



Optimizing Use of Your Electronic Health Record to Meet Meaningful Use Requirements and Improve Performance Outcomes

Accelerating Quality Improvement through Collaboration (AQIC) Project
Sponsored by the California Health Care Foundation

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Presentation by:



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Jerry Lassa

- BS Industrial Engineering, MS Statistics
- 10 years QI staff and director at 600 bed Academic Medical Center in Chicago
- 8 years QI director for two Community Health Centers and one ISDN (Alliance of Chicago; 200K unduplicated users)
- 10 years adjunct instructor of statistics, quality & performance, and medical informatics at Northwestern University in Chicago
- 5 year Baldrige examiner in Illinois
- 5 year NACHC conference presenter on Performance Measurement in Community Health
- Past 2 years health system quality and HIT planning with health bureaus in Sichuan Province and Shanghai, China

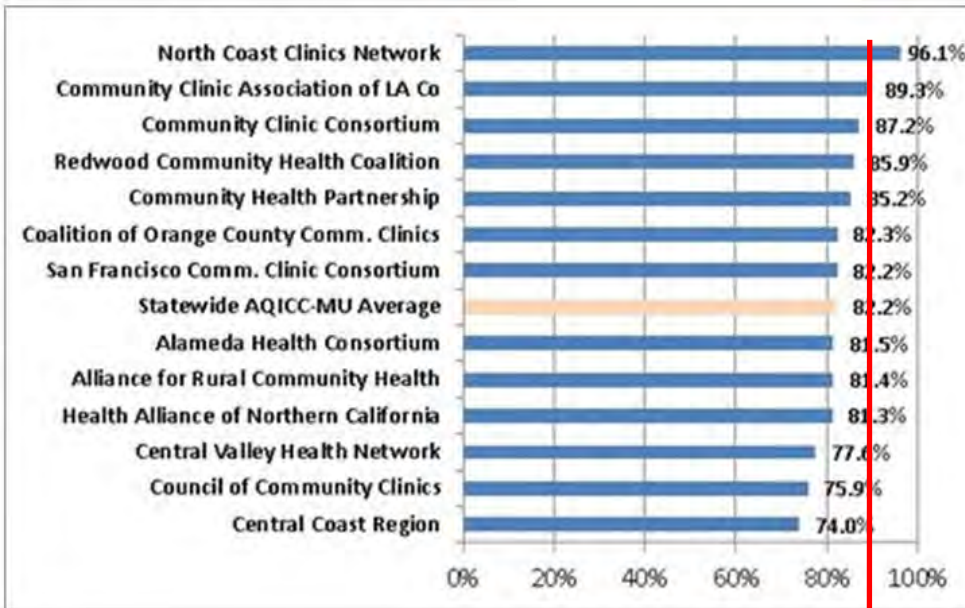
Statewide Quality Improvement Collaborative Training & Statewide Data Strategy Group

- With funding support from the California HealthCare Foundation, this training has been developed under the Statewide Quality Improvement Collaborative.
- The Accelerating Quality Improvement in California Clinics (AQICC) project is also part of the collaborative efforts. AQICC collects data from clinics across the state on clinical and operational efficiency measures and has invested substantial effort into the implementation of data collection and reporting systems, recently focusing on the distribution of data to clinics for analysis and use in improving care.
- As clinics implement EHRs and other data collection systems, such as chronic disease registries, this project seeks to provide support for structuring reports, sharing data with providers, and presenting data in a way that facilitates improved care and outcomes. Important at a statewide level is how to collect data in a standardized way so that it can be utilized in public reporting and policy and advocacy.
- A Statewide Data Strategy Group (SDSG) has been formed to bring all efforts together in creating a cohesive strategy for data collection, use and reporting across the state. Surveys will be distributed for you to provide input to this planning process.

AQICC-MU Results

CPCA “Health Center Check-up Reports” ¹

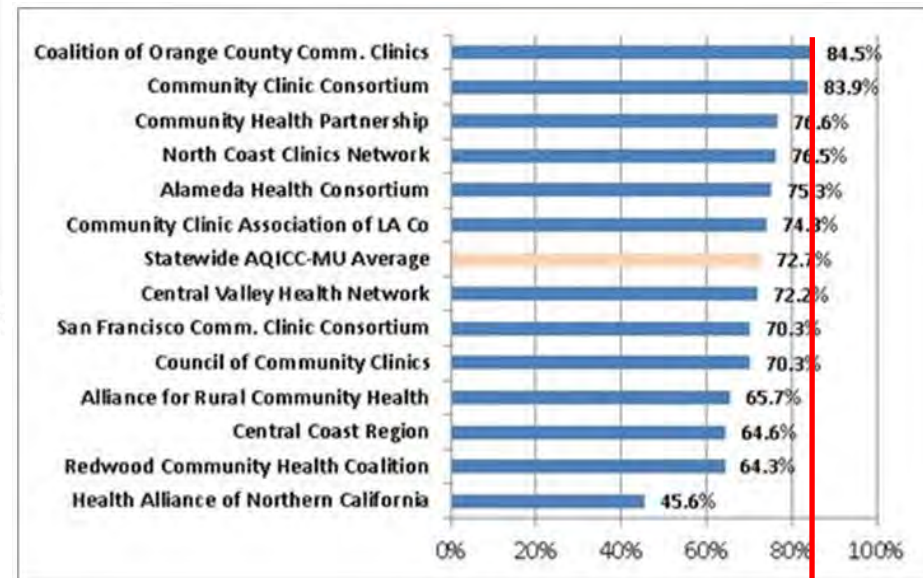
% Adult Diabetics with HbA1c in Past Year



Data as of February 2011

89%
National
Benchmark ²

% Adult Diabetics with LDL in Past Year



Data as of February 2011

85%
Nat'l BM ²

¹ <http://www.cPCA.org/index.cfm/data-reports/health-center-check-up-reports/>

² <http://www.ncqa.org/> 2010 State of Health Care Quality Report, commercial and medicare patients

Learning Topics

1. Relate Meaningful Use to your CHCs Performance Excellence
2. Align Meaningful Use objectives with CHC strategy
3. Foster a culture of data-driven management among leaders, providers and staff
4. Develop a data management and reporting approach that supports strategy objectives
5. Create accountability for achieving performance outcomes among leaders, providers and staff

Desired Outcomes

1. Improved understanding of Meaningful Use data management requirements
2. A draft data management strategy for your organization
3. An understanding of important data management considerations and challenges pre, during and post EHR implementation and mitigation tactics

Agenda

9am	Registration/Coffee
9:45	Welcome & Introductions
10am	Learning Topics 1-4
11am	Break
11:15am	Breakout session on aligning organization strategy and data management strategy
12:15pm	Lunch
12:45pm	Learning Topic 5
1:30pm	Break
1:40pm	Breakout session on data and Meaningful Use performance measurement case studies
2:55pm	Next Steps
3pm	Adjourn

**1. RELATE MEANINGFUL USE TO YOUR CHCS
PERFORMANCE EXCELLENCE**

Baldrige Framework for Performance Excellence

- President Reagan called for a national study on productivity in October 1982 in response to declining U.S. productivity; resulted in a National Quality Award signed into law in 1987
- Baldrige Program promotes excellence in organizational performance, recognizes the quality and performance achievements and publicizes successful performance strategies
- National Gold Standard for Performance Management in Industry, Education and Healthcare; Time-tested: 20+ years old
- Excellent self-assessment framework for strategic and operational planning



Malcolm Baldrige
1922-1987

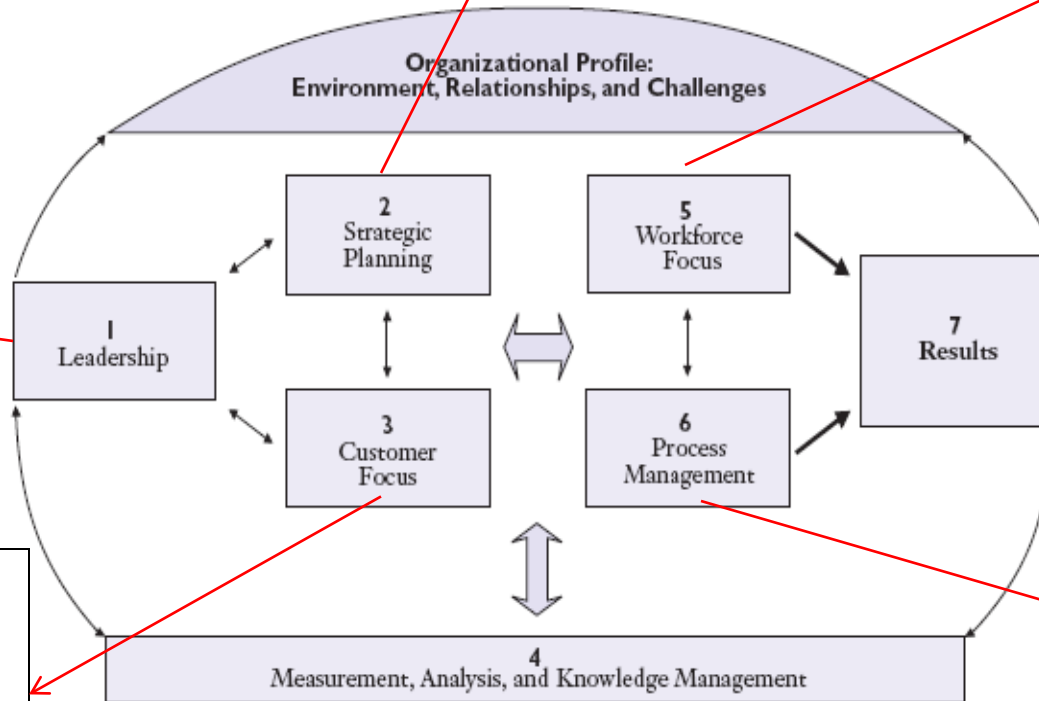
Baldrige Framework

How your key strategic objectives address your strategic challenges. How you ensure strategic and operational plans are achievable and adequately scoped. How you develop and deploy action plans throughout the organization to achieve objectives.

Baldrige Health Care Criteria for Performance Excellence Framework A Systems Perspective

How you foster an employee culture conducive to high performance. How you manage and develop your staff to utilize their full potential.

How your senior leaders communicate with and engage the entire workforce and encourage frank, two-way communication throughout the organization



What measurable results you have achieved.

How you “Listen and Learn” from your key stakeholders including Customers, Community, Partners, and Payers.

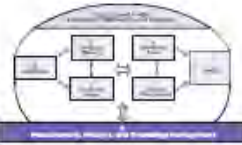
How you manage and improve your organizations’ key processes.

**How you turn data into information in your organization.
How you use that information to improve performance.**

Baldrige Priorities for Data Management

4 Measurement, Analysis, and Knowledge Management (90 pts.)

The *Measurement, Analysis, and Knowledge Management* Category examines how your organization selects, gathers, analyzes, manages, and improves its data, information, and knowledge assets and how it manages its information technology. The Category also examines how your organization reviews and uses reviews to improve its performance.



4.1 Measurement, Analysis, and Improvement of Organizational Performance: How do you measure, analyze, and then improve organizational performance? (45 pts.)

Process

Describe how your organization measures, analyzes, reviews, and improves its performance as a health care provider through the use of data and information at all levels and in all parts of your organization.

Within your response, include answers to the following questions:

a. PERFORMANCE MEASUREMENT

- (1) How do you select, collect, align, and for tracking overall organization and ACTION PLANS? What are your longer-term financial metrics? data and information to support
- (2) How do you select and ensure that operations and strategic decisions?
- (3) How do you keep your performance metrics? How do you ensure that organizational or external changes?

How do you align and integrate data and information for tracking daily operations and for tracking overall organization performance, including progress towards strategic objectives?

b. PERFORMANCE ANALYSIS AND REVIEW

How do you review organization of these reviews and to ensure that national success, performance related STRATEGIC OBJECTIVES and ACTION PLAN respond rapidly to changing or

How do you select and ensure effective use of key comparative data?

c. PERFORMANCE IMPROVEMENT

How do you translate organizational performance review findings into priorities for continuous and breakthrough improvement and into opportunities for innovation? How are these priorities and opportunities deployed to work group and functional-level operations throughout your organization to enable effective support for their decision making? When appropriate, how are the priorities and opportunities deployed to your suppliers, PARTNERS, and COLLABORATORS to ensure organizational alignment?

How do you translate organizational performance review findings into priorities for continuous and breakthrough improvements and into opportunities for innovation?

should be guided by the strategic objectives and action plans described in Items 2.1 and 2.2. The reviews also might be informed by internal or external Baldrige assessments.

N4. Analysis (4.1b) includes examining performance trends, organizational, health care industry, and technology projections; and comparisons, cause-effect relationships, and correlations. Analysis should support your performance reviews, help determine root causes, and help set priorities for resource use.

Accordingly, analysis draws on all types of data: patient- and stakeholder-related, health care outcome, financial and market, operational, and competitive/comparative.

N5. The results of organizational performance analysis and review should contribute to your organizational strategic planning in Category 2.

N6. Your organizational performance results should be reported in Items 7.1–7.6.

For additional description of this Item, see pages 41–43.

Management of Information, Knowledge, and Information Technology: How do you manage your information, organizational knowledge, and information technology? (45 pts.)

Process

Describe how your organization ensures the quality and availability of needed data, information, software, and hardware for your workforce, suppliers, PARTNERS, COLLABORATORS, and PATIENTS and STAKEHOLDERS. Describe how your organization builds and manages its knowledge assets.

Within your response, include answers to the following questions:

a. Data, Information, and Knowledge Management

- (1) How do you ensure the following properties of your organizational data, information, and knowledge?
 - accuracy
 - integrity and reliability
 - timeliness
 - security, and confidentiality
- (2) How do you make needed data and information available? How do you make them accessible to your workforce, suppliers, PARTNERS, COLLABORATORS, and PATIENTS and STAKEHOLDERS?
- (3) How do you manage data, information, and knowledge?
 - the collection
 - the transfer
 - the assembly and transfer of relevant knowledge for use in your strategic planning process.

How do you ensure data, information, and knowledge are accurate, reliable, timely, secure and confidential?

b. Management of Information Resources and Technology

- (1) How do you ensure that hardware and software are reliable, secure, and user-friendly?
- (2) In the event of an emergency, how do you ensure the continued availability of hardware and software systems and the continued availability of data and information?
- (3) How do you keep your data and information available and secure, including your own and your suppliers, PARTNERS, COLLABORATORS, and PATIENTS and STAKEHOLDERS' data and information?

Note:

N1. Data via electronic health care organizations are initiatives to develop and utilize electronic medical records to share patient data both within the organization and, as appropriate, with other health care organizations. Of particular

EHR Meaningful Use addresses all of these priorities.

compliance with HIPAA.

For additional description of this Item, see page 43.

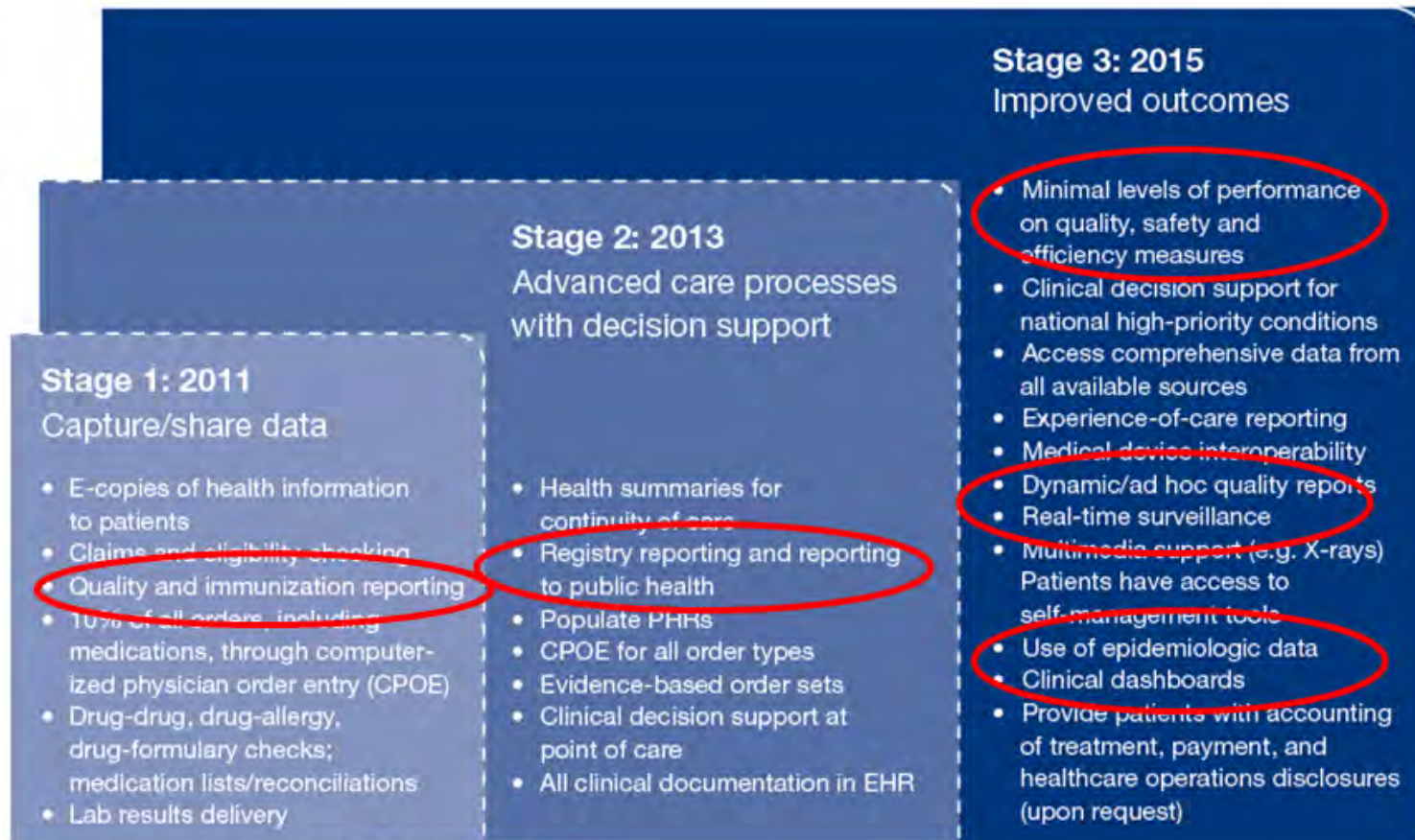
Notes:

N1. Performance measurement fact-based decision making for organizational directions and routine, key process, departmental levels.

