

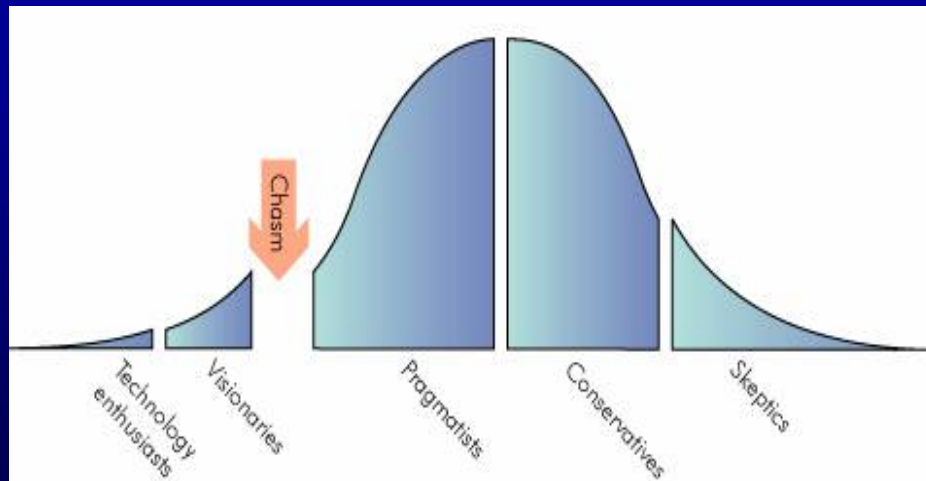
# Challenges and Strategies when Implementing an Electronic Health Record (EHR): a ground level perspective



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**Chief Medical Information Officer**  
**QueensCare Family Clinics**

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## *Focus and They Will Adopt...*



*from Crossing the Chasm, Geoffrey Moore*

## The Clinical Pull Model:

**Clinical Pull** - An approach towards managing a *positive* change while retaining essential **quality** and **productivity** during the implementation of an Electronic Health Record

### Alternative Model:

**Administrative Push** - An approach towards managing change while retaining essential **productivity** and **quality** during the implementation of an Electronic Health Record

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## Approaches Compared:

### Administrative Push


- Bird's Eye view
- Administrative Lead
- Expectations
- Productivity/Quality
- Stick

### Clinical Pull

- Ground-Level Perspective
- Provider Lead
- Goals
- Quality/Productivity
- Carrot





- 7 clinical sites: ~ 215 FTE employees
- ~30,000 lives served/yr
- ~130,000 visits/yr 
- 33 FTE providers (MD/NP)
- Services offered include:




**Family Medicine**      **Cardiology**

**Pediatrics**                      **Podiatry** 

**Optometry**                      **Obstetrics**


**Dental** 

## QCFC's Health Information Technology History:

- Current Practice Management System
  - 10 years 
- Dictation System for
  - 2yrs – Failed 
- Manual Disease registry 
  - 3 years – becoming out-dated
- Electronic Health Record (EHR)
  - 2 years
  - 1 year (Full implementation)

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## Vendor Selection:

- PMS ↔ EHR 
- Investigated Others
- Interface won out
- No Silos!!!



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## Implementation Financing:

**\$2.7 million to implement**

- **California Health Financing Authority Grant ~\$471,000**
- **QueensCare Charitable Foundation ~\$550,000**
- **Remainder - Clinic budget**



## Where'd it (\$) all go?

### Hard \$

- Hardware & Software
  - Licensing
  - Training
  - Tablets
  - Computer Lab
  - Extra PCs
- Consultant Fees

### Soft \$

- Maintenance Fees
- Fiber Optic Monthly Fees
- Additional Scanning Staff
- Additional Management
- Productivity Loss



<http://weblogs.newsday.com/reports/watchdog/pockets>



## Building Clinic Capacity for Quality: A Readiness Assessment

- 50 Community Health Center in So-Cal evaluated
- 57% were not ready
- QCFC found to have:
  - Administrative & Financial Commitment
  - Strong Vision
  - Tenured staff
  - Well run clinic
- QCFC found lacking in:
  - Tactical plan for implementation
  - Unclear management structure for implementation
  - Lack of emphasis on Quality

