Measuring the Quality of Health Across a Population: The Indian Health Experience

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Indian Health Service
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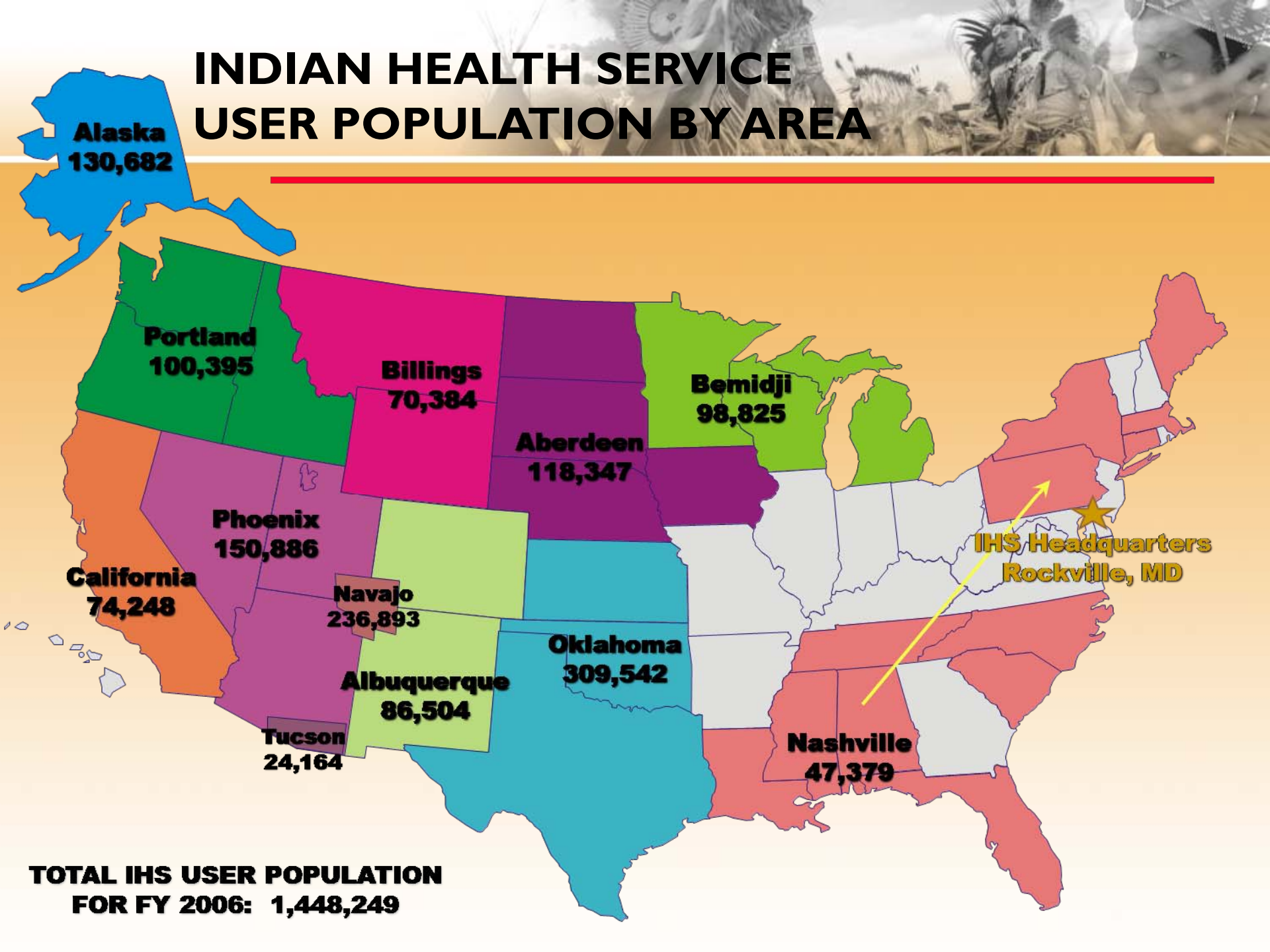
Population Health in the IHS

