatments, such as aspirin or nitroglycerine administration. FirstPass's clinical care bundles are evidence-based but also tailored to RAA's protocols and training. RAA is also working with the FirstPass team to develop even more sophisticated analysis and reporting tools.

THE TQM PROCESS

When paramedic and RAA's QA/QI Director of Operations Tom Ludin arrives each morning, he checks to see which reports were flagged by the FirstPass system. He can immediately review the PCR to determine if it was a documentation error, an omission in patient care or if there was a reasonable deviation from protocol. If the answer isn't clear, he can talk to the crew who treated the patient first to help make his decision while the crew still recalls the details of the call.

"It gives a lot of opportunity to look through and see where improvements are needed," says Ludin. "We can't fix it if we don't know it's a problem."

FirstPass not only allows for every PCR to be reviewed for at least minimal criteria, it also creates a system for measuring overall performance of the agency and individual providers. In many systems, simple

database searches and spreadsheet computations can determine how often 12-lead ECGs are documented as having been performed on chest pain patients. But FirstPass creates an easy way to then track why that happened. On a continuous basis, supervisors can determine whether providers require re-education in clinical areas, documentation, or both.

"Ninety-nine percent of the calls pass the criteria. I never look at most of those," says Ludin.

After Ludin reviews a PCR that failed a FirstPass test, he decides whether there was a deviation from protocol or a documentation error and emails the provider who wrote the report within one business day. That provider then has a chance to review the call and explain what happened, or correct the PCR, and Ludin and his colleagues determine whether any further action—such as remedial training—is required.

But while FirstPass allows RAA to check each PCR for certain criteria, it doesn't replace having a real person dedicated to QA/QI.

"FirstPass is a tool," Ludin says, explaining that he still uses his own database queries and other methods for other aspects of the quality management process.

For example, Ludin reads a random selection of PCRs each month so he can look for any issues the computer might not catch. As an accredited dispatch center, RAA already reviews the 9-1-1 calls for critical cases and a random selection of other calls each month—Ludin uses the same list to determine which PCRs he will review.

Having a TQM system means that when issues are discovered by one department, the entire agency helps find a solution. This will become even more critical for EMS agencies when the next revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) is adopted by payers later this year.

With ICD-10, the number of billing codes will greatly expand, and the importance of good documentation will increase. Having a TQM program is helping RAA prepare for these changes by bringing billing and clinical services to the table together. When the billers find an issue with documentation, they can ask the clinical supervisors about it and determine if it's a documentation error or a misunderstanding by the billers over what service was actually provided. If systemic problems are discovered, the clinical supervisors can conduct training or change the minimum required information to complete a PCR.

CLOSING THE QI LOOP

RAA keeps its quality management as nonpunitive as possible, focusing instead on finding ways to motivate its staff to make corrections and solve problems. Just publicly displaying some performance measures, either at the individual level or system-wide level, has led to improvements. Clinical lapses aren't necessarily tied to performance evaluations, unless supervisors feel there are no efforts made to improve.

"You're not evaluated on your QA/QI results," Ludin says. "Instead it's your responsiveness to training."

When it was recently discovered that intubation rates were slipping after an influx of newly qualified paramedics, RAA's training coordinators instituted a system-wide effort to improve—even though they knew not every single paramedic had unsuccessful intubations. In the Login Room, they set up intubation manikins and equipment, as well as some literature and videos on airway management. At the beginning of each shift, every ALS provider took 10 minutes to practice intubation before heading out on the ambulance to run calls.

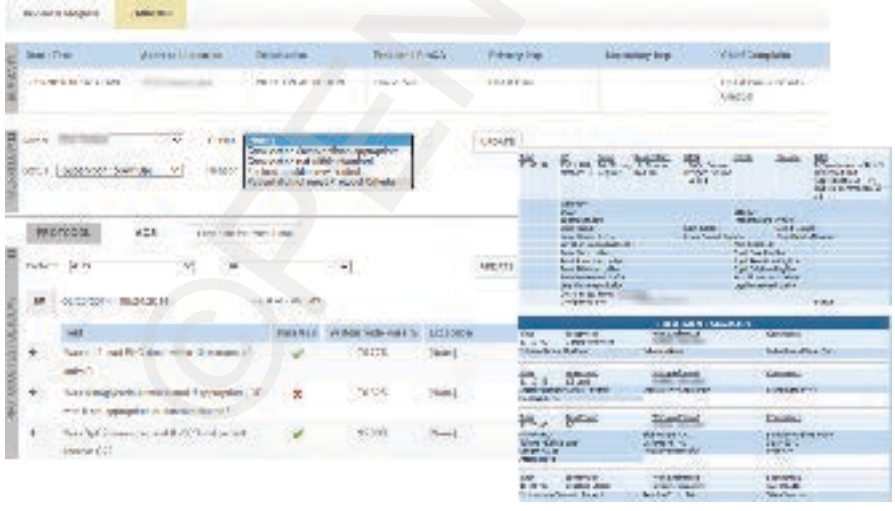
After the recent intubation refresher stations, RAA's training staff received positive feedback from the providers, including one paramedic who credited the training with helping make his first live intubation successful.