## Solutions:

- Hired a consultant
- Appointed a Physician PM
- Organized EHR steering committee
- Created a Business Requirements Analysis
- Investigated and Mapped Workflows
- Communication Campaign
- Training/Quality Control

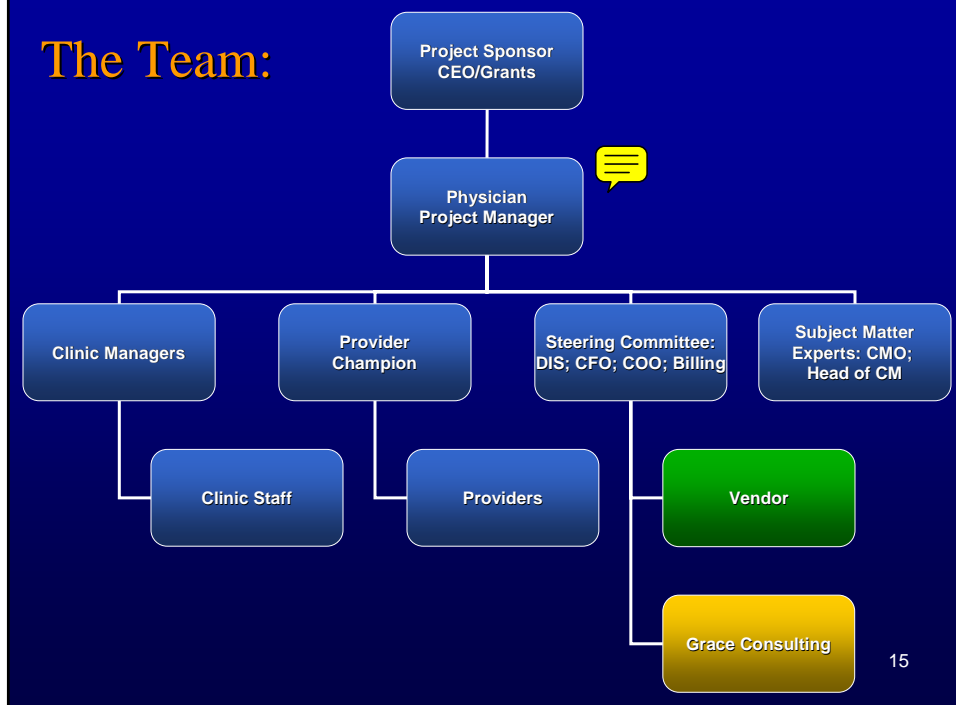
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## Timeline:

- **Phase I**
  - Planning (8/2006 – 3/2007) 
- **Phase II**
  - Implementation (4/2007 – 11/2007)
- **Phase III**
  - Quality Control/Quality Improvement (12/2007 – Current)

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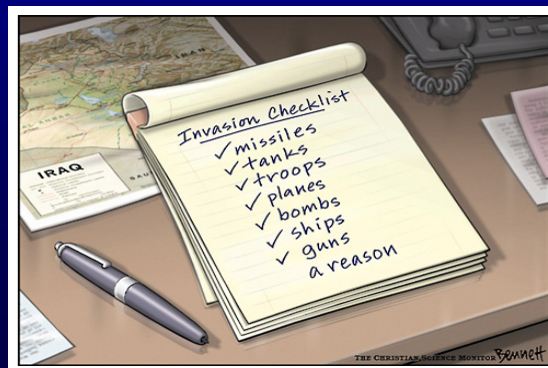
## The Team:



## Business Requirements Analysis Defined:

What do you want out of the system and what does the system have?