N2. Comparative data and info obtained by benchmarking and comparisons. "Benchmarking" processes and results that represent performance for similar activities, inside or outside the health care industry. Competitive comparisons relate your organization's performance to that of

your organization's performance measures reported throughout your Criteria Item responses, and performance measures reviewed by senior leaders (1.1b[2]), and they

Meaningful Use Stages Towards Improved Outcomes



PwC On the Road to Meaningful Use, June 2010

Low

Data Management Intensity and Outcomes Improvement Expectation

High

Stage I Meaningful Use Requirements

- 15 Core Set objectives
 - EHR vendor must be compliant with all to become certified
- 5 objectives out of 10 from menu set
 - EHR vendor can be certified with only 5, so know which ones they are and plan for gaps
- 6 total Clinical Quality Measures (3 core or alternate core, and 3 out of 38 from alternate set)
 - EHR vendor can be certified with this minimum set, so know which ones they are and plan for gaps

Core Set:	
1	CPOE
2	Implem drug-drug and allergy interact checks
3	ePrescribing
4	Demographics
5	Problem List
6	Medication List
7	Medication Allergy List
8	Vital Signs
9	Smoking Status
10	Clinical Decision Support
11	Calculate and Transmit CMS Quality Measures
12	Electronic Copy of Health Information
13	Electronic Copy of Discharge Instructions
14	Clinical Summaries
15	Exchange Key Clinical Information
16	Privacy/Security

Menu Set:	
1	Implement drug-formulary checks
2	Advance Directives
3	Lab Results into EHR
4	Patient List
5	Patient Reminders
6	Timely Electronic Access to Health Information
7	Patient Specific Education
8	Medication Reconciliation
9	Summary of Care
10	Submit to Immunization Registries
11	Submit Lab Results to Public Health Agencies
12	Submit Syndromic Surveillance to Public Health

Core Set: Clinical	
1	Hypertension: BP Measurement
2	Prev Care and Screening Measure Pair: a) Tobacco Use Assessment, b) Tobacco Cessation Intervention
3	Adult Weight Screening and Follow-up
Alternate Core Set: Clinical	
1	Weight Assessment and Counseling for Children and Adol
2	Prev Care and Screening : Influenza Immun. For >50 yrs old
3	Childhood Immunization Status



Alternate Set: Clinical

Need 3

1. Diabetes: HbA1c poor control
2. Diabetes: LDL mgmt and control
3. Diabetes: BP mgmt
4. HF: ACE/ARB for LVSD
5. CAD: beta-blocker for prior MI
6. Pneumo vax for older adult
7. Breast cancer screening
8. Colorectal cancer screening
9. CAD: oral antiplatelet therapy
10. HF: beta-blocker for LVSD
11. Anti-depressant med mgmt
12. POAG: optic nerve eval
13. Diabetic Retinopathy: docum of macular edema
14. Diabetic Retinopathy: communication with physician managing diabetic care
15. Asthma pharmacologic therapy
16. Asthma assessment
17. Appropriate testing for children with pharyngitis
18. Oncology breast cancer: hormone therapy
19. Oncology colon cancer: chemo for stage III
20. Prostate cancer: avoidance of overuse of bone scan
21. Smoking and tobacco cessation, medical assistance
22. Diabetes: eye exam
23. Diabetes: urine screening
24. Diabetes: foot exam
25. CAD: drug therapy for lowering LDL
26. HF: warfarin therapy for atrial fib
27. IVD: BP mgmt
28. IVD: use of aspirin or other antithrombotic
29. Initiation and engagement of alcohol and other drug dependence tx
30. Prenatal care: screening for HIV
31. Prenatal care: anti-D immune globulin
32. Controlling high BP
33. Cervical cancer screening
34. Chlamydia screening for women
35. Use of appropriate meds for asthma
36. Low back pain: use of imaging studies
37. IVD: complete lipid panel and LDL control
38. Diabetes: HbA1c control (<8.0%)



MU Financial Incentives

- Max incentive:
 - Medicaid \$63,750; Medicare \$44,000
- Timeline for Medicaid EPs:
 - April 18 2011: attestation for MU begins (varies by state)
 - 2012: last year to start attestation (2011 Medicaid)
 - 2015: penalties for not achieving MU follow in 2015
 - 2016: last year to initiate incentive payments
 - 2021: last year to receive incentive payment (2016 Medicaid)
- Data required for registration: Name of EP, NPI, Address/phone, TIN, CCN, Medicare or Medicaid selection, state selection
 - Before making incentive payments, CMS will verify enrollment by registrants NPI, PECOS, NPPES
- EPs can participate in other CMS P4P programs like Medicare PQRI, EHR demo, Care Mgmt Performance Demonstration

Barriers to Adoption

- Timing – only have a few months to purchase, implement, assess usability
- Volume of measures – 20 still considered too high
- Hospital-based MDs (not elig if >90% IP/ED)
- Time frame for furnishing patient and health info electronically (within several days, conflicts with HIPAA)
- Threshold requirements still too high
- No appeals process for any aspect of incentive program
- Usability – certification process does not take this into account
- Early EHR adopters may have to upgrade
- Testing of re-tooled measures – no guarantee e-specs in EHRs are accurate and operational

2. ALIGN MEANINGFUL USE OBJECTIVES WITH CHC STRATEGY

Annual Planning Process

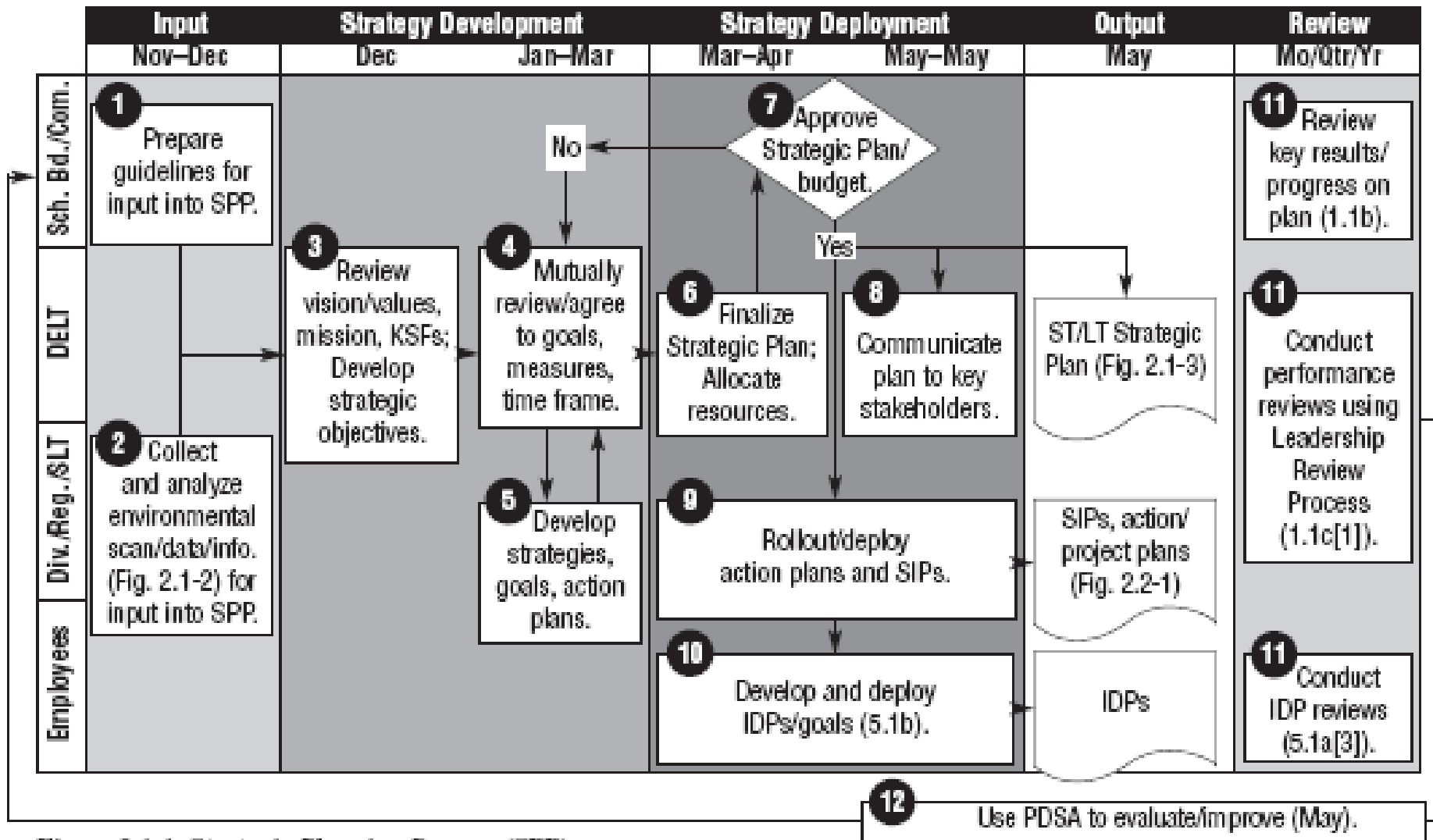
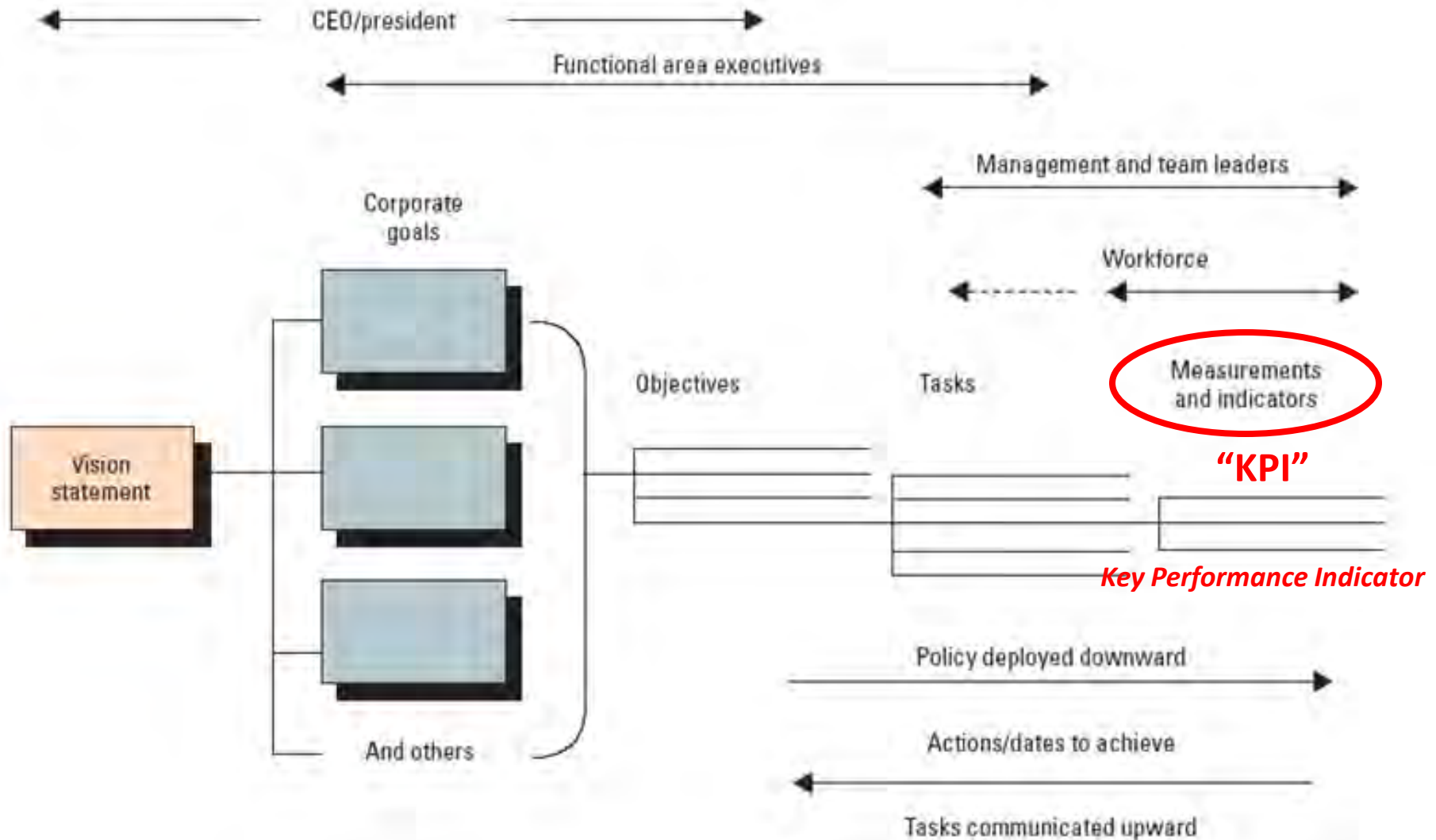


Figure 2.1-1 Strategic Planning Process (SPP)

Making Your Strategic/Operating Plan SMART



Example of Your Strategic/Operating Plan (Clinical)

Strategic Objectives (Figure 2.1-2)	Related Action Plan(s)	Sample Measure(s)
Clinical Excellence		
Increase the overall ratio of patient visits to staff.	Re-engineer patient flow process to reduce cycle time.	Office visit cycle time
Develop internal and external resources to address unmet health care needs in the service area to increase the number of new patients served.	Pediatrics: Increase immunization rates for children and adolescents.	Immunization rates
	Females: <ul style="list-style-type: none"> • Increase screening rates for domestic abuse, depression, cervical cancer, and colon cancer. • Increase mammography services. 	Screening rates Mammograms

Set long term Strategy



Create annual operating plan objectives



Monitor monthly/qty achievement with a KPI

Community Health Strategic Objectives

Example

- Patient Access
 - Unduplicated Patients
 - Visit Volume
 - Provider Productivity
 - Days to 3rd Available Appointment
 - No Show Rate
 - Same Day/Next Day Appts
 - Wait Time/Cycle Time
- Clinical Quality/Meaningful Use
 - Life Cycle Health Outcomes measures (Pediatric, Adolescent, Adult, Geriatric, Maternal Care, HIV/AIDS, Dental)
- Patient & Employee Satisfaction
- Financial
 - Budget vs. Actual
 - Cost/Visit
 - Current Ratio
 - Days in A/R and A/P
 - Days Cash on Hand
 - Collection Rate
- IT/HIT Meaningful Use
 - Help Desk Support
 - EHR System/Functional Use
- Development
 - Fundraising-grant seeking/grants secured
 - New Donors
 - Media Hits



**3. FOSTER A CULTURE OF DATA-DRIVEN
MANAGEMENT AMONG LEADERS, PROVIDERS
AND STAFF**

Data-Driven Management Culture & Tools

Culture

- Strategic Plan process exists
- Annual operating plan used to implement Strategic Plan
- Performance outcomes are reviewed in leadership forums (BOD, senior leadership, management, staff)
- Data is used to inform planning, resource allocation, course corrections, recognition
- Performance outcomes are transparent internally and externally
- There is accountability for performance outcomes



Tools/Data Mgmt Plan

- National and industry-appropriate performance indicators are used to measure, monitor and benchmark Strategic Plan progress (“KPIs”)
- Dashboard and reporting tools support efficient review of progress and identification of opportunity at all levels and across all operating units
- Process improvement is used to improve performance (Incremental = PDSA cycles, Breakthrough = Six Sigma/DMAIC project)

A data management plan should be informed by and also inform the organization's data-driven culture



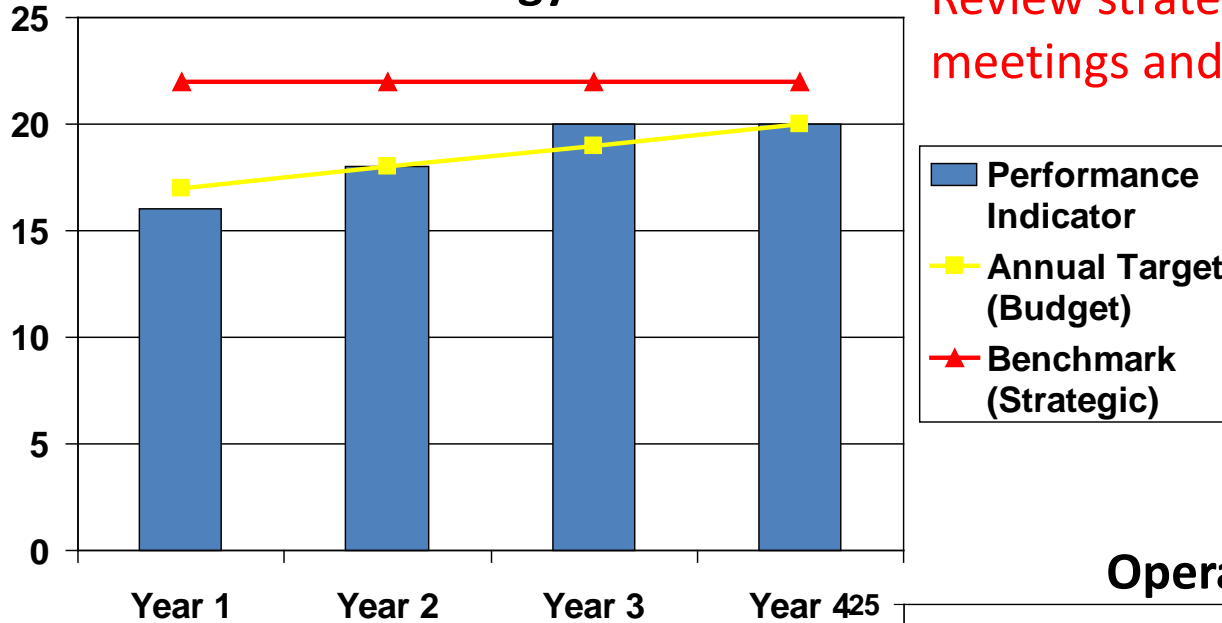
Create a Vision for Data Management

- Achieve improve outcomes and rational use of resources
- Use of nationally defined measures but flexibility to develop measures that are not standard for custom efforts
- Measurement of all aspects of quality and performance including operations, health outcomes and financial
- Data is compiled in a systematic manner with reliability and validity; data is standardized in a common database structure
- Data is transformed into information for optimal decision-making
- Data is visually displayed for efficient identification of trends and opportunities
- There is ability to compare internally across sites and externally against benchmarks
- Data is transparent and is shared openly internally and externally
- There is ongoing development of internal capacity for data management across sites
- There is Meaningful Use of data for population health management
- A data-driven management culture and accountability for outcomes is present in governance, leadership, management, committee and staff forums

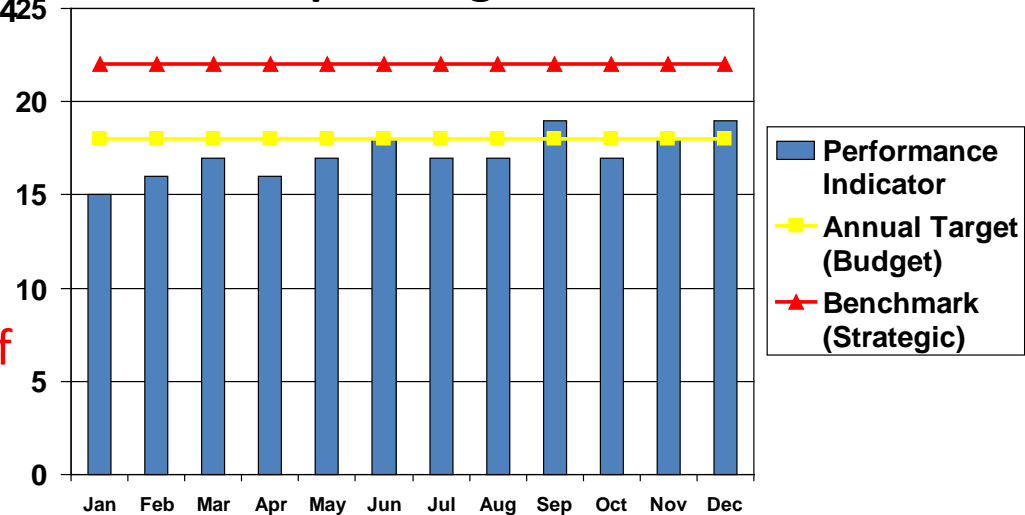


Reviewing KPI Data

Strategy KPI



Operating KPI



Diabetes Trend Report Example (tabular)

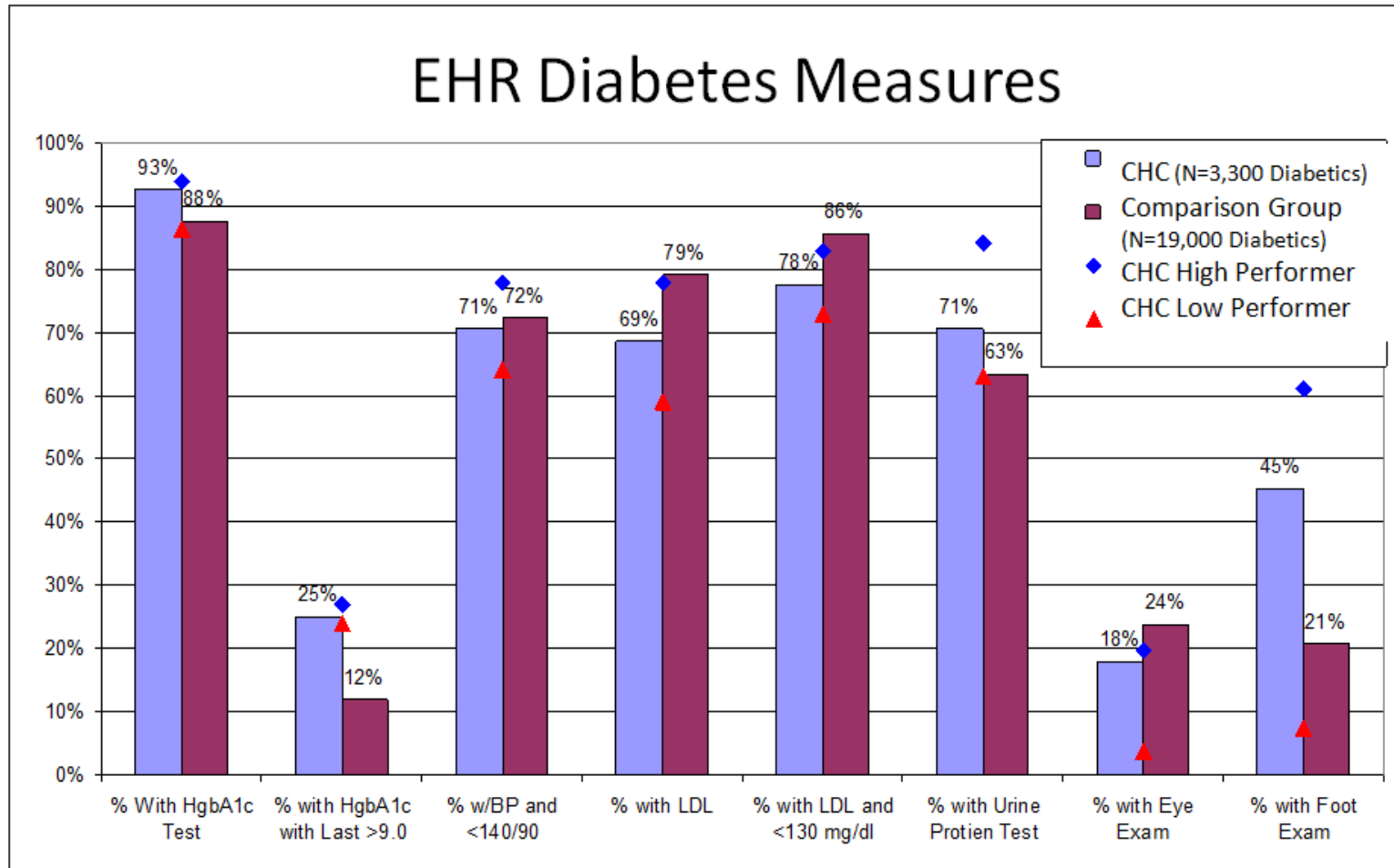
Health Registry Report (Diabetes)