RAA was also an early EMS adopter of self-reporting. Several years ago, operational medical director Joseph Ornato, MD, signed off on a self-reporting protocol that encourages providers to come forward when they make an error or omission.

But this isn't to say that RAA doesn't let providers know they value high performance. Each year when employees submit preferences for which shifts they want to work, RAA ranks them using a combination of seniority and compliance to certain standards. With FirstPass now in effect, that might include compliance to clinical protocols and PCR documentation in the future.

THE FUTURE OF QA/QI

Technology adds one more tool to the TQM process, allowing personnel to spend more time doing what they do best—analyzing the problems and finding solutions—instead of spending hours determining whether the right boxes were checked. Software can't replace having dedicated providers and educators, but it can make the system more efficient and more robust, allowing agencies to focus on areas where improvement is necessary and ultimately provide better care for their patients. JEMS



The TQM system links quality management efforts in the clinical, operations and billing arenas in order to comprehensively improve RAA's service and efficiency. Photo courtesy The RedFlash Group/RAA

Michael Gerber, MPH, NRP, is a paramedic, instructor, author and consultant in Washington, D.C. He has more than a decade of experience in EMS and the fire service. He can be reached at mgerber@redflashgroup.com.

Rob Lawrence, MCMI, is chief operating officer at RAA and was named an EMS 10 Innovator for his work on the Rider Alert program in 2011. Rob is a graduate of the U.K.'s Royal Military Academy, Sandurst, and spent his first career as an active-duty Army officer in the British Royal Army Medical Corps, after which he held various senior leadership roles in U.K. ambulance services before moving to Richmond, Va., to join RAA.

EMS1.com News

Better EMS Performance

with Mike Taigman

Improve EMS performance like a champion

Learn how one EMS agency improved EMS provider performance with an Olympic-themed competition

Jan 6, 2017

By Mike Taigman and Tony Sorensen

My most vivid Olympic memory is the 1996 women's gymnastics all-around competition. The Russians had dominated the sport and going into the final rotation it looked like it would be possible for the U.S. to win for the first time in Olympic history. The last U.S. event was the vault. U.S. team member Dominique Moceanu had fallen twice when Kerri Strug, the last U.S. competitor, lined up to vault. Strug under-rotated the landing of her first attempt and injured her ankle.

With the point difference smaller than a blood cell, she asked the coach, "Do we need this?"

He said, "Kerri, we need you to go one more time. We need you one more time for the Gold. You can do it; you better do it."

She limped to the end of the runway and then landed the vault on both feet long enough to register a 9.712 before collapsing in pain, cementing the Olympic gold medal for the U.S.

OLYMPIC INSPIRATION FOR EMS IMPROVEMENT

Inspired by champions like Strug, the team from Life EMS Ambulance, established in Grand Rapids, Mich. in 1980 and proudly serving over 3,700 square miles of west Michigan with

paramedic response, decided to have some fun and see if they could make some meaningful improvements at the same time. Their theory was that if they focused on a handful of measurable opportunities for improvement, added in a dose of friendly competition, and offered prizes for the winners, that they would make meaningful improvements.

