



# Action OI Introduction

August 2018





# About Action OI

- Healthcare operations database
- On-line data collection & report writing
- Quarterly and annual data submission cycles
- Reporting database refreshed quarterly
- Actual and Normalized data views





# Benchmarking Overview

*Benchmarking alone is merely a focusing tool to highlight areas of potential opportunity.*

## What it is

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- A directional comparison of a healthcare provider's performance against a national peer group
- An approach to estimate **potential** areas for improvement opportunities
- A process to help the Executive Team understand the magnitude of the opportunity for possible target setting

## What it is not

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- A prescriptive list of recommendations for immediate implementation
- A precise analysis of work flows, bottlenecks, waste or redundancy
- A reflection on the strength of present or past management

## Action O-I Overview

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- The largest database of client-supplied data in the industry
- Over 750 healthcare organizations across the country submit operational and financial data
- Provides facility and departmental level performance benchmarks





# Action OI Benefits

- Identify opportunities for performance improvement thru benchmarking
- Compare department and facility practices to efficient practices at similar facilities
- Recognize and project operational trends
- Assist in the budget and planning cycles





# Benchmarking Limitations & Barriers

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## Perceived Limitations/Challenges of Benchmarking

- Every difference is seen as an opportunity – benchmark fatigue
- Consideration is not given to the organization or department's unique issues (e.g., patient mix, clinical programs, etc.)
- Benchmarks represent a “snapshot” at specific point in time: static measure of an organization's performance in a dynamic environment
- No outside institution is just like Duke
- Benchmarking data is inherently messy – it contains outliers and anomalies

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## Potential Barriers and Negative Outcomes

- The imperative for change is not established and effectively communicated
- Buy-in to the need for change is inconsistent
- “Our organization is different” - focus remains on discrediting the data versus focusing on issues
- Redesign of underlying work processes are not considered to support opportunities for change
- Lack of medical staff participation and support





# How does the PDC use Action OI?

- Compare clinics against peers within the PDC
- Compare clinics against national average benchmarks
- Continual performance improvement: strive towards 75th percentile for positive indicators and 25th percentile for negative indicators
- Produce a heat map by service, by clinic to compare to benchmarking metrics
- PDC Finance identifies and communicates improvement opportunities to clinics
- Clinical Operations team and HCAs create plans to be implemented for the clinics that are identified
  - Clinical operations leads discussions with clinical department leadership around strategies for process improvement
  - Down stream revenue analysis complements Action OI
- Elements considered in annual employee reviews





# Users of the Action OI Data

- HCAs (Education Process)
- Physician Leadership within clinics
- Clinical Department Administrators
- PDC Leadership Team (Clinical and Executive)
- Labor Management Committee (LMC)
- PDC Finance (Budget Process)



# Key Data Elements



## Inputs

- Facility & financial information

Financial Statements

- Revenue & Expenses

General Ledger

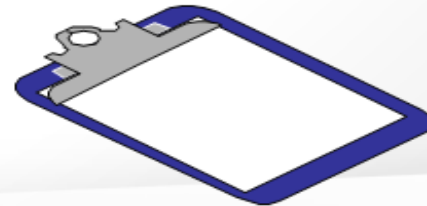
- Patient days, discharges & transfers
- Procedures, RVUs & other WLUs

Statistics

- Worked hours, paid hours, overtime hours
- Hours by job code

Payroll System

- Characteristics (Y/N questions, operational differences)
- Normalization surveys







# Ratios Revealed

*Indicators are automatic calculations based on data element values from the Data Collection module*

**Hours Worked per Patient Visit**      **4.04**      (32,115 hrs / 7,957 visits)

**Labor Expense per Visit**      **\$238.91**      (\$1,901,012 / 7,957 visits)

<b>Hours Worked</b> 32,115	<b>Labor Expense</b> \$1,901,012	<b>Visits</b> 7,957
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# Metric Benchmarking Options