– 109 requirements – 92% of criteria were met



## Creating a Business Requirements Analysis: Points to Consider

### Requirements included: Functional Requirements:

- People
- Function
- Technology
- Health Information and Data
- Results Management
- Order Entry Management
- Disease Support
- Electronic Communication and Connectivity
- Patient Support
- Administrative Processes
- Reporting and Population Health Management
- Performance Management

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## Creating Workflows

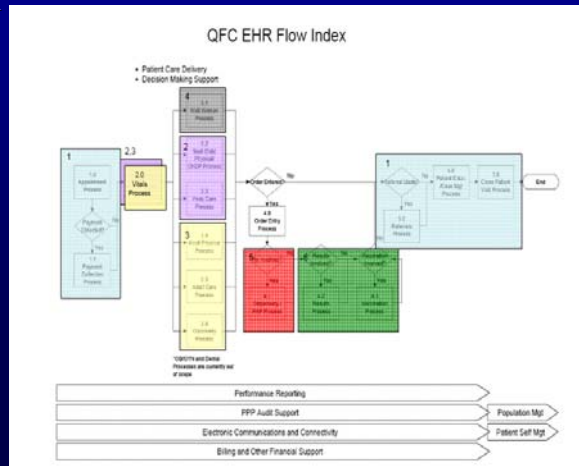
- Create the **As-Is Workflows**  
*How do you do what you do daily on paper?*
- Create the **To-Be Workflows**  
*How will you do what you do on computer?*
- Validate the To-be Workflows  
*Establish Best Practices*

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## Who to involve?

*Imagine the chart/patient from A to Z*

- Front Office Staff
- Back Office Staff
- Providers
- Laboratory Staff
- Dispensary Staff
- Clinic Managers



## Why bother with the Business Requirements Analysis & Workflows?

- Create Buy-in
- Focus on improving processes
- EHR is the Great Equalizer
- Focus: Improve Quality of care
- Identify Critical areas of Impact
- *Create Buy-in*



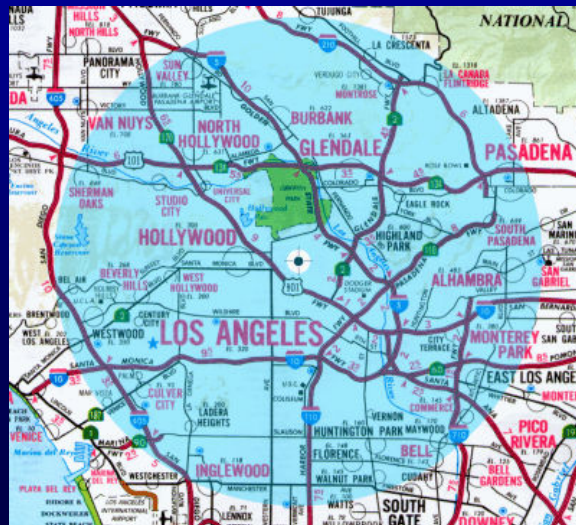
[http://printisdeadblog.com/wp-content/uploads/stop\\_the\\_press.jpg](http://printisdeadblog.com/wp-content/uploads/stop_the_press.jpg)

## *Communicate!*

Monthly Newsletters  
Provider Meetings  
Emails  
Board updates  
Advertising

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## Phase II: Implementation *EHR Hot Zone*



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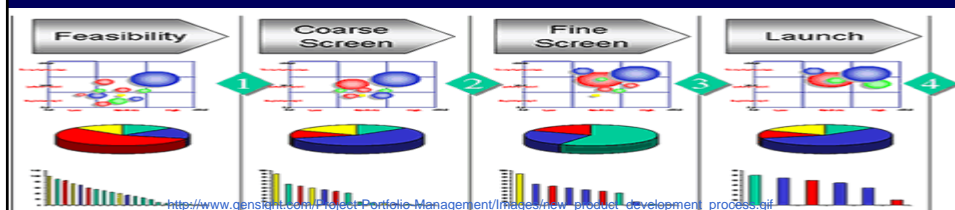
## Create a System of Support

- Created - Support Desk
  - User Groups
- Trained - Trainers
  - By Clinic
  - Work Type
  - In Groups
  - 1:1 sessions
  - Online
- *Training continues today...*




## Stage-Gate Implementation



- Rolled out **portions** of the system
  - Labs/Images/Tasks/Vitals
- Clinic by clinic rollout
- Small incremental rise in required # of notes/day
- Established Best Practices
- Rolled out system one clinic at a time
  - Closest to Farthest
  - Slowest to Busiest