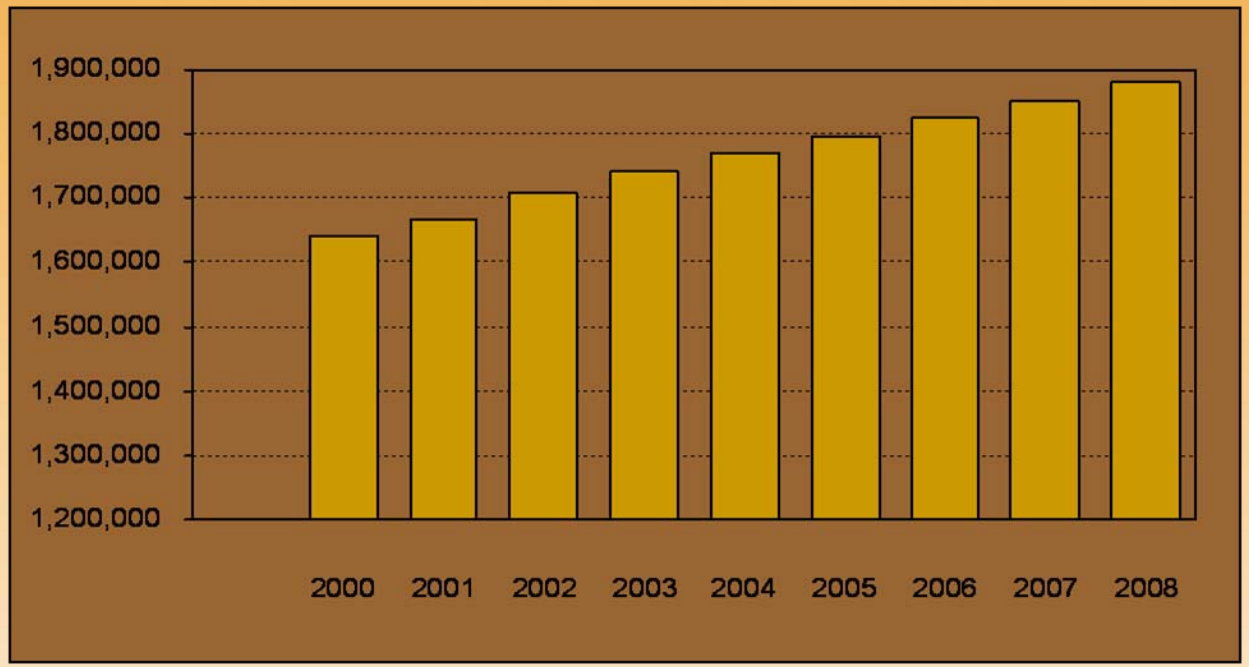
- **IHS Health Care**
- **What Works**
- **What Doesn't**
- **The Future**

INDIAN HEALTH SERVICE
USER POPULATION BY AREA



TOTAL IHS USER POPULATION FOR FY 2006: 1,448,249

The Indian Population We Serve



IHS Service Population Growth

- Average population growth since 2000 is 1.8% per year
- 71% high school graduates (80% U.S.) and 10% college graduates (24% U.S.)
- 29% of AI/AN fall below poverty standards
- Unemployment is 4.0 times the U.S. rate for males and females
- Less than 22% with self reported access to the internet