Their quality improvement-focused version of the Olympics was held last summer in the months before, during and after the Rio Olympics. The Life EMS Ambulance organization is naturally segmented into three teams — central, north/east, and south — for friendly competition. They created four events:

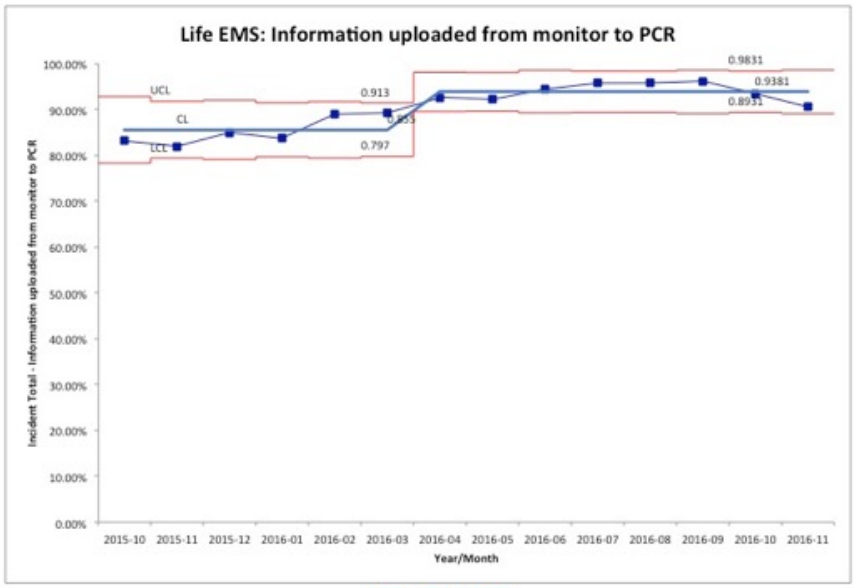
1. **Vital Sign Sprint:** Did we obtain two sets of vital signs on each patient?
2. **Breath Stroke:** Did we use capnography on patients receiving ventilatory assistance?
3. **Last Normal Backstroke:** Did we record the last seen normal time for patients with CVA?
4. **Data Sync Dive:** Was the data from the monitor uploaded into the ePCR?

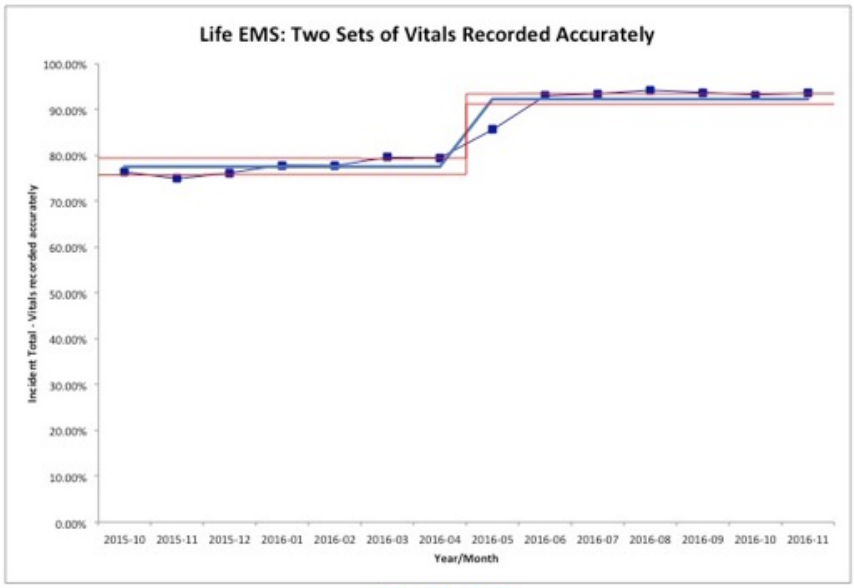
Their aim was to make tangible improvements in these four areas. Baseline data provided a starting point. The company provided feedback on team performance every two weeks in company newsletters. Individual employees got regular feedback on their performance through FirstPass, a clinical quality measurement and protocol monitoring tool. Gold medal winners got $25 gift cards, silver got a pizza party and bronze got an ice cream social.

A spirit of camaraderie, competition and fun spread throughout the organization. Crew members started coaching each other on ways to improve.

SIGNIFICANT AND SUSTAINED PERFORMANCE IMPROVEMENT

Life EMS Ambulance saw significant and sustained improvement in two of the target areas. These two charts are Shewhart charts, which are a type of statistical process control charts to display data for performance improvement.





The other two target areas saw no change. They had no decrease in performance anywhere in their system. And probably the most surprising thing is that they saw widespread sustained improvement in several areas that were not on the target list. These included improvements to:

- Time to 12-lead ECG acquisition.
- Time to nitroglycerin administration and time to aspirin administration for patients with acute coronary syndrome.
- Recording of two pain scores.