Facility:		Duke University Private Diagnostic Clinic		Custom Comparison Report			IBM ActionOI®			
Standard Department:		02215, Allergy Clinic		Quarterly Period - 1Q 2018						
Department:		Asthma Allergy Airways								
Compared to:		Allergy Clinic Compare Group (Generic)								
Measure	Host Value	Percentile			Compare Group Average	Minimum	Maximum	Sample Size		
	1Q 2018	Host Percent Rank	25th	50th					75th	
<b>Dept Operating Statistics</b>										
Days of Operation per Week	5.00	100.00 %	4.00	5.00	5.00	4.41	2.50	5.00	17	
Hours of Operation per Week	40.00	70.59 %	29.75	40.00	40.75	36.15	17.00	51.00	18	
Patient Examination Spaces	18.00	100.00 %	4.25	8.00	8.00	6.94	2.00	18.00	18	
Patient Visits	9,487.00	100.00 %	629.05	1,955.01	2,166.03	2,067.67	102.00	9,487.00	18	
Patient Initial Visits			b	b	b	164.00*	164.00*	164.00*	1	
Patient Visits with Physician Provider			b	b	b	b	b	b	0	
Procedure Visits			b	b	b	b	b	b	0	
Average Wait Time For Initial Visit			b	b	b	5.00*	5.00*	5.00*	1	
New Patient Average Wait Time for Initial Visit	21.14	66.67 %*	9.36*	15.51*	23.71*	17.56*	7.82*	31.42*	4	
APC Relative Weight	134,461.24	100.00 %	15,908.40	25,422.95	40,063.49	34,556.67	3,079.27	134,461.24	17	
Professional Work RVUs (wRVUs)	10,744.65	100.00 %	213.65	558.18	1,552.72	1,633.42	20.73	10,744.65	17	
Total Inbound Calls			b	b	b	b	b	b	0	
Total Abandoned Calls			b	b	b	b	b	b	0	
Patient Appointments Scheduled	16,048.00	100.00 %*	2,594.17*	5,832.27*	10,402.19*	7,164.00*	944.00*	16,048.00*	4	
Total Bumped Appointments	386.00	66.67 %*	51.50*	225.52*	424.75*	250.75*	11.00*	541.00*	4	
Missed Appointments	3,927.00	100.00 %*	713.05*	1,886.58*	2,856.04*	1,882.50*	230.00*	3,927.00*	4	
Patient No Shows	1,178.00	100.00 %*	237.02*	618.03*	1,004.78*	623.75*	81.00*	1,178.00*	4	
Third Next Available Appointment			b	b	b	58.00*	58.00*	58.00*	1	
Worked Hours: Staff	7,766.09	100.00 %	612.32	1,869.75	3,494.23	2,357.30	66.00	7,766.09	18	
Worked Hours: Physician Provider	0.00	100.00 %	0.00	0.00	0.00	0.00	0.00	0.00	18	
Worked Hours: Management	0.00	b	46.98*	59.00*	165.34*	146.14*	20.25*	494.86*	6	
Worked Hours: RN	2,638.65	100.00 %	572.05	892.42	1,160.36	1,008.83	274.02	2,638.65	15	
Worked Hours: LPN, LVN	2,952.36	b	251.36	421.47	538.35	518.45	-0.77	1,393.31	10	
Worked Hours: Other Patient Care Provider	2,175.08	91.67 %	180.00	416.10	1,154.57	758.57	62.70	2,671.10	13	
Worked Hours: Other Support Staff			507.77*	880.89*	1,033.36*	772.36*	143.97*	1,299.42*	7	
Worked Hours: Overtime	0.00	b	4.18	16.58	41.78	30.29	1.19	118.50	12	
Paid Hours: Staff	8,895.85	100.00 %	692.15	1,854.32	3,809.95	2,680.09	66.00	8,895.85	18	
Paid Hours: Physician Provider	0.00	100.00 %	0.00	0.00	0.00	0.00	0.00	0.00	18	
Paid Hours: Contract Labor	0.00	100.00 %	0.00	0.00	0.00	0.00	0.00	0.00	18	
Labor Expense	225,594.89	a	a	a	a	a	a	a	18	
Labor Expense: Physician Provider	0.00	94.12 %	0.00	0.00	0.00	5,254.81	0.00	94,586.55	18	
Overtime Salary Expense			62.27	177.51	572.65	699.68	-0.01	3,185.98	10	
Other Direct Operating Expense	89,258.07	100.00 %	6,736.66	12,264.98	27,627.97	22,479.47	372.00	89,258.07	18	

\* Data based on small sample size.    <sup>a</sup> Insufficient unshared data for display.    <sup>b</sup> Calculation not applicable.





# “SCORES”



Measure	Host Value				
	1Q 2018	Host Percent Rank	25th	50th	75th
Procedure Visits as a % of Patient Visits			b	b	b
Procedure Visits per Operating Day			b	b	b
Procedure Visits per Exam Space per Operating Day			b	b	b
APC Relative Weight per Patient Visit	14.17	41.18 %	9.20	15.86	19.75
Professional Work RVUs per Patient Visit	1.13	81.25 %	0.20	0.41	1.05
Patient Bump Rate	2.41	33.33 %*	1.89*	4.38*	6.48*
Call abandonment rate			b	b	b
Missed Appointments as % of Patient Appointments Scheduled	24.47	33.33 %*	24.44*	26.13*	28.18*
Patient No Shows as % of Missed Appointments	30.00	0.00 %*	32.30*	34.14*	35.89*
Patient No Shows as % of Patient Appointments Scheduled	7.34	0.00 %*	8.27*	8.89*	9.67*
<b>Labor Productivity Ratios</b>					
Hours Worked per Patient Visit	0.82	29.41 %	0.78	1.14	1.48
Hours Worked per APC Relative Weight	0.06	37.50 %	0.05	0.06	0.09
Hours Worked per Professional Work RVU	0.72	6.25 %	1.02	2.81	4.41
Hours Paid per Patient Visit	0.94	35.29 %	0.84	1.27	1.72
Hours Paid per APC Relative Weight	0.07	35.29 %	0.06	0.08	0.11
Hours Paid per Professional Work RVU	0.83	6.25 %	1.19	3.18	4.83
<b>Cost Ratios</b>					
Staff Average Rate per Hour	25.36	a	a	a	a
Staff Average Rate AWI Adjusted per Hour			a	a	a
Labor Expense per Patient Visit	23.78	a	a	a	a
Labor Expense AWI Adjusted per Patient Visit			a	a	a
Other Direct Expense per Patient Visit	9.24	76.47 %	3.21	5.89	8.97
Total Supply Expense per Patient Visit	6.92	66.66 %	2.42	6.09	10.72
Medical Supply Expense per Patient Visit	3.57	46.87 %	2.06	4.46	10.69
Total Expense per Patient Visit	33.02	23.53 %	33.26	52.86	76.28
Total Expense AWI Adjusted per Patient Visit			39.79	47.78	69.61