Date Range:		1/1/2010 - 12/31/2010		1/1/2009 - 12/31/2009		1/1/2008 - 12/31/2008	
Item		Value	%	Value	%	Value	%
1. Patients							
A.	Total Patients Included	638	100%	486	100%	424	100%
8. Diabetes Type							
A.	Type 1	4	0.63%	4	0.82%	4	0.94%
B.	Type 2	278	43.57%	263	54.12%	268	63.21%
C.	Gestational	0	0%	0	0%	0	0%
D.	Impaired Glucose Tolerance	0	0%	0	0%	0	0%
10. Blood Pressure							
A.	Patients with BP checked	628	98.43%	475	97.74%	334	78.77%
	1. Average Systolic	133		134		131	
	2. Average Diastolic	78		79		77	
	3. >= 135/85	320	50.96%	225	47.37%	128	38.32%
	4. >= 140/90	222	35.35%	174	36.63%	86	25.75%
	5. < 135/85	308	49.04%	250	52.63%	206	61.68%
	6. < 130/80	221	35.19%	169	35.58%	143	42.81%
11. Education							
A.	Diabetes (i2i)						
	1. Received	300	47.02%	127	26.13%	41	9.67%
	2. Referred	3	0.47%	3	0.62%	3	0.71%
	3. Received or Referred	300	47.02%	127	26.13%	41	9.67%
	4. Refused	0	0%	0	0%	0	0%
16. Self-Management Goals							
A.	Check Home Sugars	313	49.06%	275	56.58%	269	63.44%
B.	Cut Down on Carbs	129	20.22%	84	17.28%	47	11.08%
C.	Diabetes Goal Set	394	61.76%	311	63.99%	272	64.15%
19. Cholesterol (Total)							
A.	Patients with test	527	82.6%	389	80.04%	307	72.41%
	1. Average	178.36		179.17		178.34	
20. HbA1c							
A.	Patients with test	560	87.77%	378	77.78%	312	73.58%
	1. Average	7.58		7.68		7.65	
B.	Patients with 2 or more tests 91+	335	52.51%	253	52.06%	207	48.82%

- Example of a diabetes registry report that is distributed at QI Committee Meetings (includes Physicians, Ops Mgr, RN, CEO)
- Reports reviewed monthly
- Average HbA1c, LDL and BP are the measures from the CHC's annual plan



Diabetes Report (graphical)



What can we learn from this for strategy? For operations?

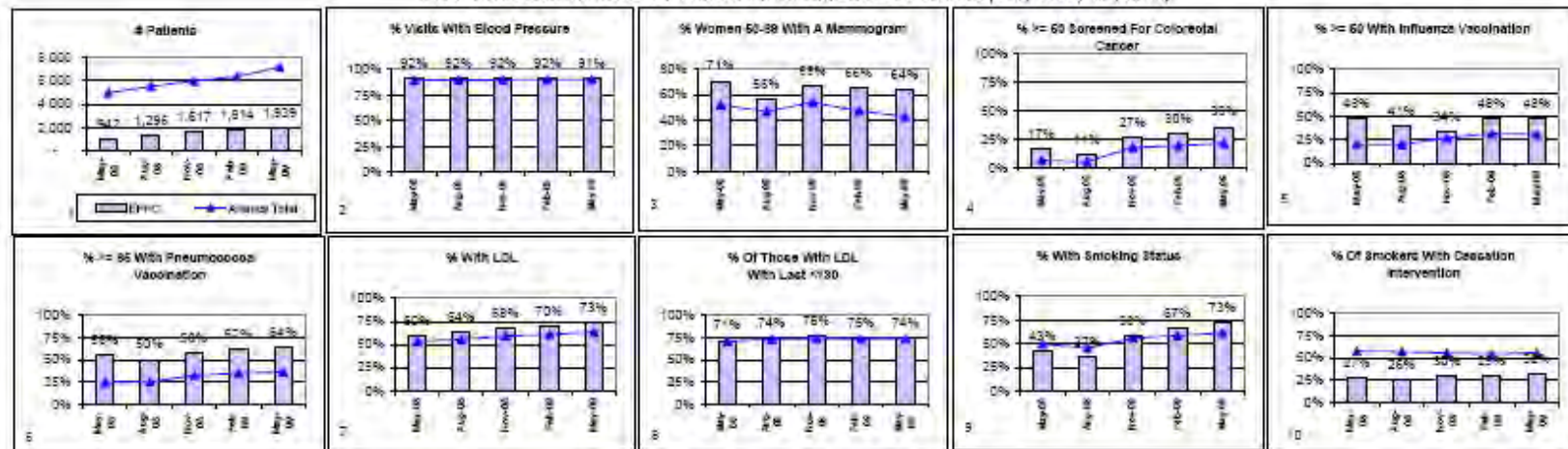


Diabetes "Dashboard" Report

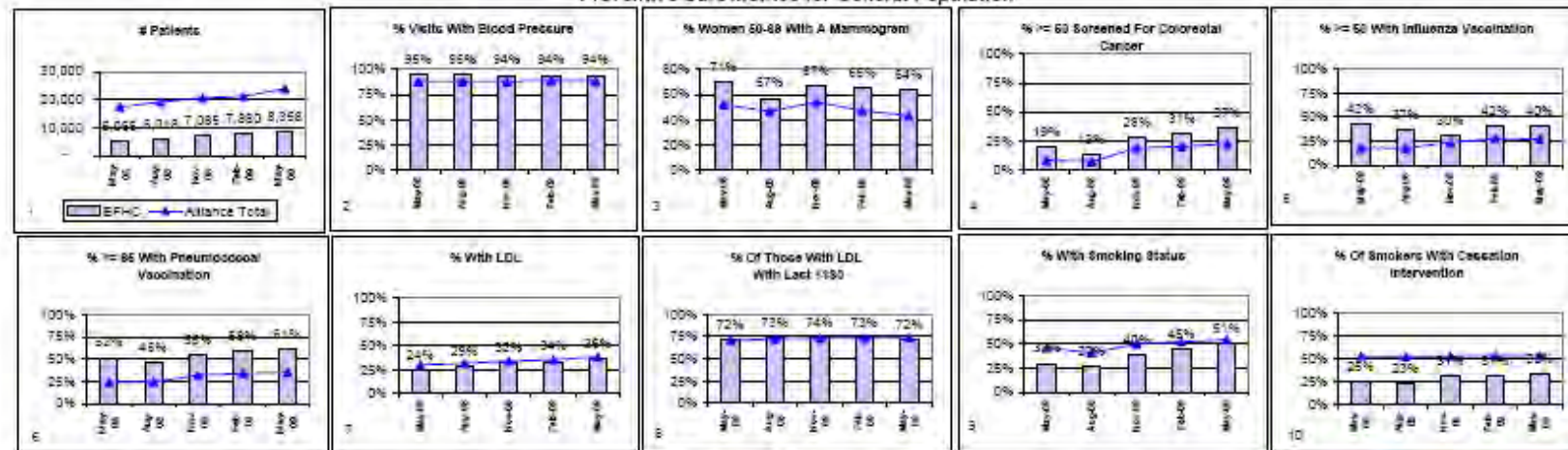
Alliance Community Health Center Health Outcomes Dashboard for the Year Ending May 2009

Note: Monthly measurements reflect 12 month rolling period
With comparison to: Alliance Total = ↔

Preventive Care Metrics for Patients with Chronic Conditions (DM, CAD, HF, HTN)



Preventive Care Metrics for General Population

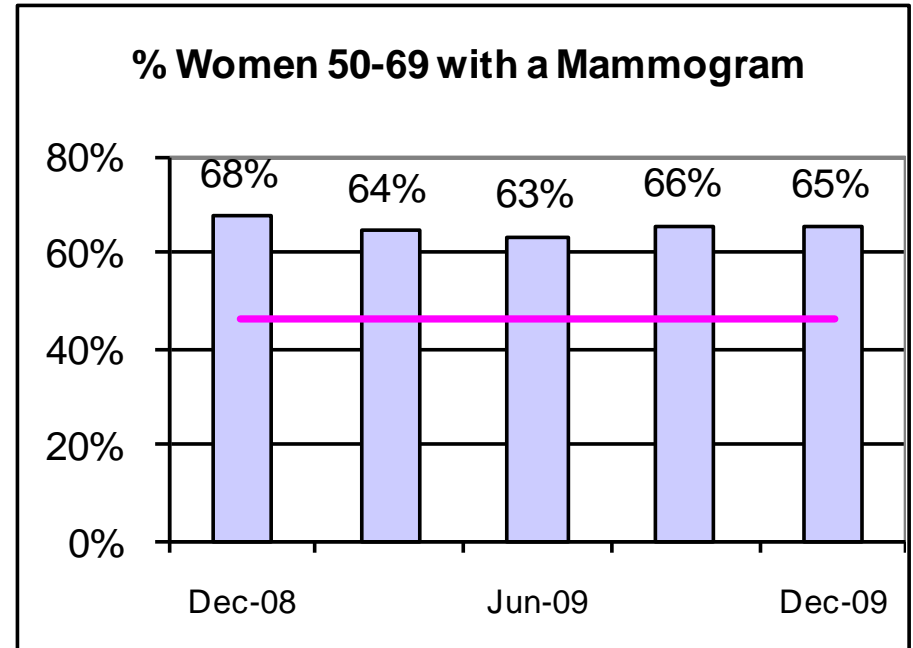
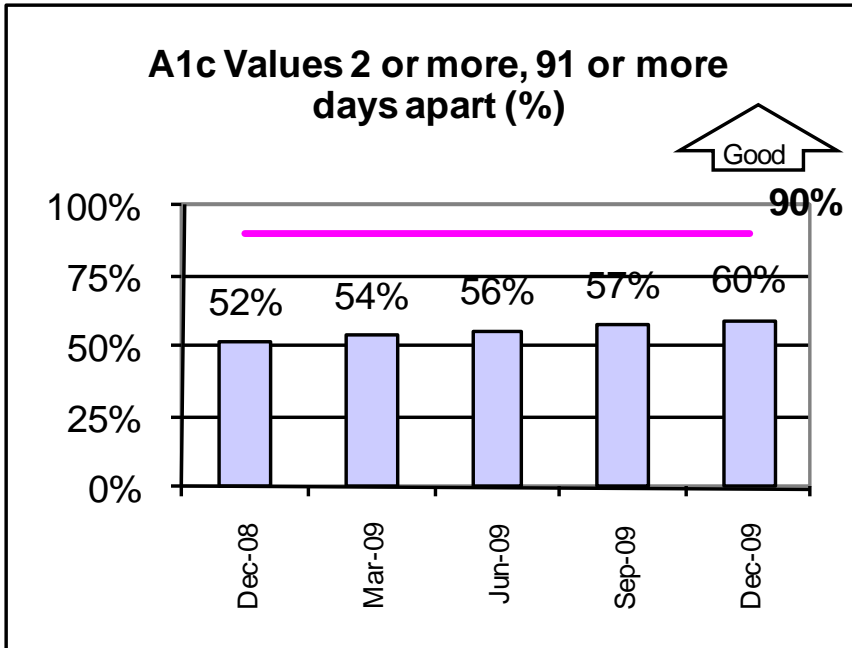


Stoplight Summary Year Ending May 2009

Variance from Comparison Group: Better than Within 5% Worse than 5%

#	Metric	Chronic Condition Patients			General Population			#	Metric	Chronic Condition Patients			General Population		
		CHC	Alliance	Var %	CHC	Alliance	Var %			CHC	Alliance	Var %	CHC	Alliance	Var %
1	# Patients	1,939	7,171		8,358	23,976		8	% >= 65 With Pneumo vac	63.9%	36.4%	75.5%	50.8%	35.2%	72.3%
2	% Visits With Blood Pressure	91.3%	90.0%	1.4%	93.9%	88.3%	6.4%	7	% w/LDL	73.2%	63.6%	15.2%	38.4%	38.3%	50.1%
3	% Women 50-59 With A Mammogram	64.2%	43.0%	49.1%	63.7%	43.5%	46.0%	8	% w/LDL With Last <130	74.1%	73.9%	0.3%	72.5%	73.5%	-1.5%
4	% >= 60 Screen for Colorectal Cancer	35.9%	21.5%	67.4%	36.6%	22.3%	63.9%	9	w/Smoking Status	73.1%	61.6%	19.7%	50.8%	54.5%	7.3%
5	% >= 60 With Influenza Vax	47.5%	30.2%	56.5%	40.4%	27.0%	49.6%	10	% Smokers w/ Cessation Interv	32.5%	55.6%	-41.2%	33.0%	63.1%	-47.0%

All Staff Reports



How to best share performance data with all staff?
How often?



Individual Provider Report Example (tabular)

Health Registry Report (Diabetes)

Provider:		A MD		B MD		C MD		D MD		E MD		F MD	
Item		Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
1.	Patients												
	A. Total Patients Included	156	100%	171	100%	98	100%	48	100%	102	100%	74	100%
8.	Diabetes Type												
	A. Type 1	2	1.28%	0	0%	1	1.02%	0	0%	1	0.98%	0	0%
	B. Type 2	82	52.56%	111	64.91%	53	54.08%	2	4.17%	26	25.49%	4	5.41%
	C. Gestational	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
	D. Impaired Glucose Tolerance	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
10.	Blood Pressure												
	A. Patients with BP checked	155	99.36%	171	100%	98	100%	47	97.92%	100	98.04%	72	97.3%
	1. Average Systolic	134		134		126		128		135		133	
	2. Average Diastolic	78		78		73		74		81		81	
	3. >= 135/85	76	49.03%	82	47.95%	31	31.63%	17	36.17%	58	58%	42	58.33%
	4. >= 140/90	49	31.61%	61	35.67%	23	23.47%	10	21.28%	40	40%	31	43.06%
	5. < 135/85	79	50.97%	89	52.05%	67	68.37%	30	63.83%	42	42%	30	41.67%
	6. < 130/80	48	30.97%	64	37.43%	57	58.16%	23	48.94%	20	20%	19	26.39%
11.	Education												
	A. Diabetes (i2i)												
	1. Received	64	41.03%	108	63.16%	89	90.82%	21	43.75%	40	39.22%	9	12.16%
	2. Referred	0	0%	3	1.75%	0	0%	0	0%	0	0%	0	0%
	3. Received or Referred	64	41.03%	108	63.16%	89	90.82%	21	43.75%	40	39.22%	9	12.16%
	4. Refused	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
16.	Self-Management Goals												
	A. Check Home Sugars	98	62.82%	123	71.93%	58	59.18%	6	12.5%	32	31.37%	6	8.11%
	B. Cut Down on Carbs	34	21.79%	70	40.94%	25	25.51%	5	10.42%	11	10.78%	3	4.05%
	C. Diabetes Goal Set	111	71.15%	146	85.38%	77	78.57%	16	33.33%	49	48.04%	9	12.16%
19.	Cholesterol (Total)												
	A. Patients with test	104	66.67%	132	77.19%	85	86.73%	37	77.08%	56	54.9%	49	66.22%
	1. Average	172.14		170.45		178.81		191.3		186.45		196.29	
20.	HbA1c												
	A. Patients with test	130	83.33%	156	91.23%	84	85.71%	39	81.25%	74	72.55%	56	75.68%
	1. Average	7.44		7.31		7.84		7.79		7.59		8.06	
	B. Patients with 2 or more tests 91+	73	46.79%	97	56.73%	59	60.2%	14	29.17%	36	35.29%	13	17.57%

• Example of annual diabetes measures break by provider



Individual Provider Report (dashboard)

Health Outcomes by Provider					
EHR Patients January - December 2007					
Smith MD, John			Community Health Center		
Measure	Dec-07 Smith MD, John	Dec-07 CHC	Stoplight Analysis		
			Variance from CHC	Dec-07 Alliance	Variance from Alliance
Variance: Better than (Green), Within 5% (Yellow), Worse than (Red)					
HDC Diabetes Metrics					
1 Diabetes Patients	49	401		1,880	
2 A1c Values 2 or more, >=91 days	65%	50%	-15.4%	47%	-18.1%
3 Average A1c Value	7.8	7.8	0.0%	7.9	-0.1%
4 A1c value 1 or more (%)	90%	69%	-21.1%	69%	-21.1%
5 Self Management Goal (%)	35%	38%	3.5%	12%	-23.0%
6 ACE Inhibitor or ARB (%)	87%	78%	-9.0%	70%	-17.0%
7 Statins (%)	79%	61%	-18.0%	52%	-27.0%
8 Blood Pressure Value (%)	100%	100%	0.0%	100%	0.0%
9 Blood Pressure less than 130/80 (%)	37%	28%	-9.0%	41%	-4.0%
10 LDL value (%)	82%	73%	-9.0%	60%	-22.0%
11 LDL less than 100 (%)	50%	52%	2.0%	45%	-5.0%
Preventive Care Metrics for General Population					
1 # Patients	212	2,675		14,637	
2 % Visits With Blood Pressure	78%	73%	-5.0%	68%	-10.0%
3 % Women 50-69 With A Mammogr	83%	68%	-15.0%	55%	-28.0%
4 % >=50 Screen for Colorectal Canc	3%	9%	6.0%	8%	-5.0%
5 % >=50 With Influenza Vax	39%	18%	-21.0%	18%	-21.0%
6 % >=65 With Pneumo Vax	87%	59%	-28.0%	26%	-61.0%
7 % w/LDL	65%	44%	-21.0%	30%	-35.0%
8 % w/LDL With Last <130	80%	72%	-8.0%	68%	-12.0%
9 % w/Smoking Status	60%	58%	-2.0%	44%	-16.0%
10 % Smokers w/ Cessation Interv	41%	56%	15.0%	48%	-7.0%

Why is this type of report important? Where and how often should you use?