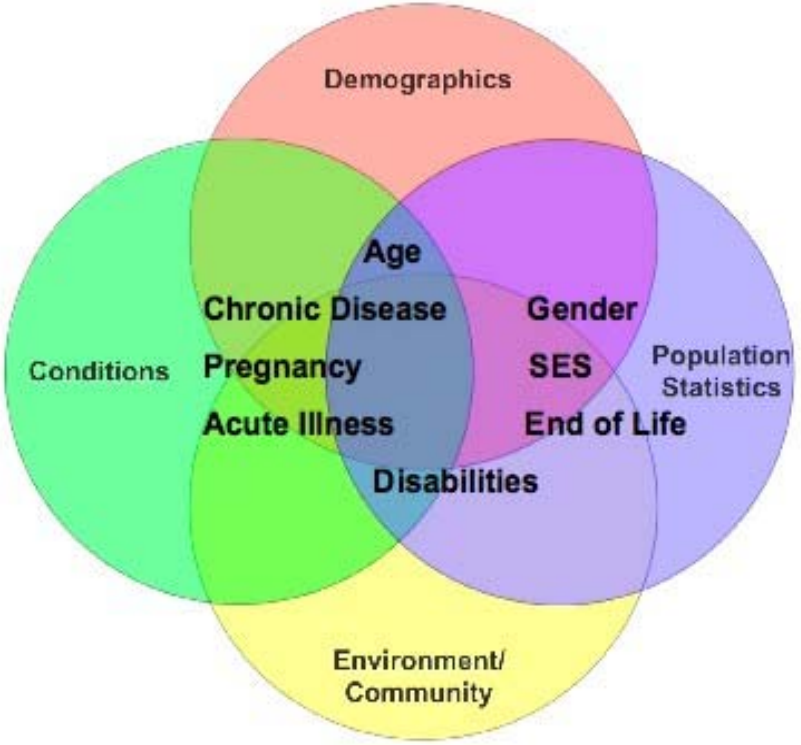
Partnership with Tribal Governments

- The Indian Self-Determination Act of 1975 includes an opportunity for Tribes to assume the responsibility of providing health care for their members, without lessening any Federal treaty obligation.

IHS	Tribal	Urban
• *33 Hospitals* • *49 Health Centers* • *46 Health Stations*	• 15 Hospitals • 198 Health Centers • 121 Health Stations • 180 Alaska Village Clinics	• 34 Urban Indian Health Programs

Indian Health Service: Facilitates a Broader Picture of Health

- Personal Health
- Family Health
- Community Health
- Public Health
- Population Health
- Transparency of Data
  - New Quality of Care website



- Patient needs based on demographics, environment and community, population data, and conditions

IHS HIT Solution (Resource and Patient Management System- RPMS)

- A decentralized automated information system comprised of over 60 integrated software applications
- Over 25 years old with a GUI placed ‘on the top’ in 2003
- 4 major categories of software:

Infrastructure applications

Practice Management applications

Clinical applications

-electronic recognition of ‘candidates for disease DX’