## Phase III: Quality Control/Quality Improvement

- Data reviewed 
- Continuous Capacity Assessment (CCA)
  - Internal audit
  - Verify process
  - Living document
- Surveys - keep abreast of needs

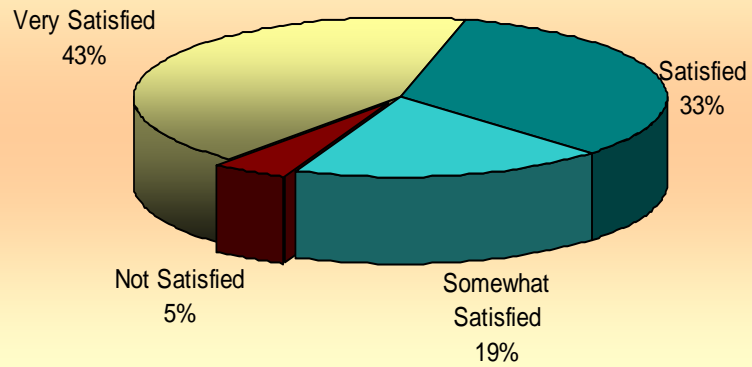
### *Where are we now?*

- Fully implemented – 1.5 years 
- Trending Data 
- Creating Clinic and Provider Quality Score Cards
- Migrating to in integrated solution
- Looking towards regional Health Information Exchange



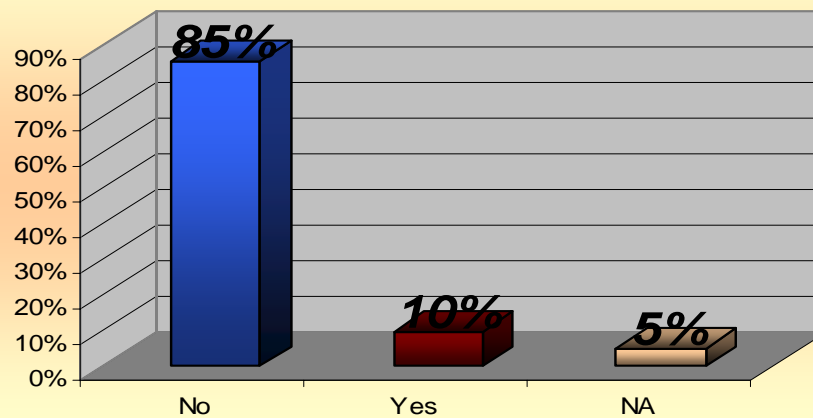
## Are providers satisfied?

### Provide Satisfaction w/ Electronic Charting



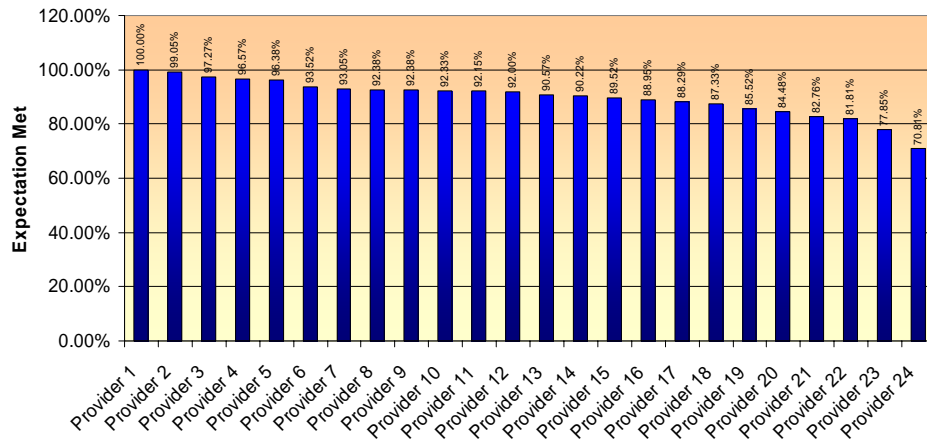
## Would providers go back to paper?