Daily Report Example

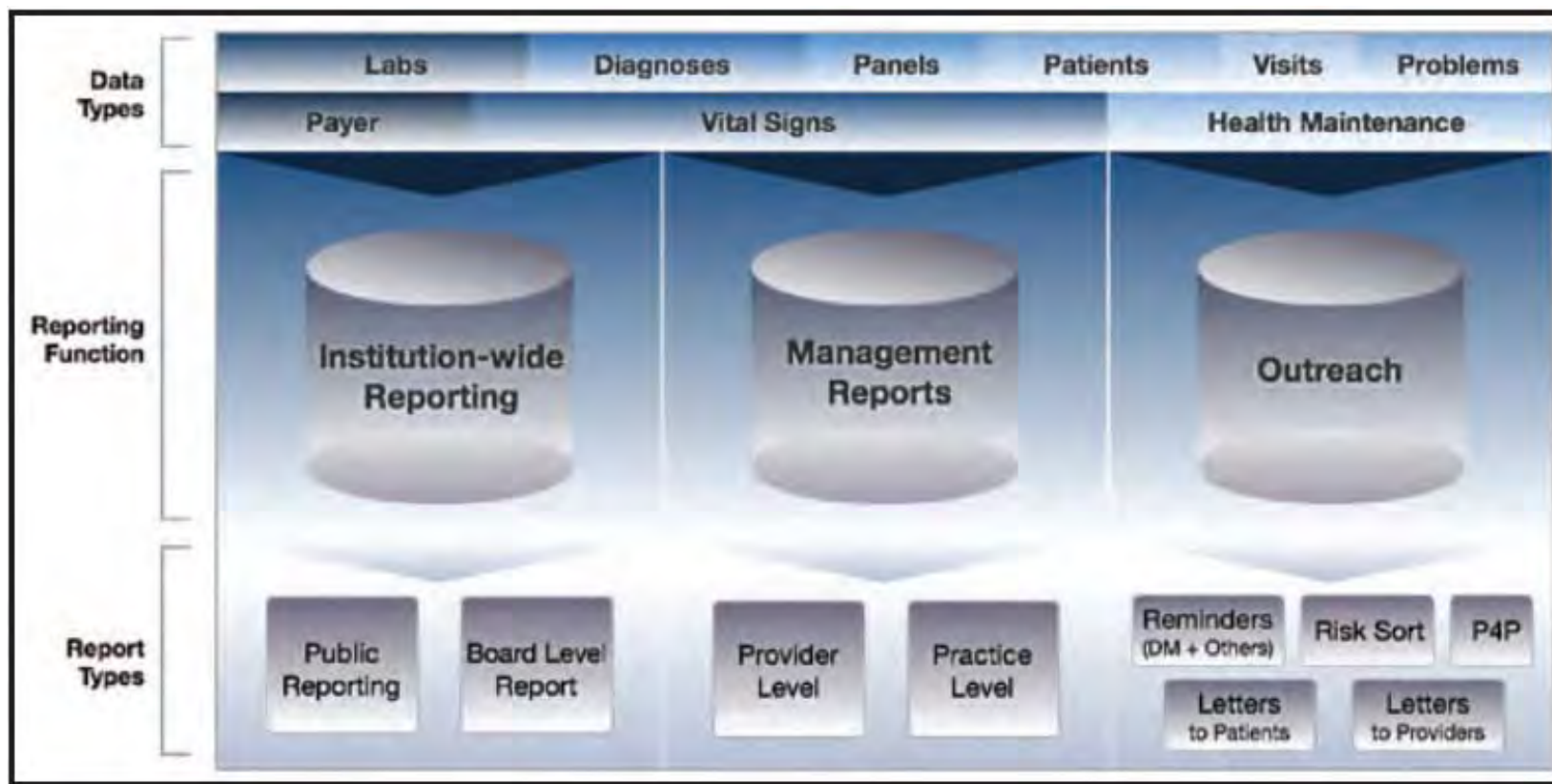
Patient Search Results (ADULT SERVICES REPORT - ~~Continued~~)

Name	ID	Age	Gender	Pneumovax (i2i) (Last Date)	Flu (i2i) (Last Date)	Tetanus (i2i) (Last Date)	Tdap (Last Date)	Mammogram Screening (Last Date)	Pap (i2i) (Last Date)	Stool Guaiac (i2i) (Last Date)	LastVisitDOS
[REDACTED]	[REDACTED]	58	F	10/4/2010	10/13/2009	7/22/2010	7/22/2010	12/4/2009	11/14/2006	8/28/2006	3/9/2011
[REDACTED]	[REDACTED]	36	F		10/14/2010				3/30/2011		3/21/2011
[REDACTED]	[REDACTED]	76	F	11/9/2009	11/9/2009						3/28/2011
[REDACTED]	[REDACTED]	50	M				3/10/2011				3/21/2011
[REDACTED]	[REDACTED]	82	F	8/25/2010		8/25/2010	8/25/2010				4/17/2011
[REDACTED]	[REDACTED]	69	M	2/3/2011	10/13/2010					1/22/2011	5/2/2011
[REDACTED]	[REDACTED]	28	F		10/27/2009				8/28/2009		5/6/2011
[REDACTED]	[REDACTED]	50	M		2/21/2011						3/10/2011
[REDACTED]	[REDACTED]	69	F		10/14/2009						4/27/2011
[REDACTED]	[REDACTED]	59	F	3/25/2002	10/7/2010	10/7/2010	10/7/2010	2/25/2011	2/27/2004	3/6/2003	3/8/2011
[REDACTED]	[REDACTED]	71	M	10/20/2005	10/21/2010						10/21/2010
[REDACTED]	[REDACTED]	65	F	10/29/2003	10/14/2010	12/30/2004		3/15/2010	2/22/2010	2/22/2007	5/9/2011
[REDACTED]	[REDACTED]	59	M								5/6/2011
[REDACTED]	[REDACTED]	65	M		11/13/2008						9/10/2010
[REDACTED]	[REDACTED]	52	F		11/17/2010	1/1/2002		4/25/2011	10/22/2009	2/26/2011	2/26/2011
[REDACTED]	[REDACTED]	52	F					2/24/2011	1/21/2011		5/9/2011
[REDACTED]	[REDACTED]	59	F		1/14/2011						5/6/2011
[REDACTED]	[REDACTED]	77	F		10/13/2010				5/5/2003		3/7/2011
[REDACTED]	[REDACTED]	51	F	1/22/2010	1/22/2010	9/20/2010	9/20/2010	10/6/2009	9/3/2009	3/5/2011	3/24/2011
[REDACTED]	[REDACTED]	67	F		10/28/2010			10/10/2008	11/19/2007	7/23/2003	4/13/2011
[REDACTED]	[REDACTED]	54	F					4/29/2011			5/10/2011
[REDACTED]	[REDACTED]	74	F	7/30/2004	10/20/2009			12/28/2010		3/8/2011	4/14/2011
[REDACTED]	[REDACTED]	58	F		11/3/2010	11/20/2009					4/15/2011
[REDACTED]	[REDACTED]	76	M	9/2/2010	10/20/2010	9/2/2010	9/2/2010				5/14/2011

- Example of a report that is run daily by the physician for the patients scheduled for the day. Includes all preventive screening testing and those that are not up to date. The MA highlights those that need to be ordered.



Understand Stakeholder Reporting Needs



Sr. Leadership,
Board, External

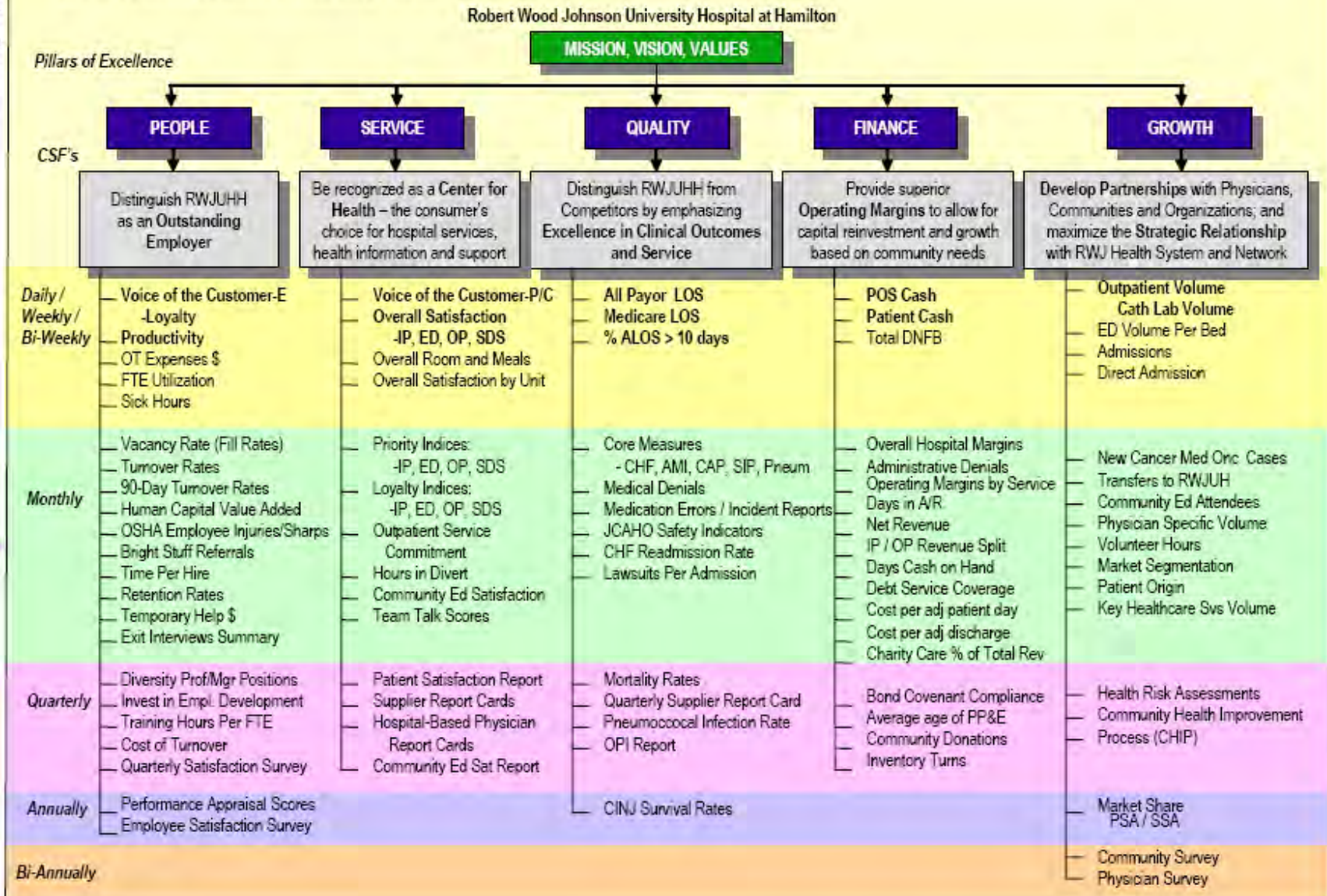
Management,
providers

Front line staff

Align Data Management with Organization Strategy

Application Summary

Figure 1.1-3 Dashboard/Balanced Scorecard Key Performance Indicators



**4. DEVELOP A DATA MANAGEMENT AND
REPORTING APPROACH THAT SUPPORTS
STRATEGY OBJECTIVES**

Data Management: The lurking variable in EHR implementation

- A critical yet sometimes under-planned priority in EHR adoption
- Heavy emphasis placed on reviewing front-end EHR database functionality and less on back-end business intelligence functionality
- Lack of data management maturity in many EHR products
- After intense EHR implementation, difficult to refocus on data management and how data will be analyzed and reported in a systematic and repeatable way
- How to consider your data management priorities pre, during and post implementation?



Data Management Considerations for EHR Implementation

Pre

- Reporting functional requirements:
- Queries, report writers, data export, performance measure computation, org, facility, and provider level detail, population health management
- Provider training on ICD9 and CPT coding to ensure clean data from go-live
- Data management skill development

During

- Data quality (e.g., interfaces)
- Sufficient preload data (e.g., office visit, lab data)
- Clinical content (e.g., structured data for performance measure numerator, denominator, exclusion criteria)

Post

- Data quality
- System utilization (e.g., flowsheets)
- Ongoing refinement of clinical content (e.g., align with evidence base and performance measures needs)
- Reports at organization, site, provider level
- Optimization (technical, content, end user)



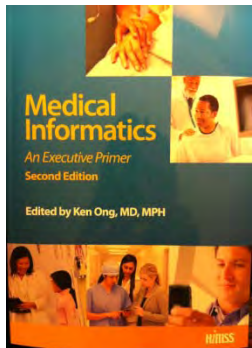
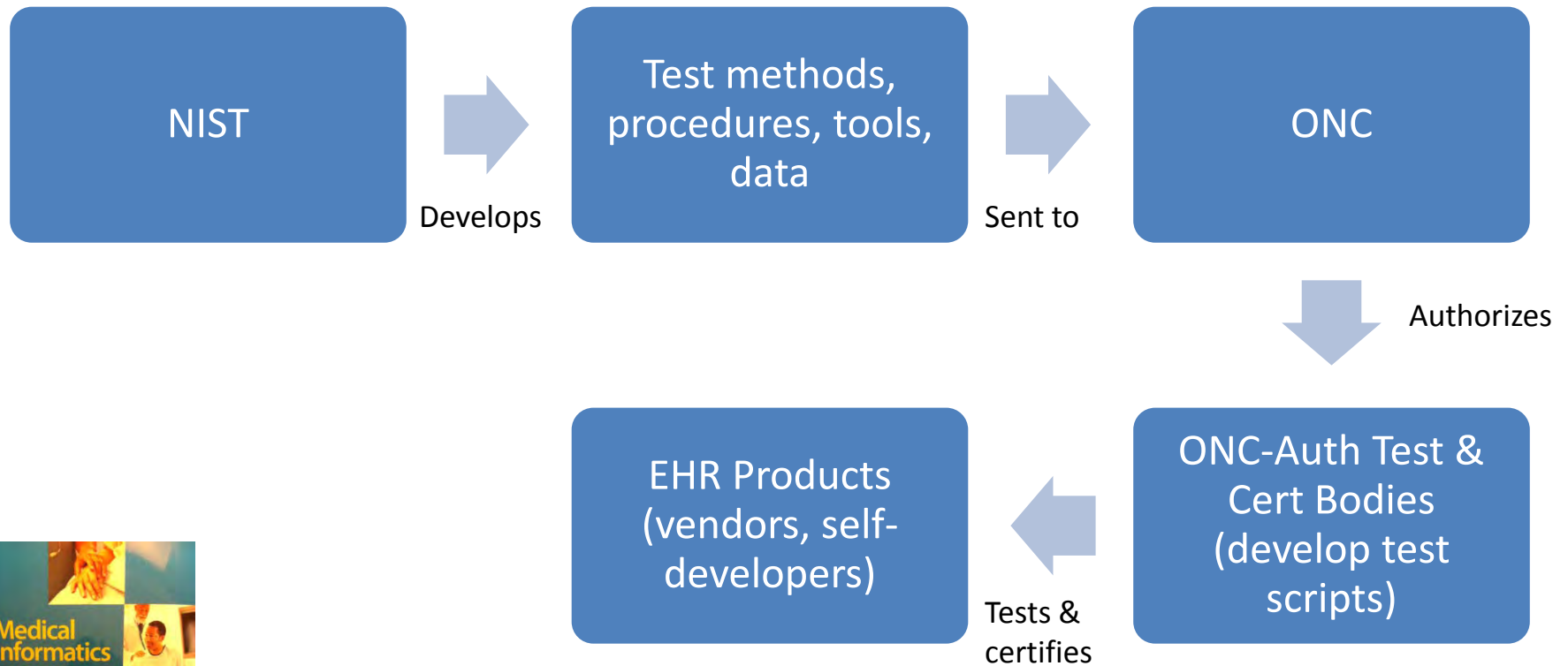
Pre Impl.: “Checklist” for EHR Vendors on Reporting Capability

- Health Industry Insights 2008 study compared various ambulatory EHRs on “fit to market” needs; Reporting/Decision Support one of multiple study areas
- Definitions used from Certification Commission for Healthcare Information Technology (CCHIT) Ambulatory EHR Certification program
- CCHIT represents minimum standards for the functionality, interoperability, and security of an EMR that are intended to provide an industry standard starting point for the evaluation
- Recognized by U.S. Department of Health and Human Services (DHHS)
- Note Meaningful Use not the same as EHR certification

Definition of 1 Rating	Definition of 2 Rating	Definition of 3 Rating
Reporting limited to canned reports or requires an additional third-party product; operational and financial reporting	Some performance-reporting capabilities; limited configurability	Full-featured performance reporting integrated with decision support to facilitate participation in internal or provider-sponsored programs such as pay for performance

How many vendors here?

Pre Impl.: Overview of Temporary EHR Certification Program





Pre Impl.: EHR Criteria for Report Generation

Criteria #	Criteria	Last mod	Comments
AM 29.01	The system shall provide the ability to generate reports of clinical and administrative data using either internal or external reporting tools.	2007	Needed for pay for performance, quality improvement activities. All data that is entered in a structured format should be individually reportable.
AM 29.02	The system shall provide the ability to generate reports consisting of all or part of an individual patient's medical record (e.g. patient summary).	2006	Report format may be plain text.
AM 29.03	The system shall provide the ability to generate reports regarding multiple patients (e.g. diabetes roster).	2007	Any disease registry might be included.
AM 29.04	The system shall provide the ability to specify report parameters (sort and filter criteria) based on patient demographic and clinical data (e.g., all male patients over 50 that are diabetic and have a HbA1c value of over 7.0 or that are on a certain medication).	2007	Minimum demographic data are age and gender.
AM 29.05	The system shall provide the ability to access reports outside the EHR application.	2006	For example, printed output, export to a file, etc.
AM 29.06	The system shall provide the ability to produce reports based on the absence of a clinical data element (e.g., a lab test has not been performed or a blood pressure has not been measured in the last year).	2009	
AM 29.07	The system shall provide the ability to save report parameters for generating subsequent reports.	2007	
AM 29.08	The system shall provide the ability to modify one or more parameters of a saved report specification when generating a report using that specification.	2008	It is acceptable if a 3rd-party reporting tool or application is used.

Sufficient functionality?



Pre Impl.: EHR Clinical Reporting Functionality Requirements

- NIST criteria require EHR to compute and submit 6 core CMS measures + 3 clinical quality measures for eligible professionals:

§170.304 (j) Calculate and submit clinical quality measures.

(1) Calculate.

(i) Electronically calculate all of the core clinical measures specified by CMS for eligible professionals.

(ii) Electronically calculate, at a minimum, three clinical quality measures specified by CMS for eligible professionals, in addition to those clinical quality measures specified in paragraph (1)(i).

(2) Submission. Enable a user to electronically submit calculated clinical quality measures in accordance with the standard and implementation specifications specified in §170.205(f).

Pre Impl.: Coding Compliance Training for Providers

- Consider a training session for all providers that incorporates an audit of current documentation and provides feedback to individuals on documentation strengths and weaknesses
- The following is an example of a coding scoring framework used by a CHC to assess provider coding compliance
 - “Red” issues will be typically be addressed by an EHR
 - “Yellow” issues may be addressed if code checking functionality is available in EHR (e.g., EMA advisor)

Green	Compliant	PERFECT!
Yellow	Clinical Compliance Issues	Chart forms/lists not up-to-date No test results Wrong ICD9 diagnosis coding UNDER coding of Visit Code UP coding of Visit Code
Red	Financial Compliance Issues	Missing Date of service, patient demographic or time Missing provider signature or illegible Not billable service (lab, VP, vaccine etc.) No record of service

During Implementation: Educate on data fields that compute performance measures & use to guide setup