- ROSC for people with cardiac arrest.

- Temperature and ETCO2 assessed for possible sepsis patients.

7 PERFORMANCE IMPROVEMENT LESSONS

The team at Life EMS ambulance learned valuable lessons about quality improvement that are applicable to any EMS agency. Here is what they learned:

1. A friendly competition focused on quality improvement can result in improvements.
2. These improvements appear to be sustainable, at least in the few months after the competition ended.
3. Not everything that is focused on for measurement will improve with the first effort.
4. Providing regular feedback, close in time to the actual patient care, to the team and individuals on performance helps people keep on track.
5. Focused improvement in a few areas has the potential to overflow and cause improvement in other areas.
6. It's possible to have a lot of fun while engaged in serious improvement work.
7. A dedicated and talented team of front line medics are able to implement widespread improvements in a short period of time.

There are some performance improvement theorists that suggest competition might not be a good idea — that competition has the potential to erode self-esteem, especially in young people. The leadership team addressed this concern by ensuring that 80-90 percent of the focus was on improving care for their patients with a lighthearted playful sense of competition.

Other experts will tell you the use of rewards like prizes undermines the joy in work. Their theory is that when people are too focused on the prize they might actually care less about the work they are doing and any improvements will be short lived. For this competition, the prizes were not luxury Caribbean cruises or fancy sports cars. Prizes were modest, but real. And we know that the prizes were not the primary focus, because the improvements have sustained well past the awarding of gift cards, pizza and ice cream.

Who could possibly top the Olympics? Bond. James Bond. Yes, their next quality improvement competition will have a 007 theme. The target areas will be:

- Serial 12 lead EKG's … One is not enough.

- Pain scores are forever.

- Doctor Know … for base physician contact.

- Morphine and fentanyl weight-based dosing … for your weight only.

- Trauma scene time … license to live.

About the co-author

Tony Sorensen is the vice president of resource performance for Life EMS Ambulance and a paramedic I/C with 31 years of EMS experience in both rural and urban systems. In addition to his EMS clinical experience he has taught MFR, EMT, EMT-S and paramedic programs through Montcalm County EMS, Montcalm Community College and Life EMS Ambulance. Tony is active in

many local, regional and state level EMS activities. He is the past president of the Society of Michigan EMS Instructor Coordinators and the current president of the Michigan EMS Practitioners Association. Tony also represents MiEMSPA as a member of the State of Michigan EMS Coordination Committee. He has held leadership positions with Montcalm County, State of Michigan EMS Section as the EMS Education Coordinator.