Population and Public Health

-reminders at POC

-electronic clinical quality reporting

-using structured data retrieval

-allows for refusals and exceptions

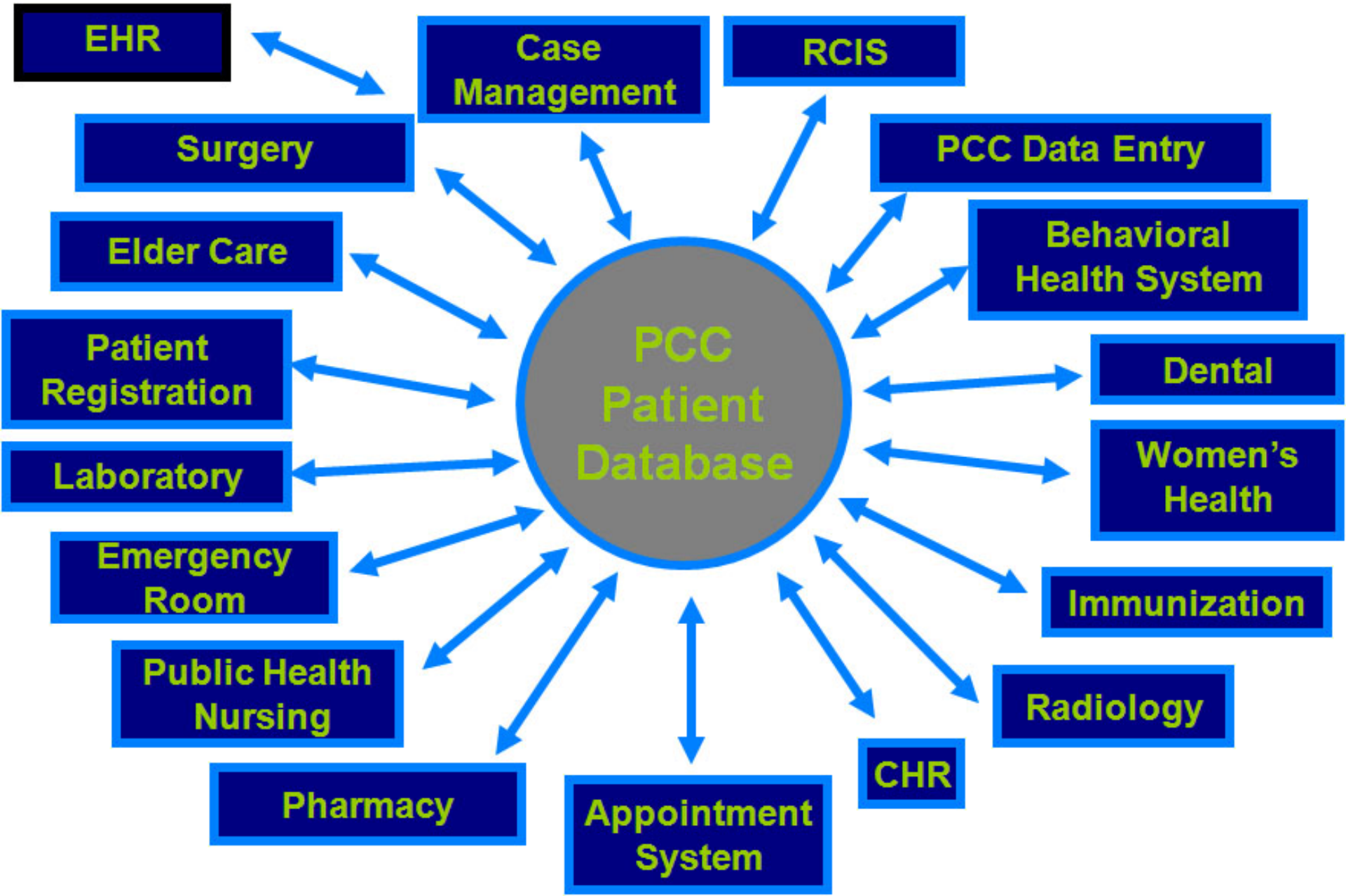
-population data delivered at the POC

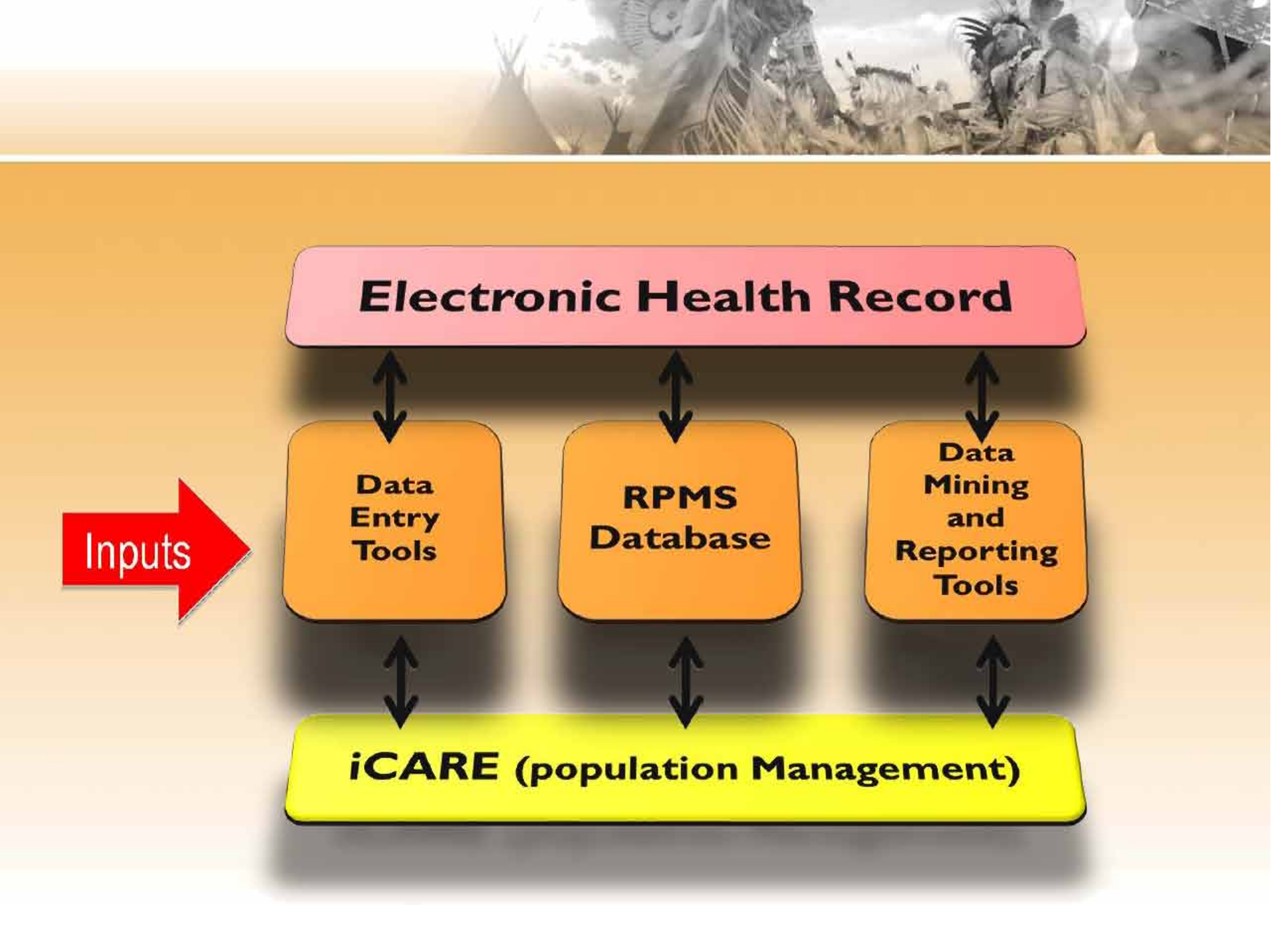
-early sentinel event recognition at POC

-integrated case management application

-diabetes, asthma, CVD, HIV, etc

RPMS Integrates Multiple Clinical Systems




Electronic Health Record
Inputs
Data Entry Tools
RPMS Database
Data Mining and Reporting Tools
iCARE (population Management)

Improvement Tools

- Standardized reports (include..)
  - Management/clinical reports
  - Population health reports
- Clinical system
  - iCARE
  - Clinical quality (HEDIS, Elder, Patient Education, GPRA)
  - Bundled measures/ exceptions monitored/denominator only reduced by MOGE criteria
- Audit Data
  - Immunization, diabetes, HIV, CVD, etc
- On the fly audit with on the fly denominator and numerator defined by end user
- Patient Wellness Handout
- Quality of Care Web Site
  - Includes site specific information
  - Includes patient screening tools and 'questions to ask'- not just information
  - Consistent with patient wellness handout