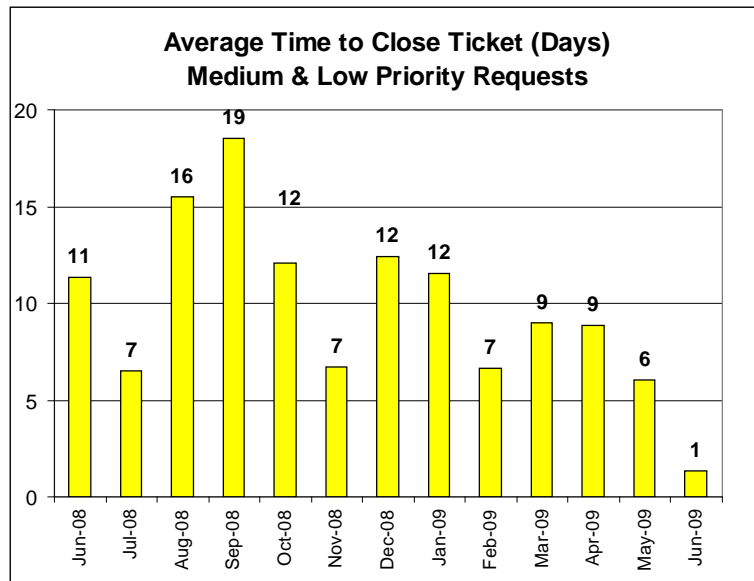
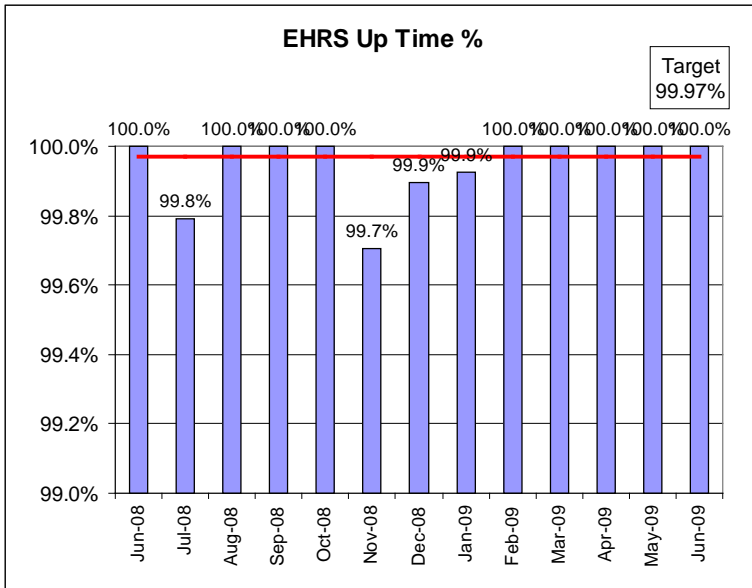
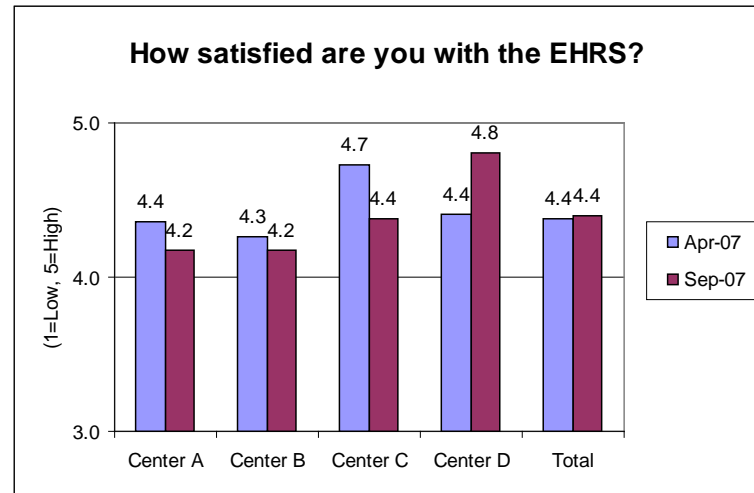
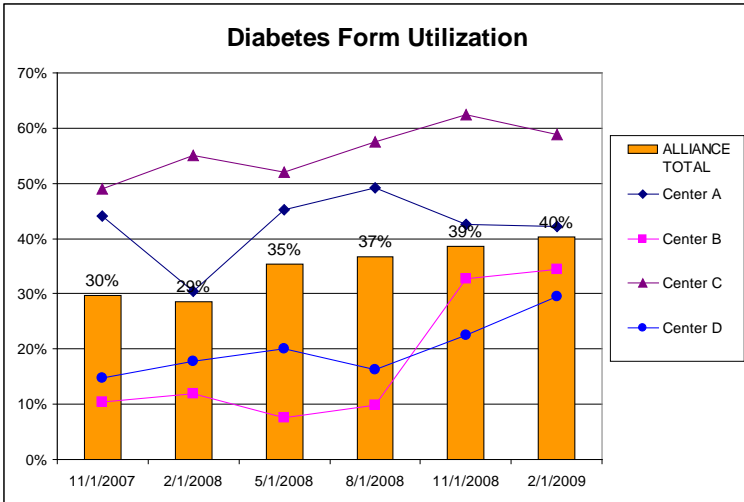
Core & Menu Set		
Use CPOE for med orders	More than 30% of unique patients with at least one medication in their medication list have at least one medication order entered using CPOE	<p><u>Numerator</u>: Number of unique patients with at least one medication in their medication list seen by an EP that have at least one medication order entered using CPOE</p> <p><u>Denominator</u>: Unique patients with at least one medication in their medication list</p>
Record demo: pref lang, ins type, gender, race, ethnicity, DOB	More than 50% of all unique patients* seen by the EP have demographics recorded as structured data	<p><u>Numerator</u>: Number of unique patients* seen in the reporting period with <u>all</u> required demographic elements recorded.</p> <p><u>Denominator</u>: Number of unique patients* seen during reporting period.</p>
Send reminders to patients per patient preference for preventive/follow up care	More than 20% of all unique patients 65 years or older or 5 years old or younger were sent an appropriate reminder during the EHRs reporting period	<p><u>Numerator</u>: Number of unique patients 65 years or older or 5 years old or younger seen during reporting period who are provided preventive/follow-up care reminders.</p> <p><u>Denominator</u>: Number of unique patients 65 years or older or 5 years old or younger seen during reporting period.</p>

*Unique patient - means that even if a patient is seen multiple times during the reporting period they are only counted once.

During Implementation: Educate on data fields that compute performance measures & use to guide setup

Core Set: Clinical		
NQF 0013	Hypertension: Blood Pressure Measurement	Percentage of patient visits for patients aged 18 years and older with a diagnosis of hypertension who has been seen for at least 2 office visits, with blood pressure (BP) recorded
NQF 0028	Preventive Care and Screening Measure Pair: a. Tobacco Use Assessment, b. Tobacco Cessation Intervention	Percentage of patients aged 18 years and older who have been seen for at least 2 office visits who were queried about tobacco use one or more times within 24 months. B. Percentage of patients aged 18 years and older identified as tobacco users within the past 24 months and have been seen for at least 2 office visits, who received cessation intervention.
NQF 0421 PQRI 128	Adult Weight Screening and Follow-up	Percentage of patients aged 18 years old and older with a calculated BMI in the past six months or during the current visit documented in the medical record AND if the most recent BMI is outside parameters, a follow-up plan is documented.
Alternate Core Set: Clinical		
NQF 0059 PQRI 1	Diabetes: HgbA1c Poor Control	Percentage of patients 18 - 75 years of age with diabetes (Type 1 or 2) who had hemoglobin A1c >9%
NQF 0064 PQRI 2	Diabetes: LDL Mgmt and Control	Percentage of patients 18 - 75 years of age with diabetes (Type 1 or 2) who had LDL-C <100 mg/dl
NQF 0061 PQRI 3	Diabetes: BP Mgmt	Percentage of patients 18 - 75 years of age with diabetes (Type 1 or 2) who had blood pressure <140/90 mmHg

Post Go-Live: Assess System Utilization, End User Perception, Technology Support



In Summary: Data management transition is not a discrete process

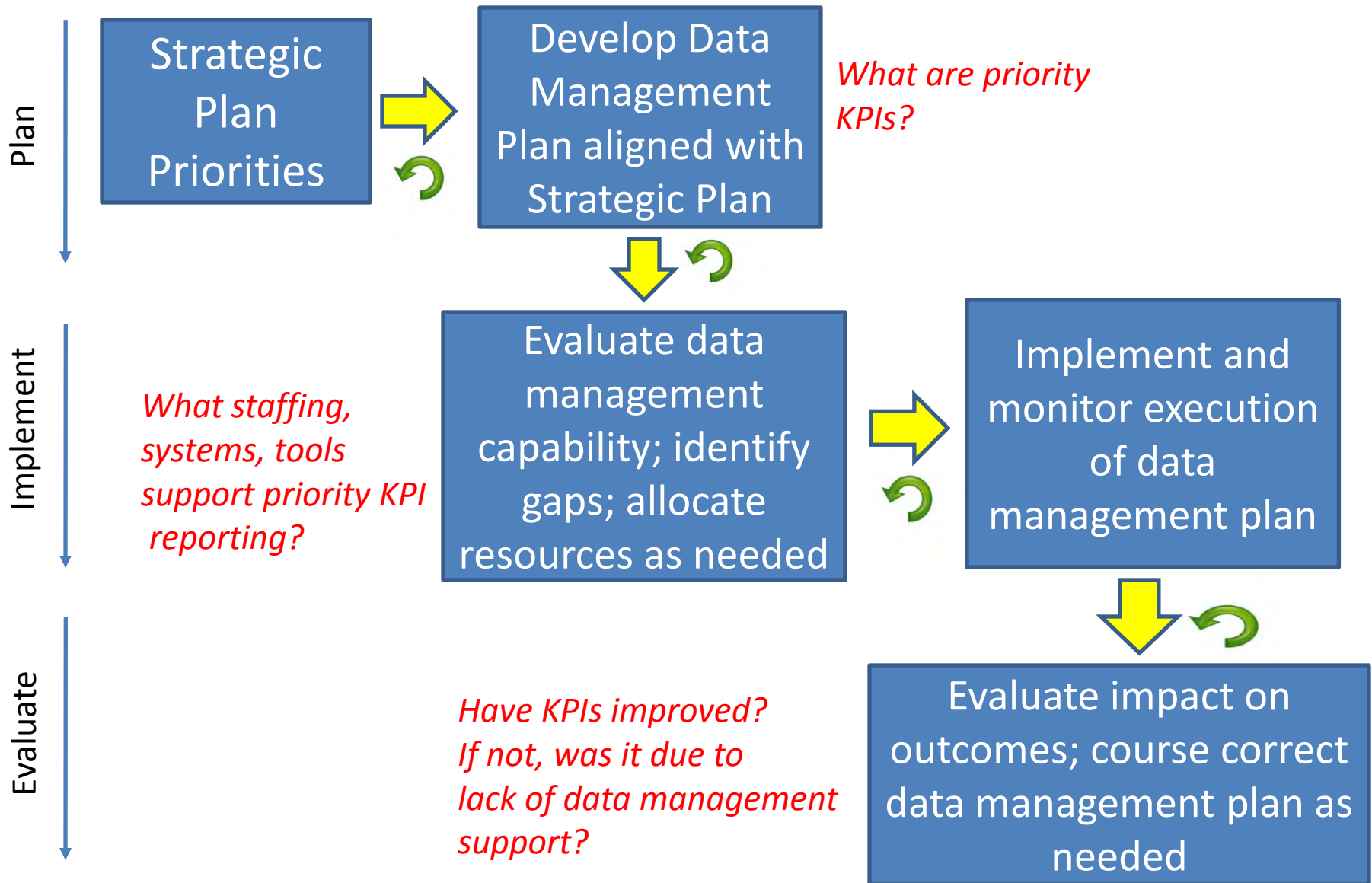
Answer:

1. EHR queries
2. EHR BI platform
3. Database application
4. PM reports
5. CoCasa (CDC registry)
6. PECS (BPHC Collaborative registry)
7. CareWare (HRSA registry)
8. Chart audits
9. Excel dashboards

Question:



Data Management Roadmap



**GROUP BREAKOUT SESSION I:
ALIGNING ORGANIZATION STRATEGY AND DATA
MANAGEMENT STRATEGY**



Data Management *Objectives* for EHR Implementation

Pre

- Ensure EHR selection process includes review for compliance with MU and known gaps; reporting capability for strategic, operational, and population health management
- Ensure all staff are trained on front end data quality issues (e.g., coding and field populating compliance) and back end performance measures
- Ensure adequate data management skill development to utilize new EHR reports and analytic tools

During

- Ensure data quality of all preload data (e.g., lab interfaces) for back end performance reporting needs (e.g., # visits in past 1-3 years) for priority measures
- Clinical content is informed by evidence base for priority disease conditions (e.g., structured content for flowsheets)

Post

- 0-6 months: System utilization is tracked at site and provider level (e.g., use of flowsheets)
- 3+ months: health outcomes reports at organization, site, provider level
- Periodic end user survey to understand and prioritize optimization efforts
- Optimization Work List is reviewed and prioritized monthly



Data Management Plan

Vision Statement

Strategy

Stage	Objectives	Measures
Pre		
During		
Post		

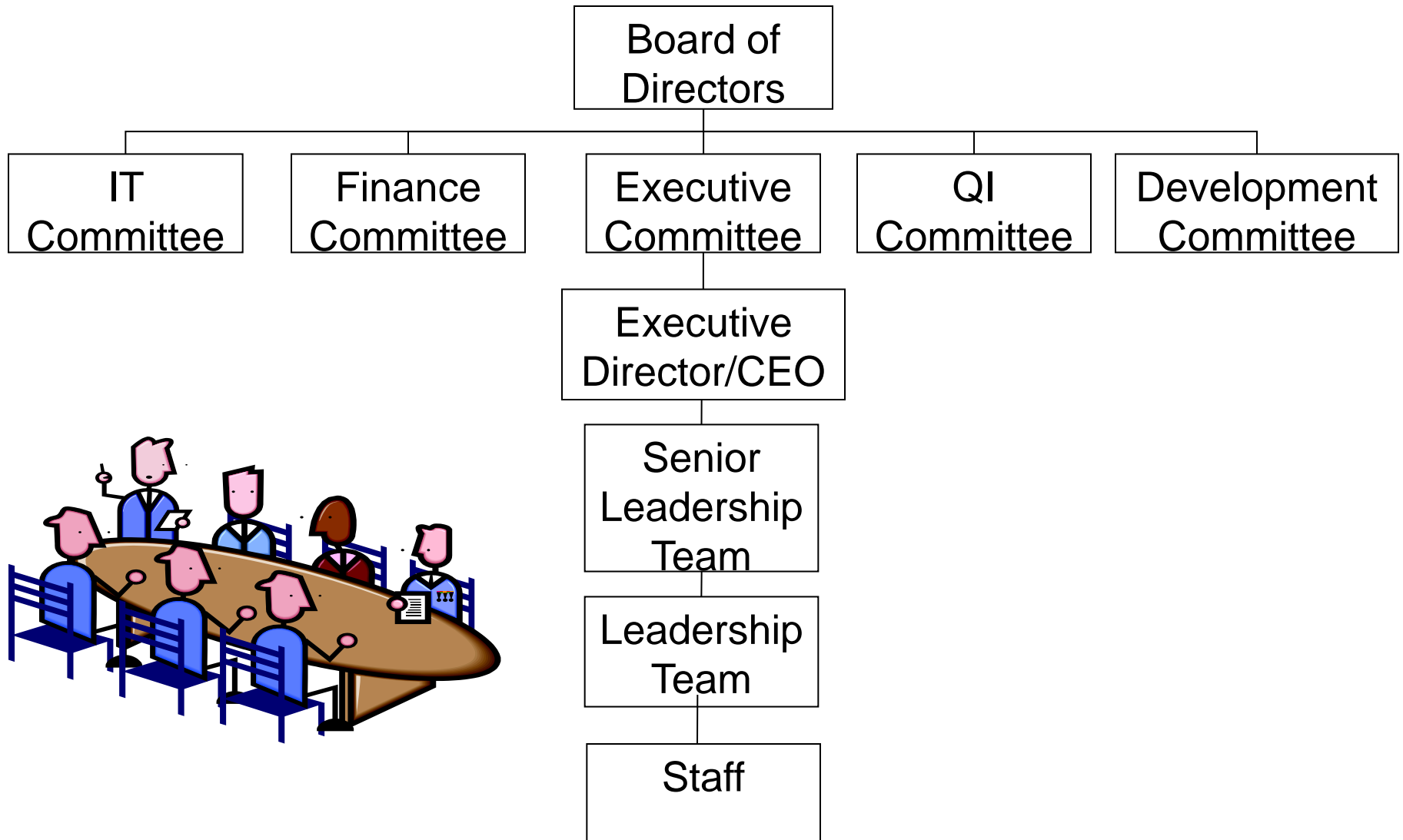
**5. CREATE ACCOUNTABILITY FOR ACHIEVING
PERFORMANCE OUTCOMES AMONG LEADERS,
PROVIDERS AND STAFF**

Accountability for Outcomes

- A measurable Strategic and Operating Plan is the main reference point for accountability in outcomes achievement
- Need alignment of goals between governance, leadership, management, and staff
- Assign responsibility for specific strategy objectives and goals to appropriate governance and management committees (e.g., clinical quality, finance, IT)
- Incorporate performance goals and incentives into board, leadership, and staff performance management plans and reviews; incorporate goals into provider contracts



Leadership Structure Accountability



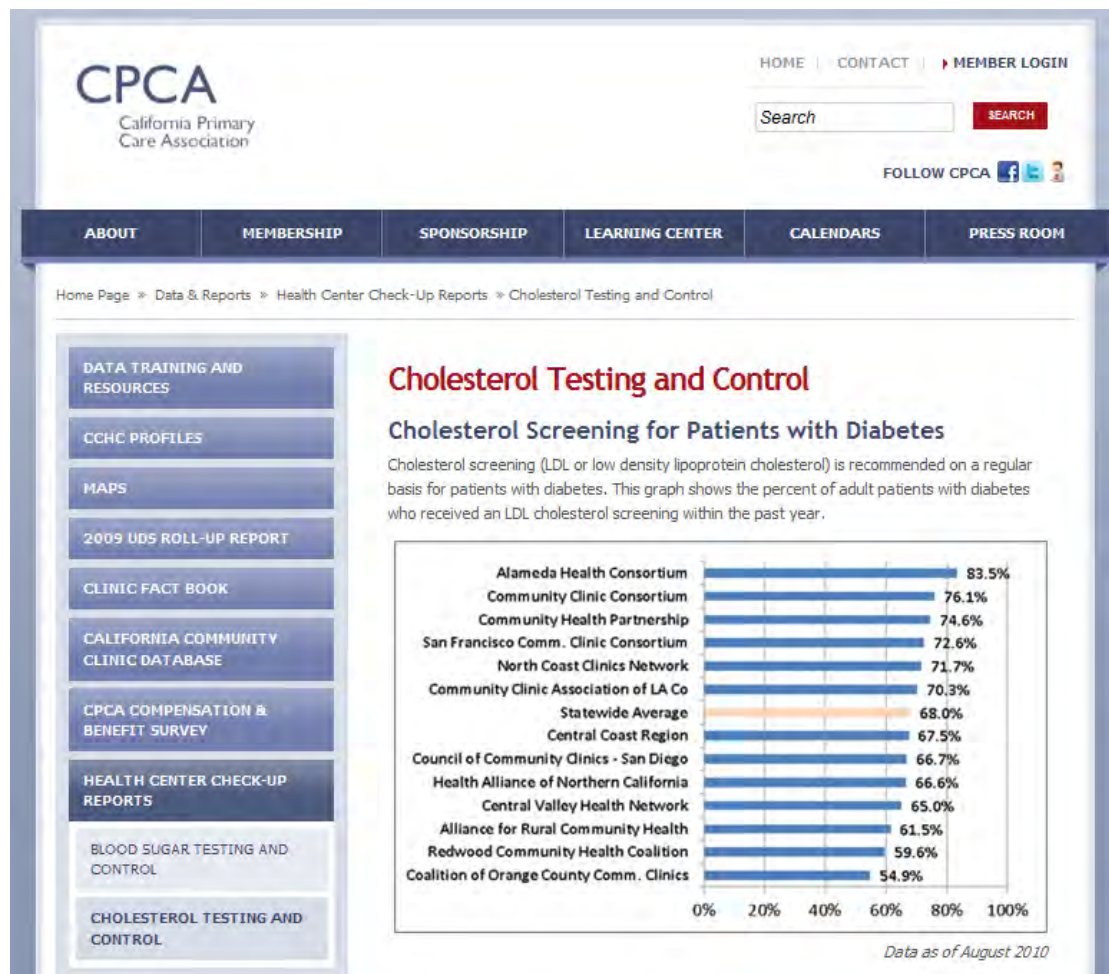
Review of Performance Data in Leadership and Staff Meetings

- Review data
 - recognize achievements
 - scan trends
 - identify opportunities
- Prioritize interventions
- Establishment goals for improvement
- Assignment responsible for goal achievement
- Allocate appropriate resources to achieve goal



Public Accountability

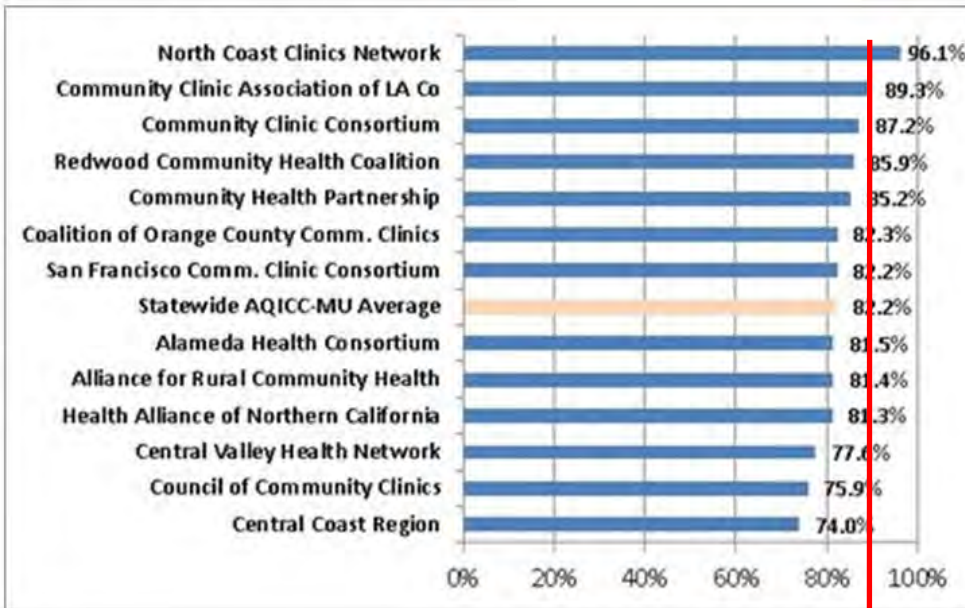
- How to demonstrate transparency of performance data both internally and externally through public reporting?