About the author

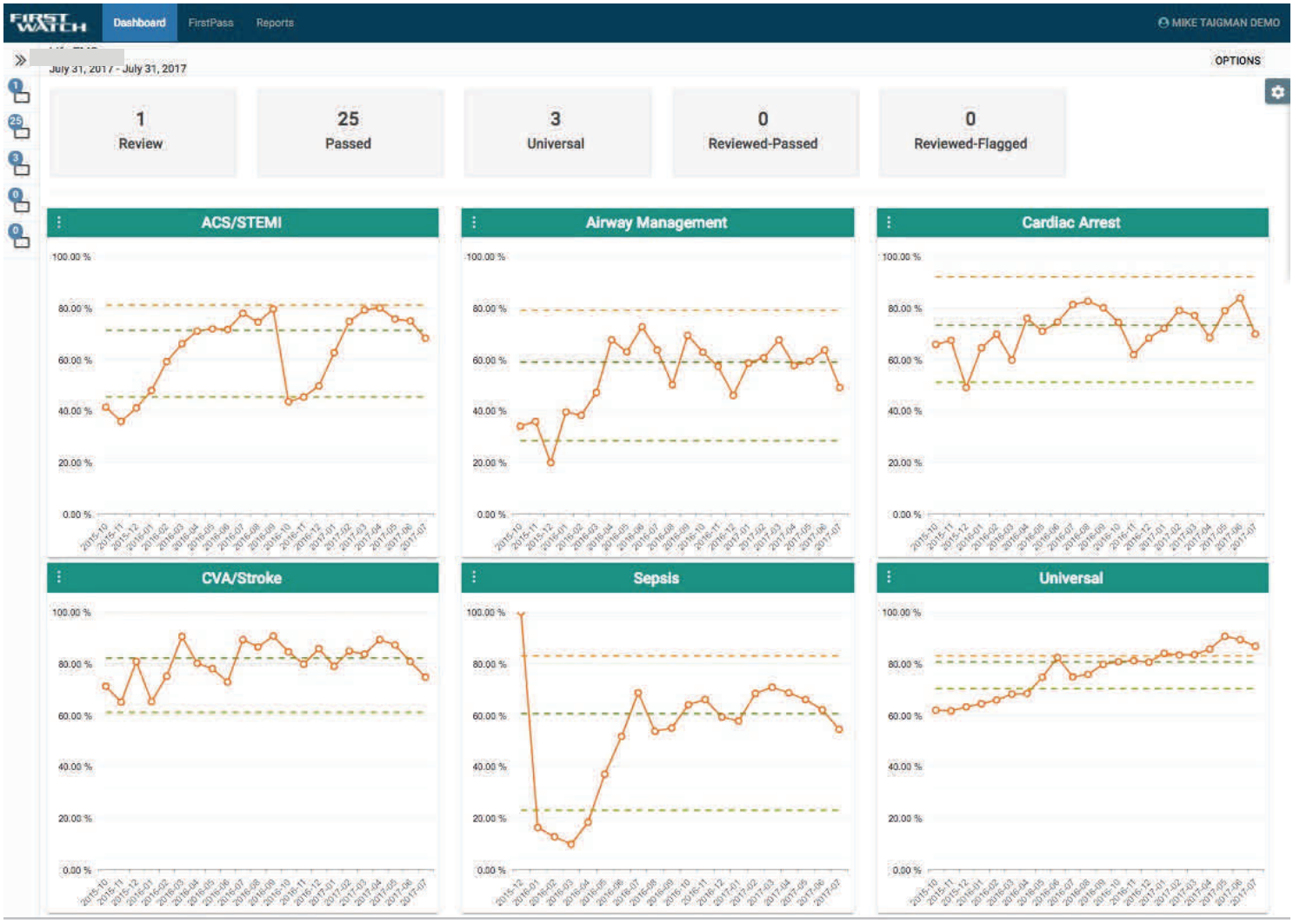
Mike Taigman uses more than four decades of experience to help EMS leaders and field personnel improve the care/service they provide to patients and their communities. Mike is the Improvement Guide for FirstWatch, a company which provides near-real time monitoring and analysis of data along with performance improvement coaching for EMS agencies.

He holds a Master's Degree in Organizational Systems and is an Associate Professor in the Emergency Health Services Management graduate program at the University of Maryland Baltimore County. He's also the facilitator for the EMS Agenda 2050 project. Email Mike Taigman at mtaigman@firstwatch.net.

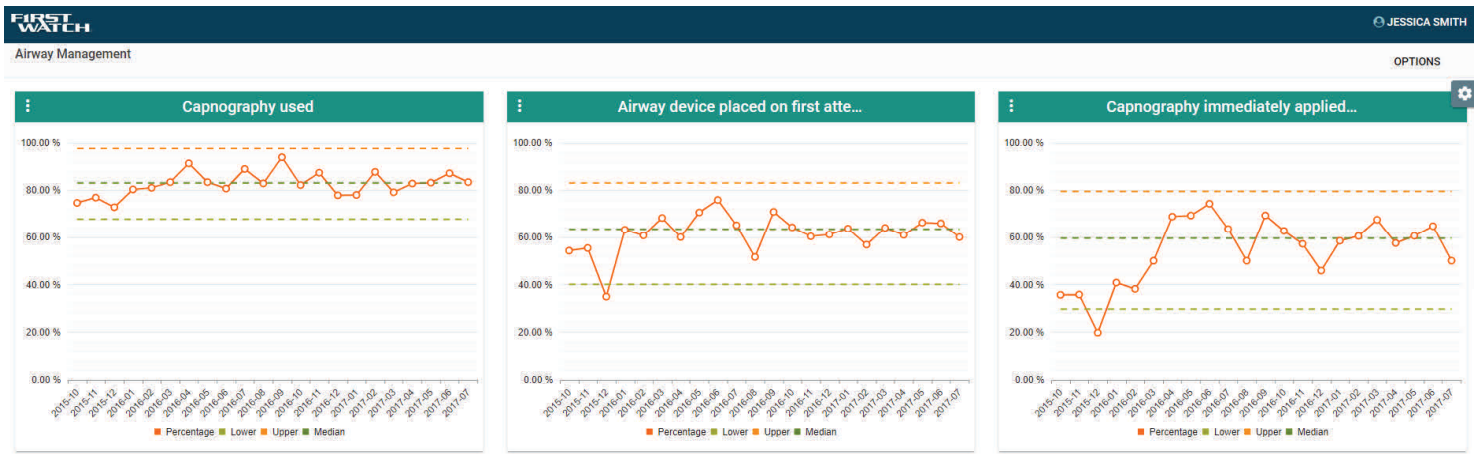
Tags › EMS Advocacy • EMS Management • Leadership