iCARE

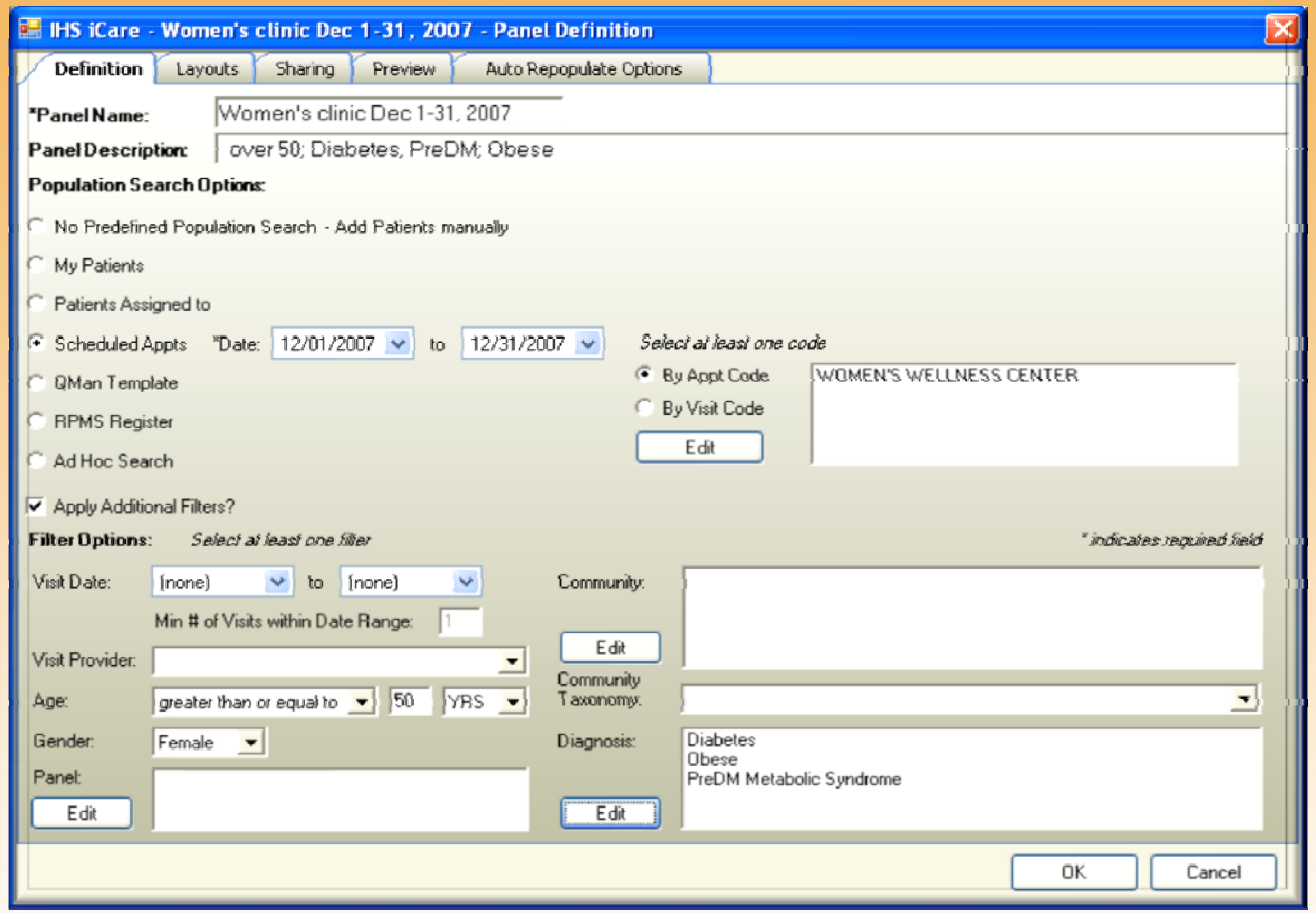
- Functionality
  - Comprehensive knowledge management couplers
  - Community health data
    - Fluoride levels in wells
    - Early suicide alerts based on community and other demographic factors
    - CDC reportable cases (limited definitions)
  - Population health data
    - Comparative health status
    - Access to care
    - Clinical quality for any denominator, as well as defined denominator
    - Expanded structured ‘candidate’ list for sentinel events