AQICC-MU Results

CPCA “Health Center Check-up Reports” ¹

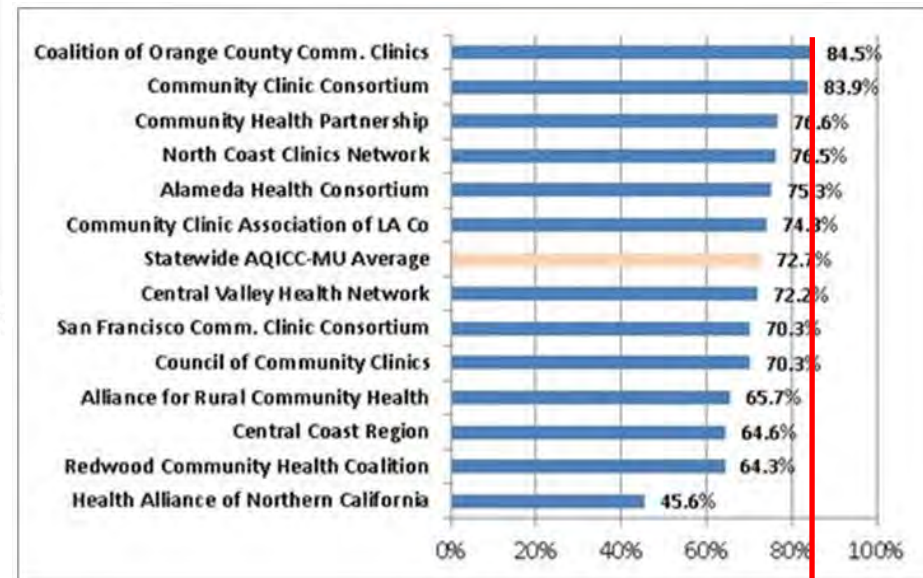
% Adult Diabetics with HbA1c in Past Year



Data as of February 2011

89%
National
Benchmark ²

% Adult Diabetics with LDL in Past Year



Data as of February 2011

85%
Nat'l BM ²

¹ <http://www.cPCA.org/index.cfm/data-reports/health-center-check-up-reports/>

² <http://www.ncqa.org/> 2010 State of Health Care Quality Report, commercial and medicare patients

**GROUP BREAKOUT SESSION II:
DATA / PERFORMANCE MEASUREMENT CASE
STUDIES ON MEANINGFUL USE**



Desired Outcomes

- Demonstrate data management considerations and challenges at different stages of EHR implementation that relate to Meaningful Use requirements.
- Challenge participants to critically assess data management issues, develop solutions and interventions, and evaluate effectiveness of interventions.

Group Breakout Session Case Studies

Helping Hands Health Center recently acquired a new EHR through a network service provider so they could leverage technical resources and implement technology more efficiently. The following scenarios describe various challenges they have had with data management from pre-implementation through post go-live. Read each scenario, then discuss and answer the questions provided as a group.

1. Evaluating EHR reporting capability
2. Coding compliance
3. Data management resource planning
4. Access to care – appointment availability
5. System Utilization/Meaningful Use functional measures – Med/Prob list up to date, form utilization
6. Meaningful Use clinical measures – Smoking Status & Cessation
7. Meaningful Use clinical measures – Diabetes
8. Meaningful Use clinical measures – Adult Preventive Care

1) Evaluating EHR Reporting Capability

Selected requirements for EHR reporting capability from various consumer, private and government entities are shown below.

Team discussion and analysis:

- What additional criteria or checklist would you develop to assess whether the EHR you are evaluating meets these requirements?
- What are the most common pitfalls in evaluating an EHR for reporting capability? What do you recommend to avoid these pitfalls?
- How can you best manage your vendor's reporting capability issues post-EHR implementation?

CCHIT requirements for EHR reporting capability:

The system shall provide the ability to specify report parameters (sort and filter criteria) based on patient demographic and clinical data (e.g., all male patients over 50 that are diabetic and have a HbA1c value of over 7.0 or that are on a certain medication).

NIST requirements for EHR reporting capability:

§170.304 (j) Calculate and submit clinical quality measures.

(1) Calculate.

(i) Electronically calculate all of the core clinical measures specified by CMS for eligible professionals.

"Fit to market" definition for EHR reporting:

Definition of 3 Rating

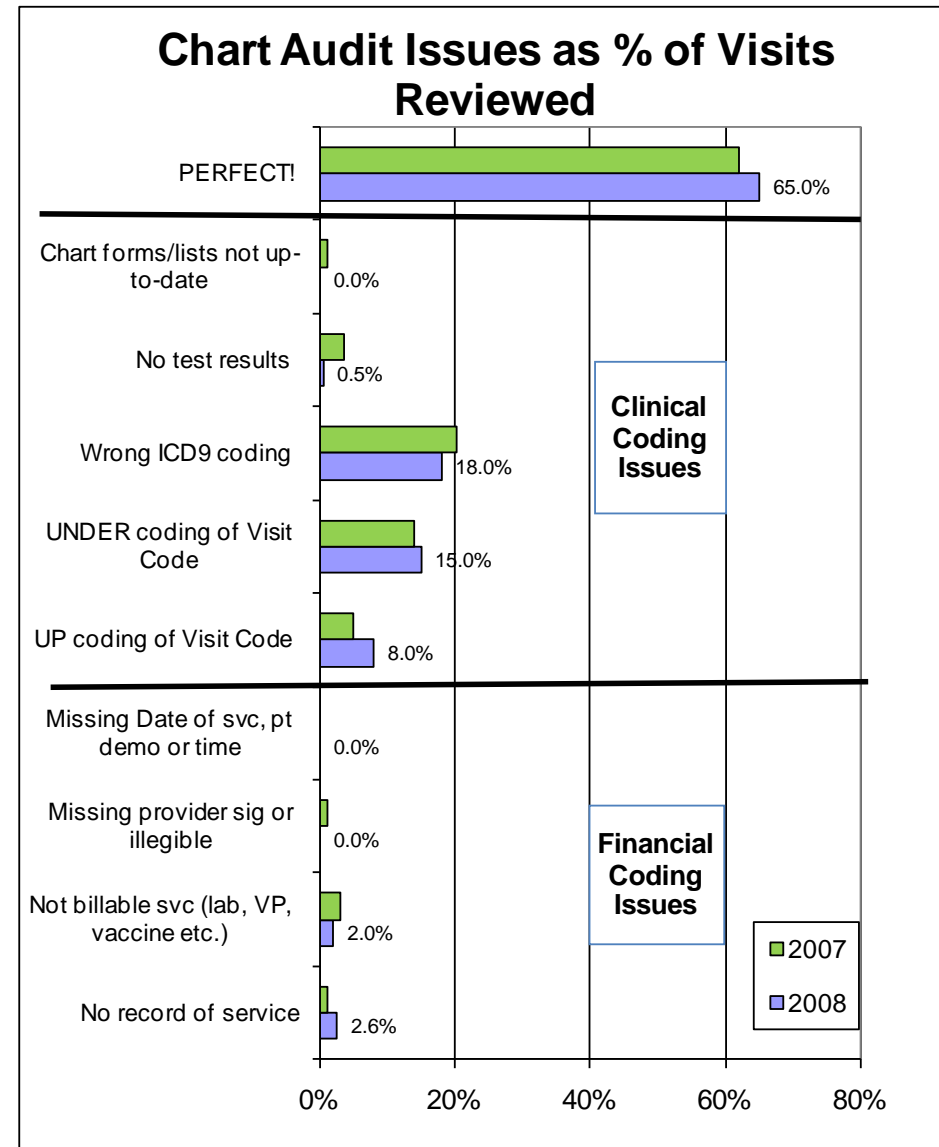
Full-featured performance reporting integrated with decision support to facilitate participation in internal or provider-sponsored programs such as pay for performance

2) Coding Compliance

Helping Hands Clinic audits over 300 charts annually to assess coding compliance. The results of the audit are down to the provider level and used to identify improvement and training opportunities. In preparing EHR implementation, the clinic wanted to review the most recent audit results and develop a special training to help ensure high quality coding in the new EHR. Results in the graph display the coding compliance results prior to EHR implementation.

Team discussion and analysis:

- Summarize results from the audit.
- Based on audit results, what training objectives would you develop? Who should the audience be?
- How would you conduct training in coordination with EHR implementation efforts?
- How would you evaluate effectiveness of training efforts?
- What coding compliance results do you expect post EHR implementation? Why?
- How should coding compliance be continuously evaluated and improved?



3) Data Management Resource Planning

Kate is the quality improvement coordinator at Helping Hands. She is responsible for collection of all clinical quality data for grants, research, and to track internal clinical quality efforts. Kate's background is in health sciences, so she understands medical processes and terminology and has supported internal clinical quality efforts well. Kate has intermediate level analytic skills and can use Excel to do basic summaries of data. Kate typically uses chart audits to manually compile data but can also use the practice management system to gather results using ICD9 or CPT codes.



Kate, QI Staff

During the months leading up to EHR go-live, Kate is expected to spend most of her time on the EHR implementation effort providing insight for system set up and reporting needs, and becoming a proficient user of the system (front end application and back end reporting). Following go-live, Kate is expected to shift her time back to clinical quality and Meaningful Use reporting.

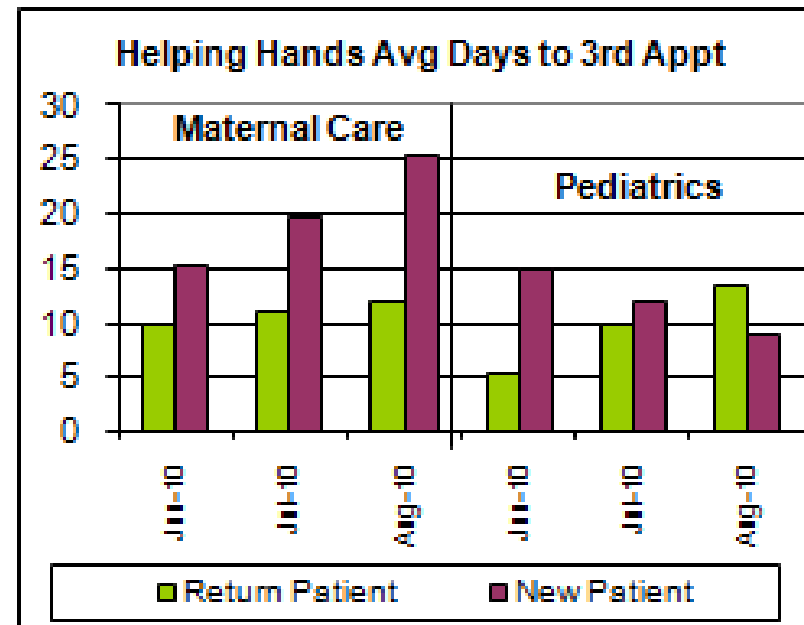
- Team discussion and analysis:
- Based on the example, what types of assessments should be done of internal data management resources at a clinic prior to EHR implementation?
- What are data management staffing, process and system challenges related to EHR implementation? What is the future impact of each?
- How would you address each challenge in preparation for EHR implementation and post go-live?
- How would you evaluate the effectiveness of your efforts?

4) Access to care – Appointment Availability

Luz is the patient care director at Helping Hands. Once a month she has her front desk staff go into the scheduling system to find the 3rd available appointment for each of the 25 providers working at the clinic. The staff find the date of the 3rd available new patient appointment and the date of the 3rd available return visit for each provider and enter it into a spreadsheet. Kate, the QI coordinator, helps with the analysis of the data to compute the average days to 3rd available appointment.

Team discussion and analysis:

- What issues might exist with integrity of the 3rd available appointment data? How would you address each of these issues in the short, intermediate and long term?
- What other ways could these data be collected and compiled? Evaluate the cost/benefit of each way against the current method.
- The following graph depicts Helping Hands average days to 3rd available appointment.
- Describe the results and speculate about cause. What additional questions do you have about the data? What recommendations would you make to improve performance of this KPI?



5) System utilization/MU functional measures

Maintain an up-to-date problem list of current and active diagnoses	More than 80% of all unique patients* seen by the EP have at least one entry or an indication of no problems are known for the patient recorded as structured data	Numerator: Number of unique patients* seen in reporting period with 1 coded entry or indication of none Denominator: Number of unique patients seen in reporting period
Maintain active medication list	More than 80% of all unique patients* seen by the EP have at least one entry (or an indication that the patient is not currently prescribed any medication) recorded as structured data	Numerator: Number of unique patients* seen in reporting period, with 1 entry on med list or an indication of 'none' if not currently prescribed any medications Denominator: Number of unique patients* seen in reporting period

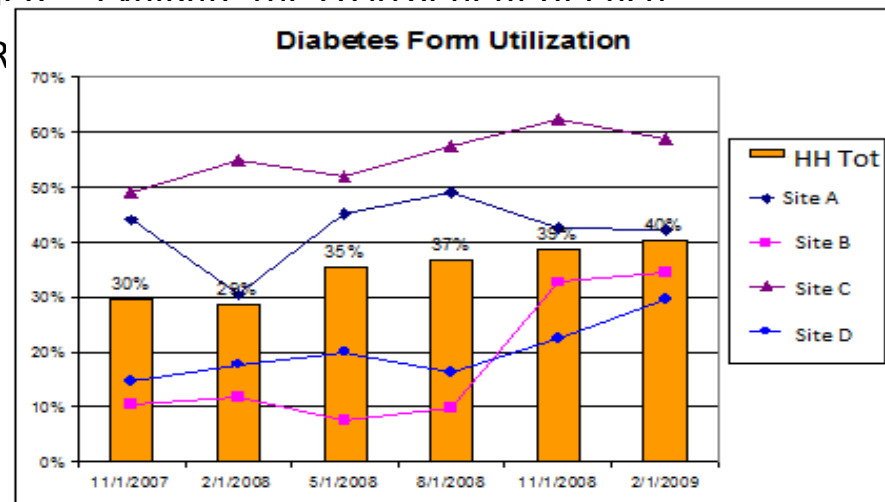
The table above defines the MU measures for up-to-date problem and med lists. The IT staff at Helping Hands are coordinating development of a program that would pull these results for all individual providers and a site summary.

Team discussion and analysis:

- What issues might exist with integrity of the data pulled from the system? How would you address each of these issues in the short, intermediate and long term?
- What are all possible ways these data could be compiled? Evaluate the cost/benefit of each

The graph to the right depicts Helping Hands diabetes EHR flowsheet utilization in the months post go-live for all eligible diabetics across four different sites.

- How would you define the numerator and denominator for this measure? Why is this an important EHR go-live measure?
- Describe the results and speculate about causes behind increases or decreases. What interventions would you make to improve results?



6) MU clinical measures - Smoking Status & Cessation

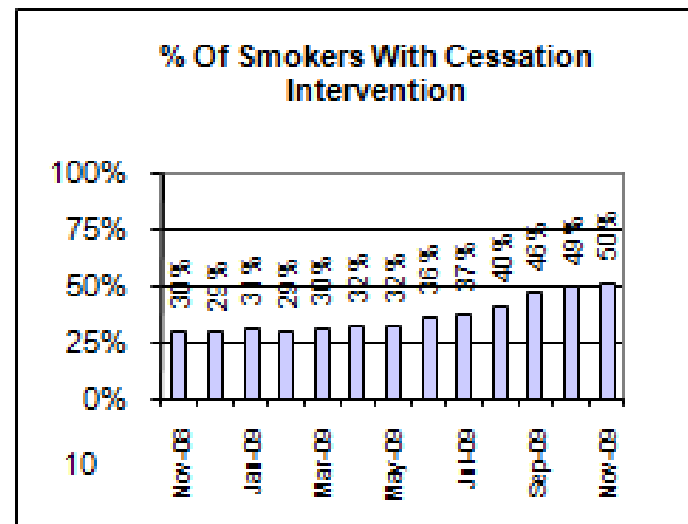
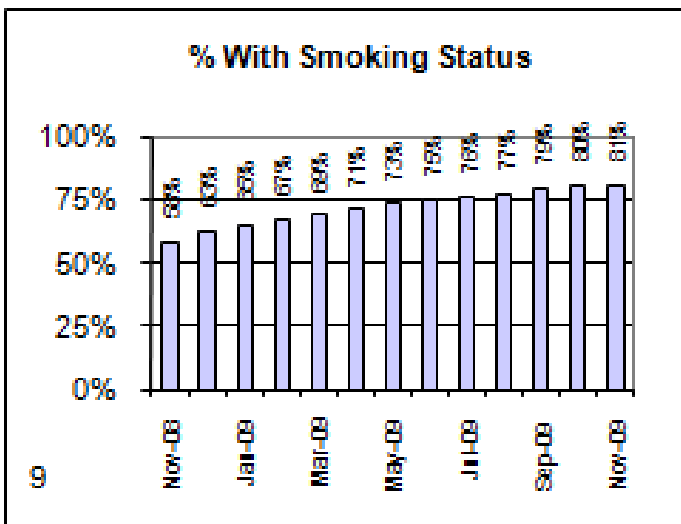
Dr. Francis, an internist at Helping Hands has long been passionate about smoking cessation among his patients, which are disproportionately affected by smoking. Previously he found it difficult to develop successful interventions for two reasons: 1) adequate documentation and 2) lack of focused and sustainable resources for interventions. With the implementation of the EHR, documentation is expected to be better structured and enable tracking of status and interventions.

Team discussion and analysis:

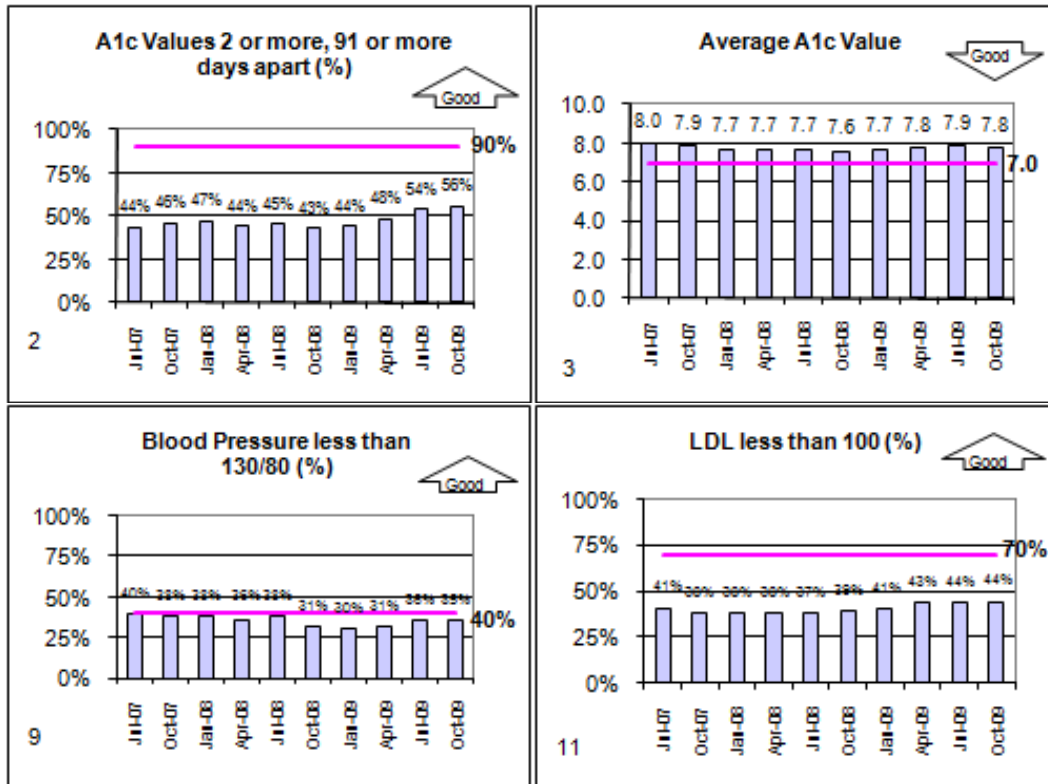
- What issues might arise with developing the clinical content for smoking documentation in the EHR? How would you address each of these issues in the short, intermediate and long term?
- Once smoking status content is developed, how should the data be analyzed effectively?

The graphs below depict progress at Helping Hands with documentation of smoking status and cessation intervention in the months following EHR implementation.

- Describe the results. What EHR questions and challenges might arise about the results?
- What interventions do you think were employed to achieve these improvements?
- What should Helping Hands work on from here?



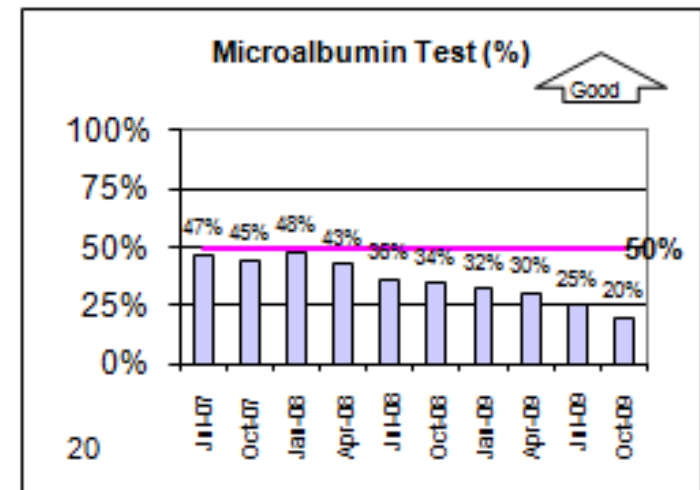
7) Meaningful Use clinical measures – Diabetes



The graphs to the left show Helping Hands diabetes results for all eligible diabetics compared again national goals in the months following EHR implementation.