NEW Coming Soon: FirstPass v3 Interface

The NEW FirstPass Dashboard includes a customizable display of a tiled summary of your where your calls are in your FirstPass queues, and Statistical Process Control (SPC) charts for each of your system's Protocols.

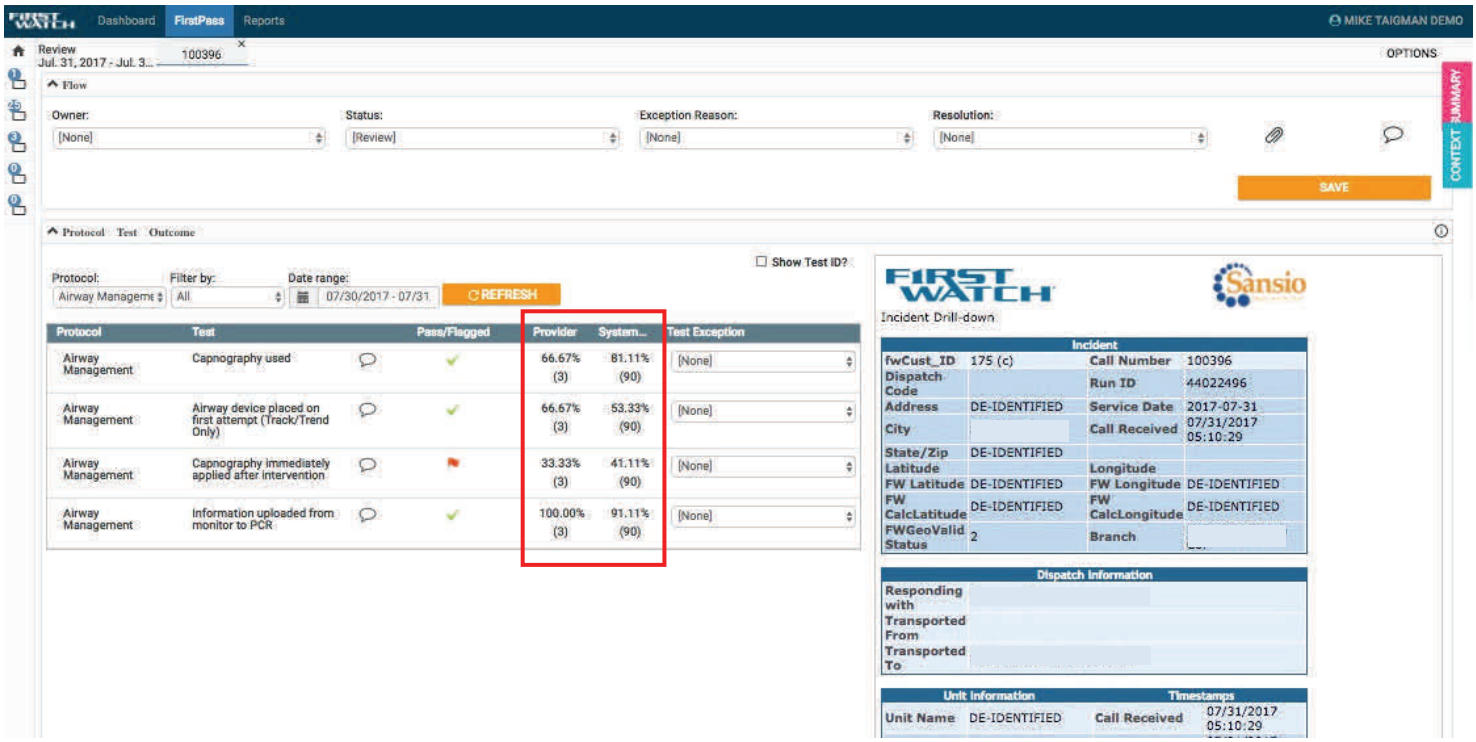


Drill-down into SPC charts for each test within a Protocol

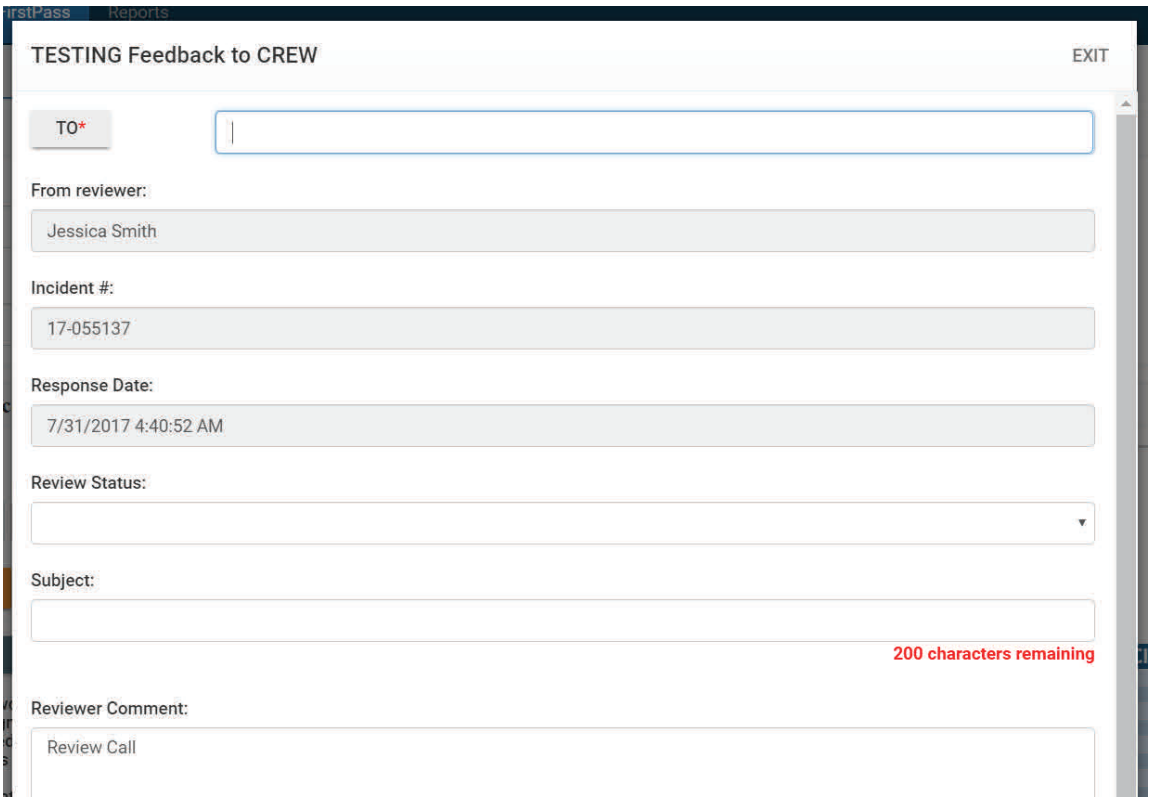


NEW Coming Soon: FirstPass v3 Interface

The NEW FirstPass interface allows for comparison of provider protocol compliance to system protocol compliance for each individual test.



The NEW FirstPass gives you the ability to send direct feedback to crew members regarding a specific call.



David Slattery, MD
Medical Director, Las Vegas Fire & Rescue

"FirstPass shines a light on the clinical cases that matter the most, including STEMI, stroke, cardiac arrest and airway management. It enables us to enhance patient care and opportunities for improvement for our crews caring for these critical patients."

Rob Lawrence, COO,
Richmond
Ambulance Authority

"With FirstPass, we're able to focus our attention on the most important calls as they happen. This in turn points us to where we need to further and train and educate our staff. Traditional quality improvement looks at a percentage of your call volume. FirstPass looks at everything - all the time. Everyone talks about how quickly we respond; now we can talk about how well we're performing clinically, with immediacy - and we're very excited bout that."

How is your system really performing, right now?

Improve Performance
Improve Quality
Improve Results

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