### Would you revert to a paper system?



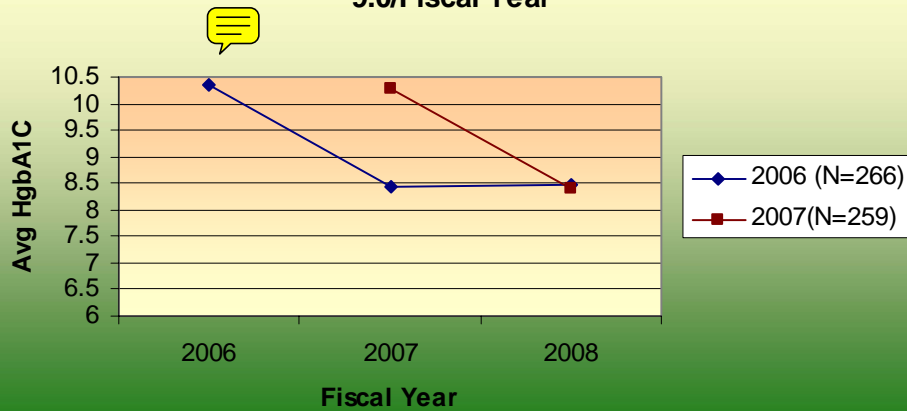
## How's the charting?

CCA # 3 July 2008 Provider Documentation Scores

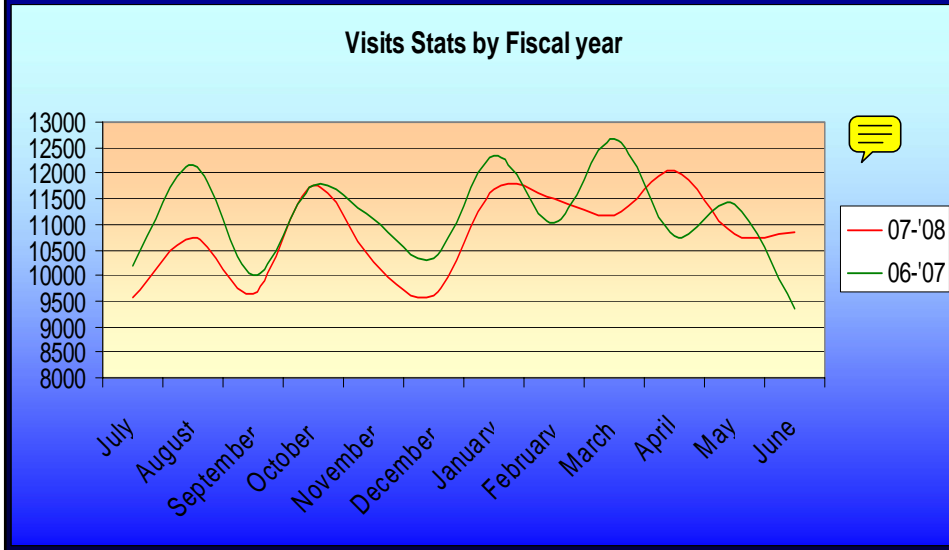


## Improved Quality???


HgbA1C for New Diabetics with baseline HgbA1C > 9.0/Fiscal Year



## Will productivity ever be the same?



## Challenges & Lessons Learned

- Have a predefined selection process
- Be Flexible 
  - Hardware
  - Data
- Interfaces have inherent flaws
- Scan Today's Work Today
- Patience is a virtue
- Consider ROI (Return on Investment)
- Be willing to self-evaluate/obtain outside evaluations



## The Clinical Pull Model

- Focus on your target audience
- Acknowledge Challenges & Promote Shared Solutions
- Focus on Improving Quality
- Clinical Leadership with Appropriate Authority
- Inclusion is KEY 
- Communicate
- Goal Setting/Celebration
- Review / Reassess / Retool
- Maintain a Ground-level Perspective

[http://i4.ggpht.com/\\_myB3iFZDDJ0/SJg34x8tQI/AAAAAAAAADCE/S1eAsPo0iOs/DSCN0297.JPG](http://i4.ggpht.com/_myB3iFZDDJ0/SJg34x8tQI/AAAAAAAAADCE/S1eAsPo0iOs/DSCN0297.JPG)

## Thank You !!!