Team discussion and analysis:

- Describe the results and speculate about causes behind increases or decreases in results. What additional questions do you have about the data? If these results were being presented at the next clinical quality committee meeting, what would you recommend for action items?



The graph to the right shows microalbumin measure results for all eligible diabetics.

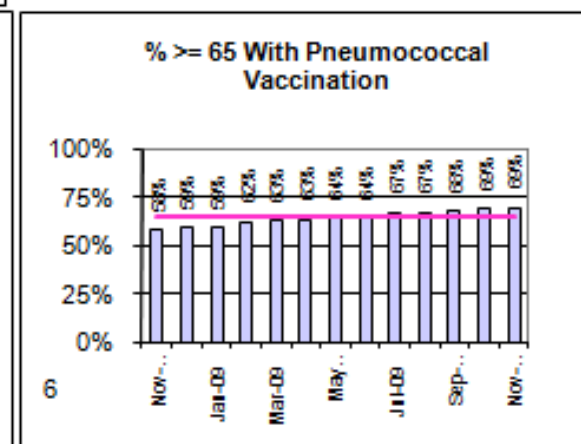
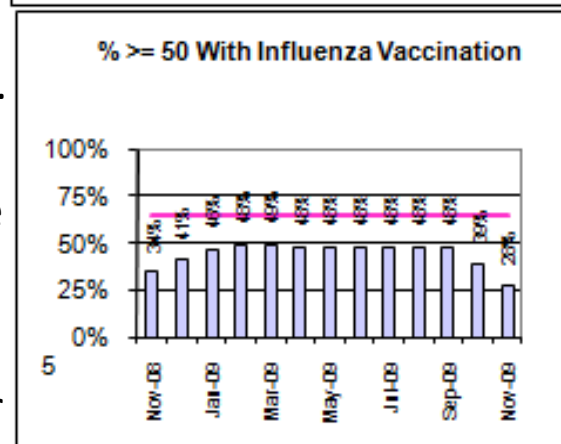
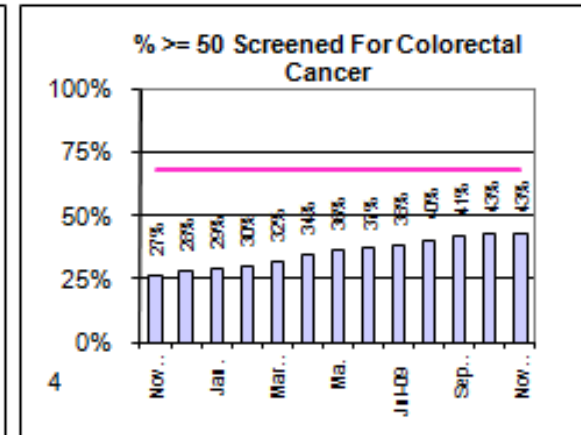
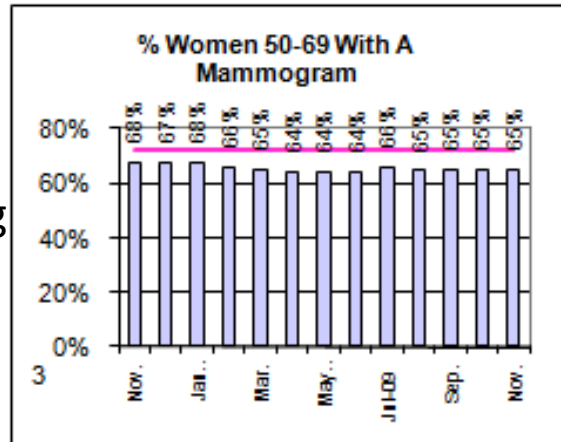
- What are all possible issues that could be causing a decline in the measure? How would you address each of these issues in the short, intermediate and long term?

8) Meaningful Use clinical measures - Preventive Care

The graphs to the right show Helping Hands preventive care results compared against national benchmarks in the months following EHR implementation.

Team discussion and analysis:

- Describe the results and speculate about causes behind increases or decreases in results.
- What EHR questions and challenges might arise about the results?
- How should goals be set?
- What would you recommend for action items with these data?
- If these results were being used to plan clinical quality priorities for the upcoming year, what would your recommendations be? Why?
- How can results be used to improve performance on these measures?
- How can results be used to inform EHR optimization efforts?



ADDITIONAL DATA MANAGEMENT CASE STUDIES

Baldrige Data Management Examples

- The examples on the following slides demonstrate attributes of good data management
- Examples come from a Baldrige CHC case study and from a CHC Network
- Examples demonstrate data management for:
 - Health Outcomes
 - Customer/Patient focus
 - Workforce
 - Process
 - Financial
 - Technology

Baldrige CHC - Health Outcome KPIs

Figure 7.1-3a Cancer: Screening for Breast Cancer

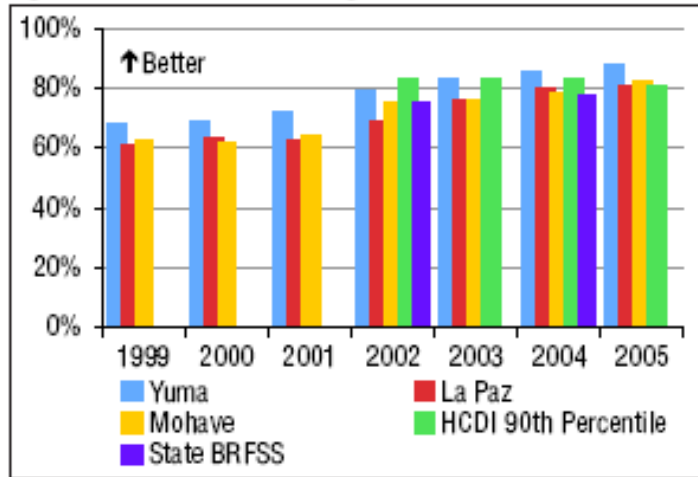


Figure 7.1-6 Asthma Care

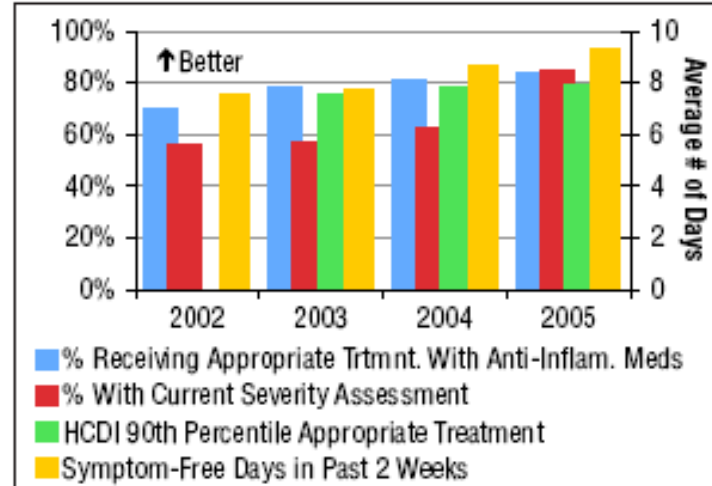


Figure 7.1-8b Pregnancy and Childbirth: Pregnant Women With Early Prenatal Care

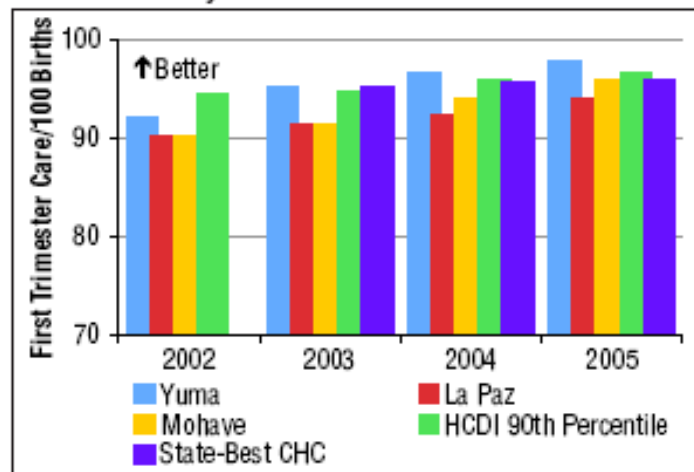
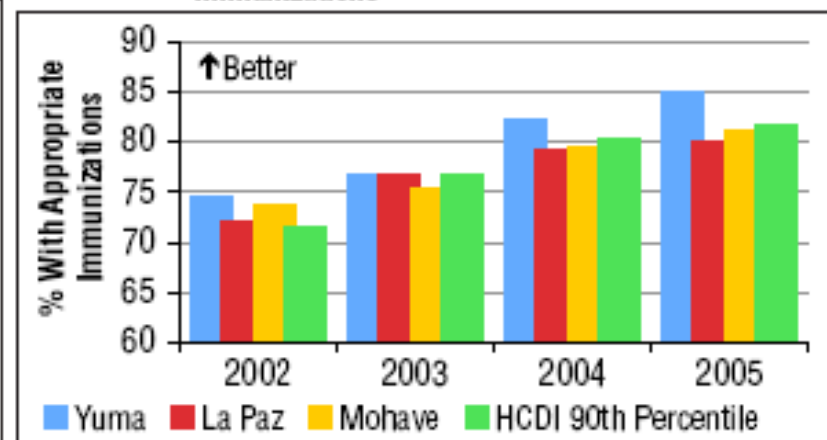


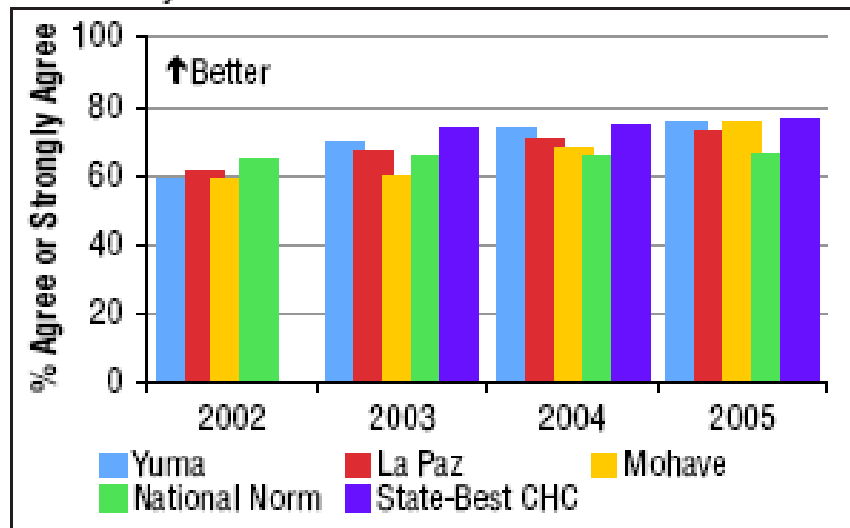
Figure 7.1-9c Pediatric Care—Well Child (ages 3–6): Appropriate Immunizations



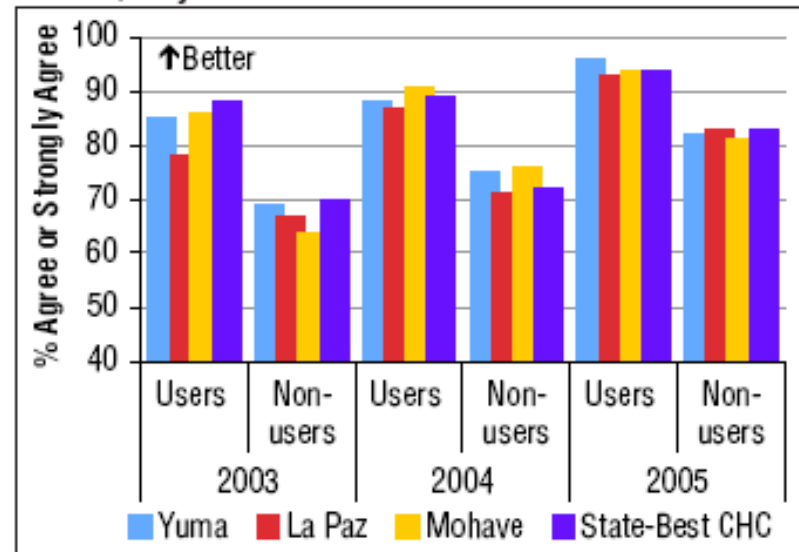
- Data management should enable tracking and trending of KPIs and comparison against internal and external benchmarks

Baldrige CHC - Patient and Community Needs KPIs

7.2-7 Patient Perception of Overall Care: Would Recommend to a Family Member or Friend

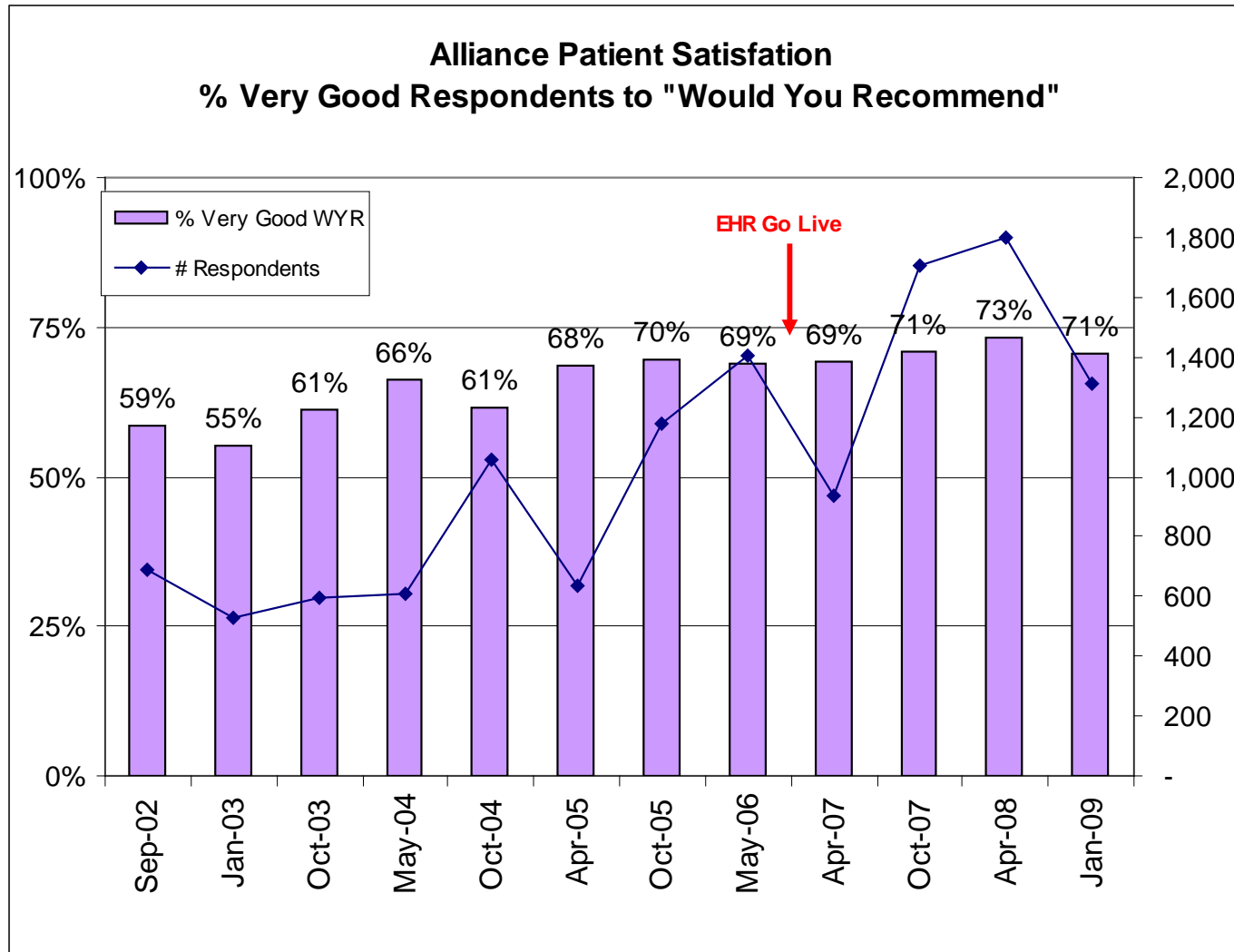


7.2-8a Community Climate Survey: Have Confidence in the Quality of Care



Data management should encompass all domains of data that are used to manage operations including patient and community needs data

CHC Network – Patient Satisfaction



This network uses a shared patient satisfaction survey tool at all centers (semi-annual sampling)

Baldrige CHC - Workforce KPIs

Figure 7.4-6b Staff Satisfaction by Job Group

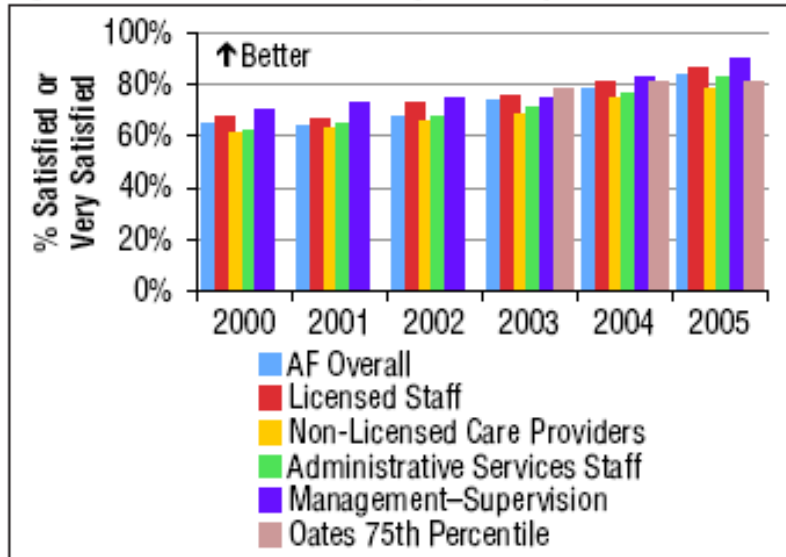
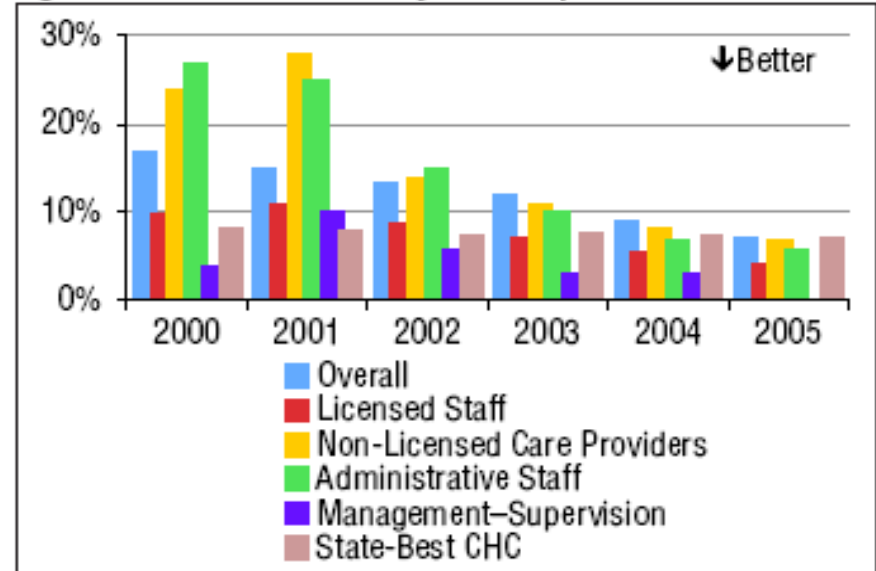


Figure 7.4-9a Staff Turnover by Job Group



Data management should also encompass employee performance measures...