## Labor Productivity Ratios

- Assess efficiency
- Evaluate salary costs based on volume or unit of service

## Cost Ratios

- Expenses divided by volume
- Identifies savings opportunities





# PDC Heat Map (subset of metrics)

Department & Percentile Benchmark	75th Percentile			25th Percentile								
	Patient Visits	Patient Visits per Exam Space per Operating Day	Patient Visits per Operating Day	Hours of Operation per Week	Hours Worked per Patient Visit	Labor Expense per Patient Visit	Skill Mix: RN %	Missed Appointments as % of Patient Appointments Scheduled	New Patient Average Wait Time for Initial Visit	Patient Bump Rate	Total Expense per Patient Visit	Total Supply Expense per Patient Visit
Asthma Allergy Airways	9058	7.74	139.35	40.00	0.83	\$ 26.06	28.78	23.88	19.84	4.31	\$ 40.20	12.49
Asthma Allergy Airways - Peds	599	1.54	9.22	40.00	1.13	\$ 32.98	-	23.54	28.23	4.74	\$ 35.51	-
Raleigh Pulmonary & Allergy Consult	3121	3.43	48.02	40.00	2.18	\$ 57.21	13.47	25.83	6.81	11.22	\$ 69.62	8.44
Allergy Clinic - 25th Percentile	652	3.61	17.59	28.13	1.08	**	33.21	24.00	23.42	4.59	\$ 37.71	3.99
Allergy Clinic - 50th Percentile	1,755	4.76	30.46	40.00	1.43	**	46.79	25.15	26.87	5.37	\$ 57.42	7.82
Allergy Clinic - 75th Percentile	2,253	6.44	37.07	40.63	1.65	**	61.87	26.35	30.11	6.92	\$ 79.48	12.35
Duke Cardiology of Raleigh	8,475	4.66	130.38	40.00	1.03	\$ 39.13	26.57	22.32	14.59	4.27	\$ 61.93	12.00
Southpoint - Cardiology	6,573	3.26	101.12	40.00	1.03	\$ 37.75	65.33	20.38	22.83	1.59	\$ 39.55	1.07
Triangle Heart Associates	10,312	6.61	158.65	40.00	0.98	\$ 29.40	30.22	18.02	8.07	1.70	\$ 42.74	11.50
Cardiology Clinic - 25th Percentile	1,234	3.24	19.57	40.00	1.32	43.67	22.20	17.74	8.30	1.96	\$ 51.75	1.18
Cardiology Clinic - 50th Percentile	2,254	4.49	35.31	40.00	1.82	64.71	35.32	24.11	16.58	2.95	\$ 76.61	2.32
Cardiology Clinic - 75th Percentile	5,057	5.68	77.81	45.00	2.88	105.72	50.05	36.11	24.52	5.47	\$ 126.94	5.93
Dermatology - 3K	5,788	5.57	89.05	40.00	1.13	\$ 28.50	25.82	23.40	68.75	3.30	\$ 33.50	4.49
Dermatology - MOHS	2,717	3.80	41.80	40.00	2.10	\$ 88.77	-	25.66	61.66	-	\$ 132.81	33.73
Dermatology - Patterson Place	2,949	5.04	45.37	40.00	1.42	\$ 35.71	28.49	23.24	61.34	11.17	\$ 45.34	6.73
Dermatology - Patterson Place Peds	1,612	3.10	24.80	40.00	1.09	\$ 32.88	35.34	24.35	63.20	4.01	\$ 42.76	8.19
Dermatology - Wake Forest	1,061	2.04	16.32	40.00	2.06	\$ 47.94	-	28.03	69.23	12.59	\$ 60.71	5.68
Dermatology Clinic - 25th Percentile	1,317	3.17	20.34	40.00	0.92	**	13.99	23.19	29.64	2.12	\$ 32.38	3.65
Dermatology Clinic - 50th Percentile	3,246	4.68	49.94	41.56	1.23	**	31.90	26.00	42.67	3.88	\$ 44.84	6.20
Dermatology Clinic - 75th Percentile	5,672	6.20	87.26	45.00	1.64	**	44.56	32.35	57.04	6.27	\$ 70.14	11.80