Baldrige CHC - Process & Finance KPIs

Figure 7.5-2 Third Next Available Appointment

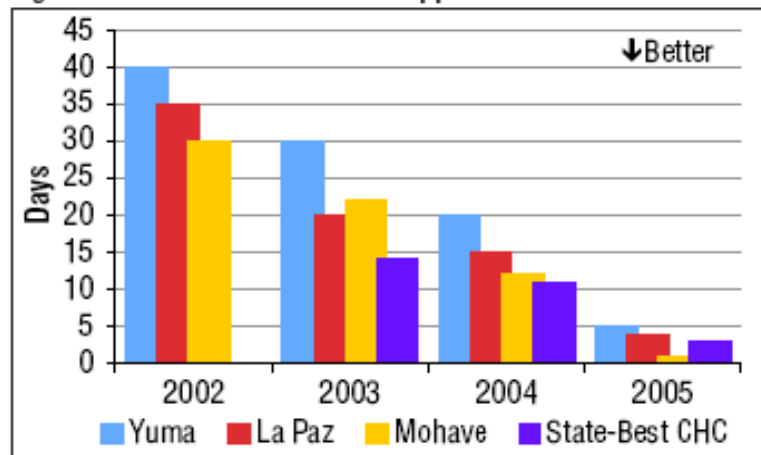


Figure 7.3-1 Revenues, Expenses, and Collections

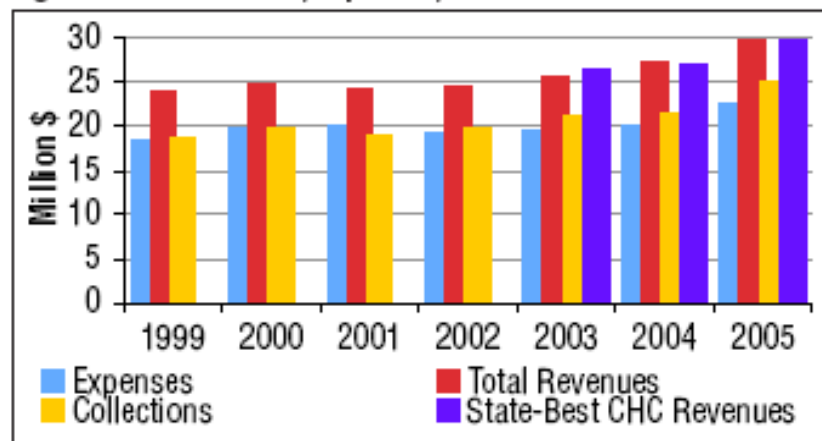


Figure 7.5-3 Office Visit Cycle Time

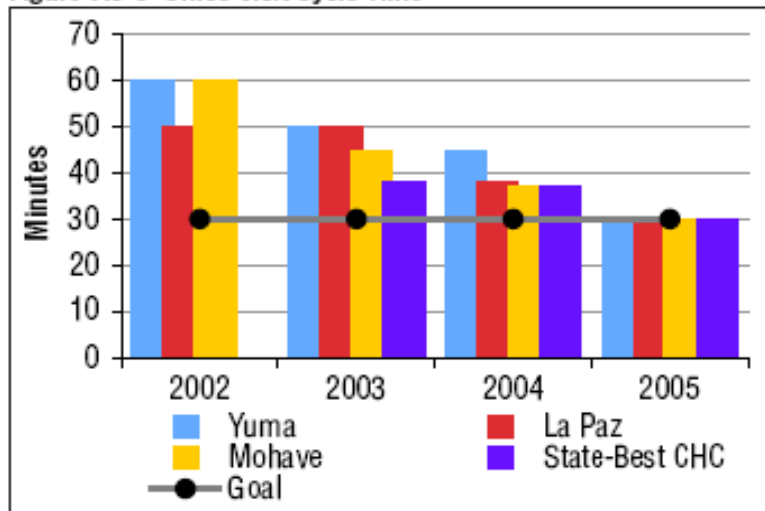
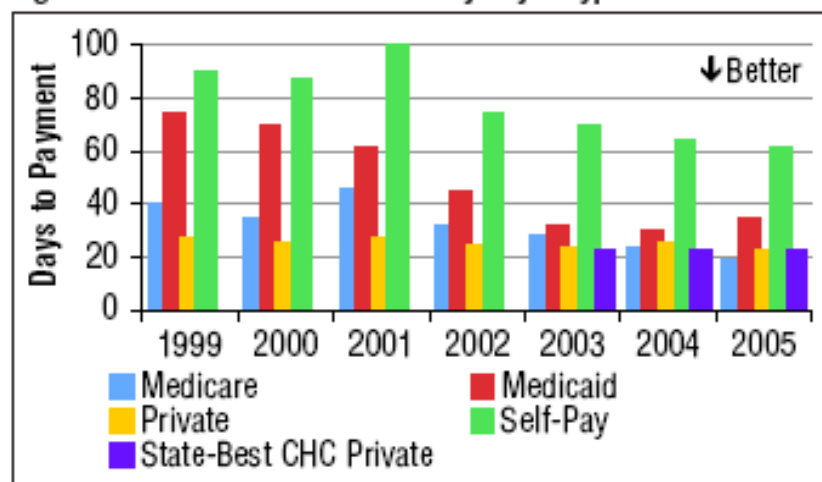
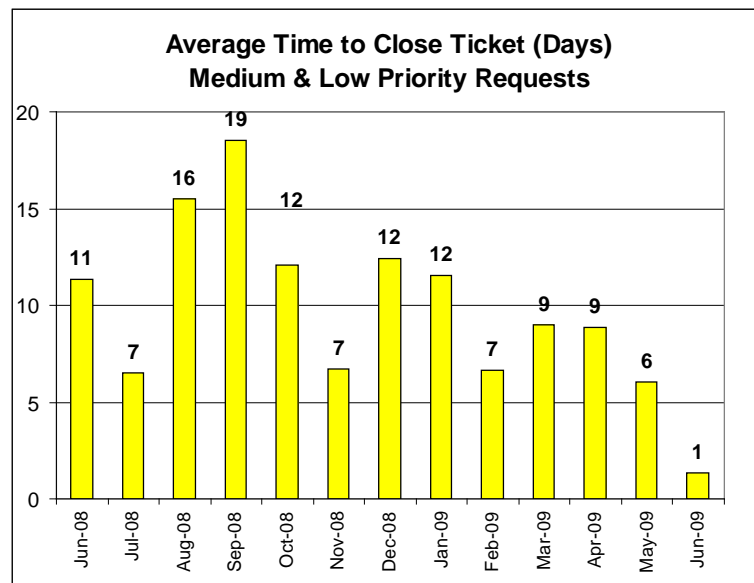
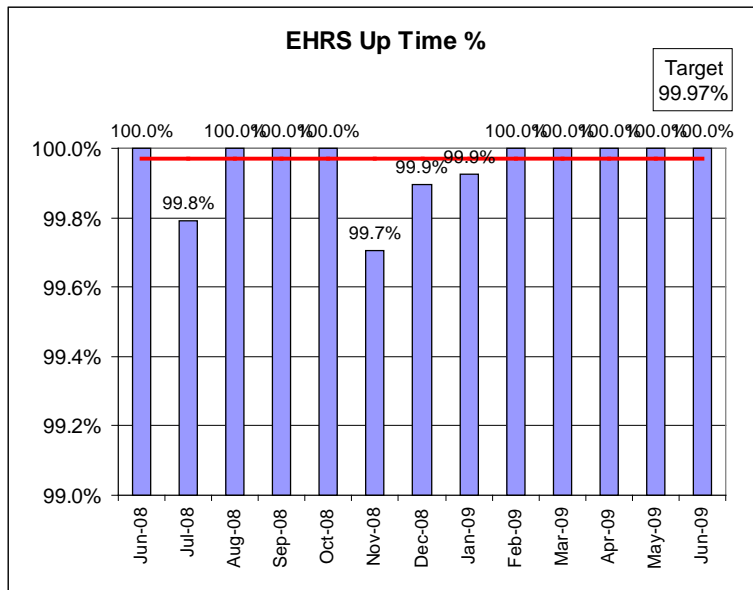
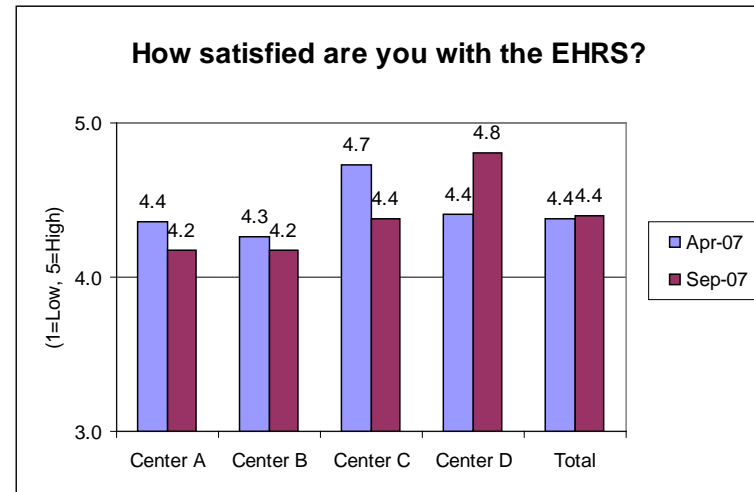
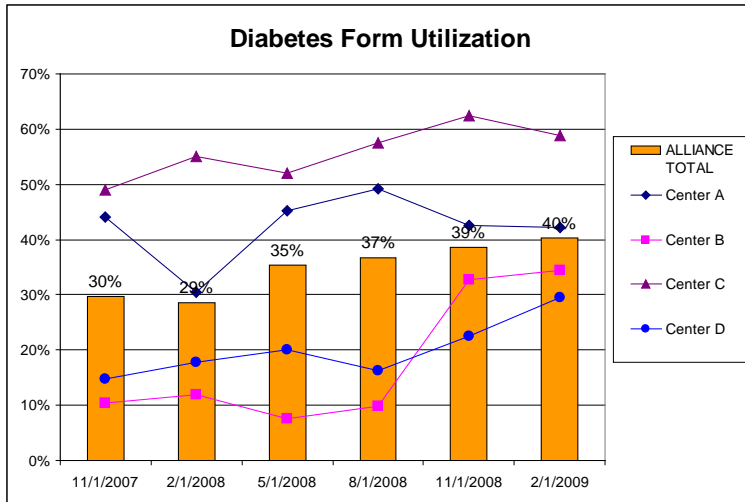


Figure 7.3-2 Accounts Receivable by Payor Type



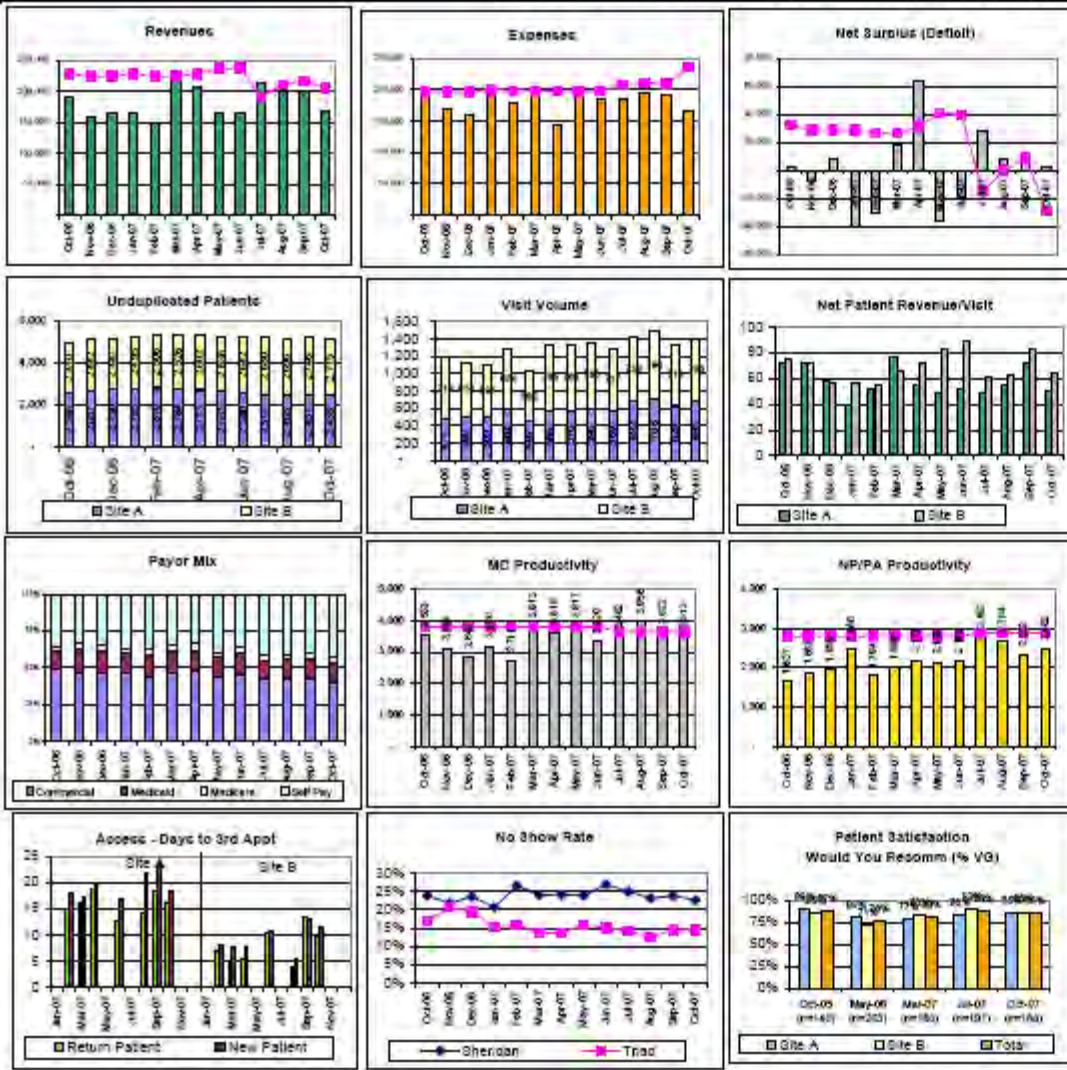
...and process and finance measures...

CHC Network – Technology KPIs



...and technology measures.

Medical Services Department Dashboard



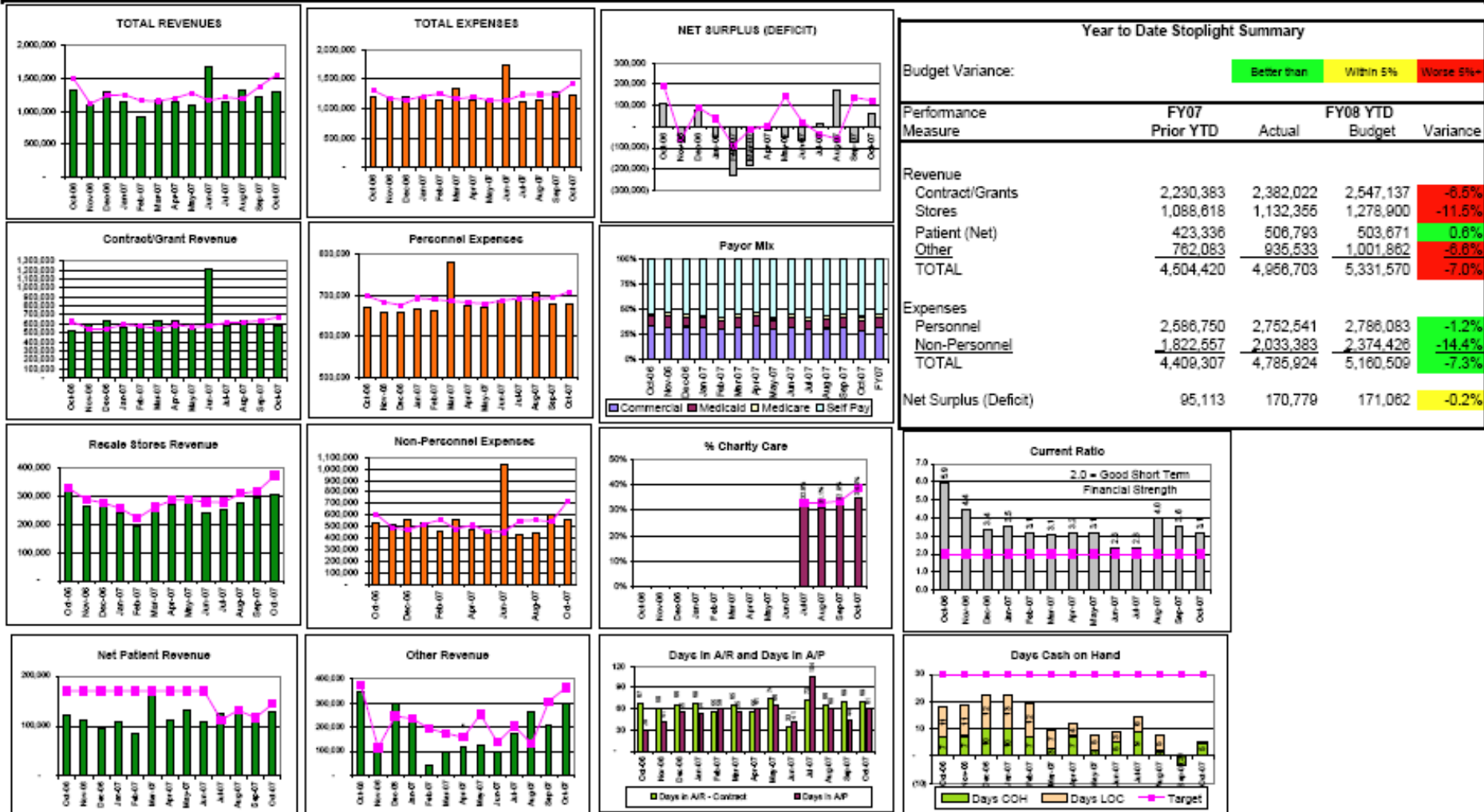
Year to Date Stoplight Summary

Budget Variance: Better than Within 5% Worse than

Performance Measure	FY07 Full Year	FY07 Prior YTD	Actual	FY08 YTD Budget	Variance
Financial					
Revenue	2,093,061	893,080	788,251	826,466	-4.8%
Expenses	2,144,137	703,401	737,844	861,178	-14.3%
Net Surplus (Deficit)	(51,076)	(10,321)	48,407	(34,713)	106.4%
Net Pt Rev/Visit					
Sheridan	80	68	56		
Triad	89	68	67		
Total	85	68	62		
Access					
Undup Pts					
Sheridan	2,580	2,586	2,438		
Triad	2,642	2,410	2,715		
Total	5,222	4,996	5,153		
Visit Volume					
Sheridan	6,433	2,068	2,722		
Triad	7,983	2,489	2,848		
Total	14,396	4,547	5,670		
Productivity					
MD	3,237	2,628	3,643	3,649	-0.2%
NP/PA	2,067	2,117	2,585	2,893	-10.6%
Payor Mix					
Commercial	48%	48%	41%		
Medicaid	14%	13%	13%		
Medicare	4%	4%	4%		
Self Pay	36%	37%	41%		
Total	100%	100%	100%		
Patient Satisfaction					
# Respondents	465	122	331		
Sheridan % VG	81%	89%	84%		
Triad %VG	78%	85%	84%		

Dashboards can be developed to meet different stakeholder needs. This is an example of a Medical Services division dashboard that was used to review results at the department/staff level.

Community Health Center Key Metrics - Financial



This is an example of a finance dashboard that is used to review monthly financials with the finance committee and BOD.

Health Outcomes by Provider

EHR Patients January - December 2007

Smith MD, John

Community Health Center

Measure	Dec-07 Smith MD, John	Dec-07 CHC	Stoplight Analysis	
			Variance from CHC	Dec-07 Alliance
Variance: Better than Within 5% Worse 5%+				
HDC Diabetes Metrics				
1 Diabetes Patients	49	401		1,880
2 A1c Values 2 or more, >=91 days	65%	50%	31.6%	47% 39.1%
3 Average A1c Value	7.8	7.8	0.0%	7.9 -1.3%
4 A1c value 1 or more (%)	90%	89%	1.4%	89% 1.3%
5 Self Management Goal (%)	35%	38%	-8.5%	12% 194.0%
6 ACE Inhibitor or ARB (%)	87%	78%	11.8%	70% 23.9%
7 Statins (%)	79%	61%	29.3%	52% 53.4%
8 Blood Pressure Value (%)	100%	100%	0.5%	100% 0.3%
9 Blood Pressure less than 130/80 (%)	37%	28%	33.3%	41% -11.2%
10 LDL value (%)	82%	73%	12.5%	60% 35.5%
11 LDL less than 100 (%)	50%	52%	-4.3%	45% 12.0%
Preventive Care Metrics for General Population				
1 # Patients	212	2,675		14,637
2 % Visits With Blood Pressure	78%	73%	7.3%	88% -11.2%
3 % Women 50-69 With A Mammogr	83%	68%	22.1%	55% 52.6%
4 % >=50 Screen for Colorectal Canc	3%	9%	-67.5%	8% -60.9%
5 % >=50 With Influenza Vax	39%	18%	112.1%	18% 114.3%
6 % >=65 With Pneumo Vax	87%	59%	46.7%	26% 233.9%
7 % w/LDL	65%	44%	46.1%	30% 114.6%
8 % w/LDL With Last <130	80%	72%	10.2%	68% 16.2%
9 % w/Smoking Status	80%	58%	38.8%	44% 83.0%
10 % Smokers w/ Cessation Interv	41%	56%	-27.1%	48% -15.8%

This is an example of individual provider reports that the medical director shared with providers quarterly.

THANK YOU!



JLASSA@QUALSCI.COM