Disease Diagnostic Tags

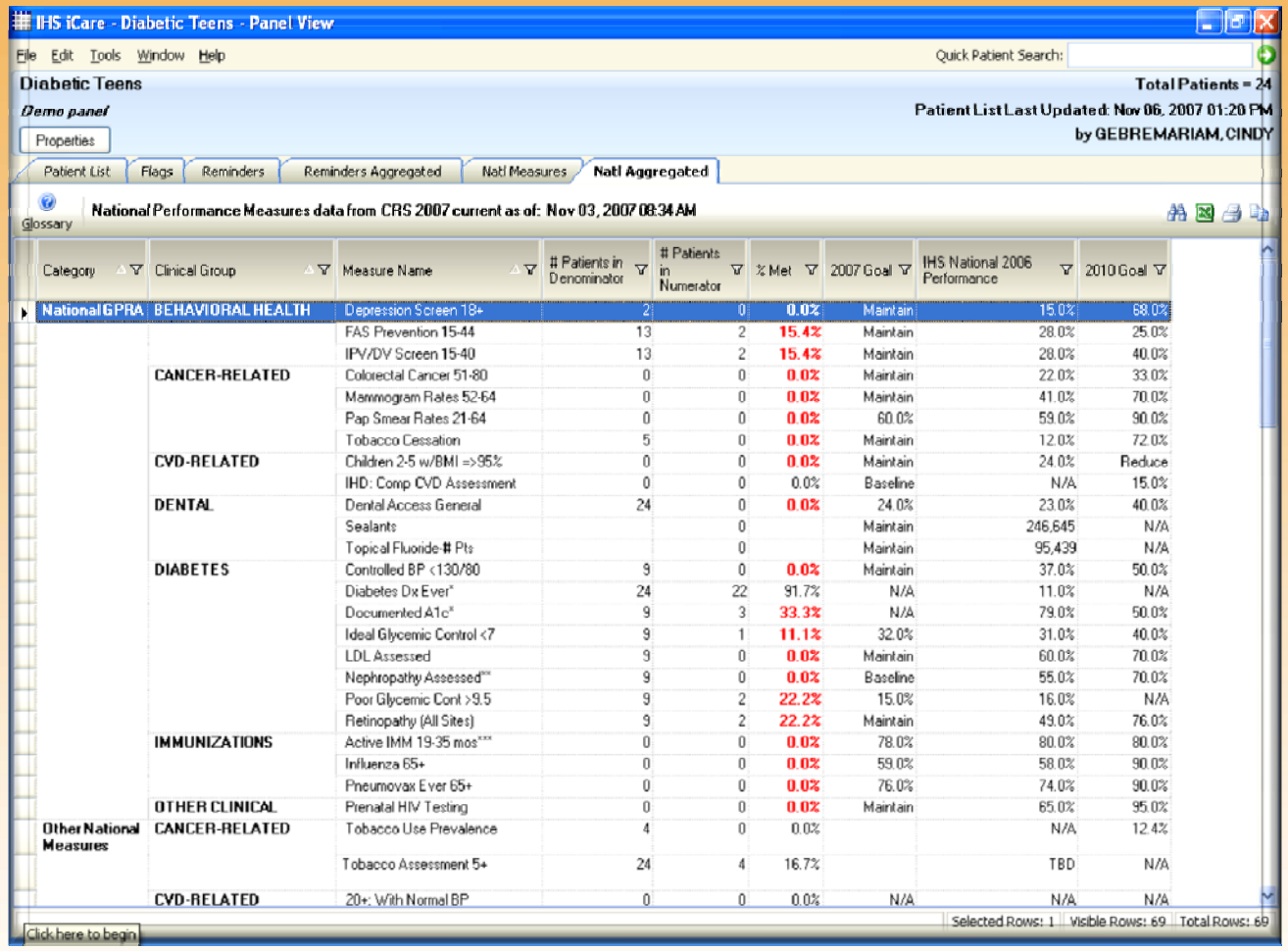
- Asthma
- COPD
- CVD At Risk
- CVD Significant Risk
- CVD Highest Risk
- CVD Known
- Diabetes
- HIV/AIDS
- Hypertension
- Obese
- Pre-DM Metabolic Syndrome
- Tobacco Users

Create Patient Panels

- By provider
- By appointment
- By register
- By search
- By visit date
- By diagnosis
- By community
- By age or gender

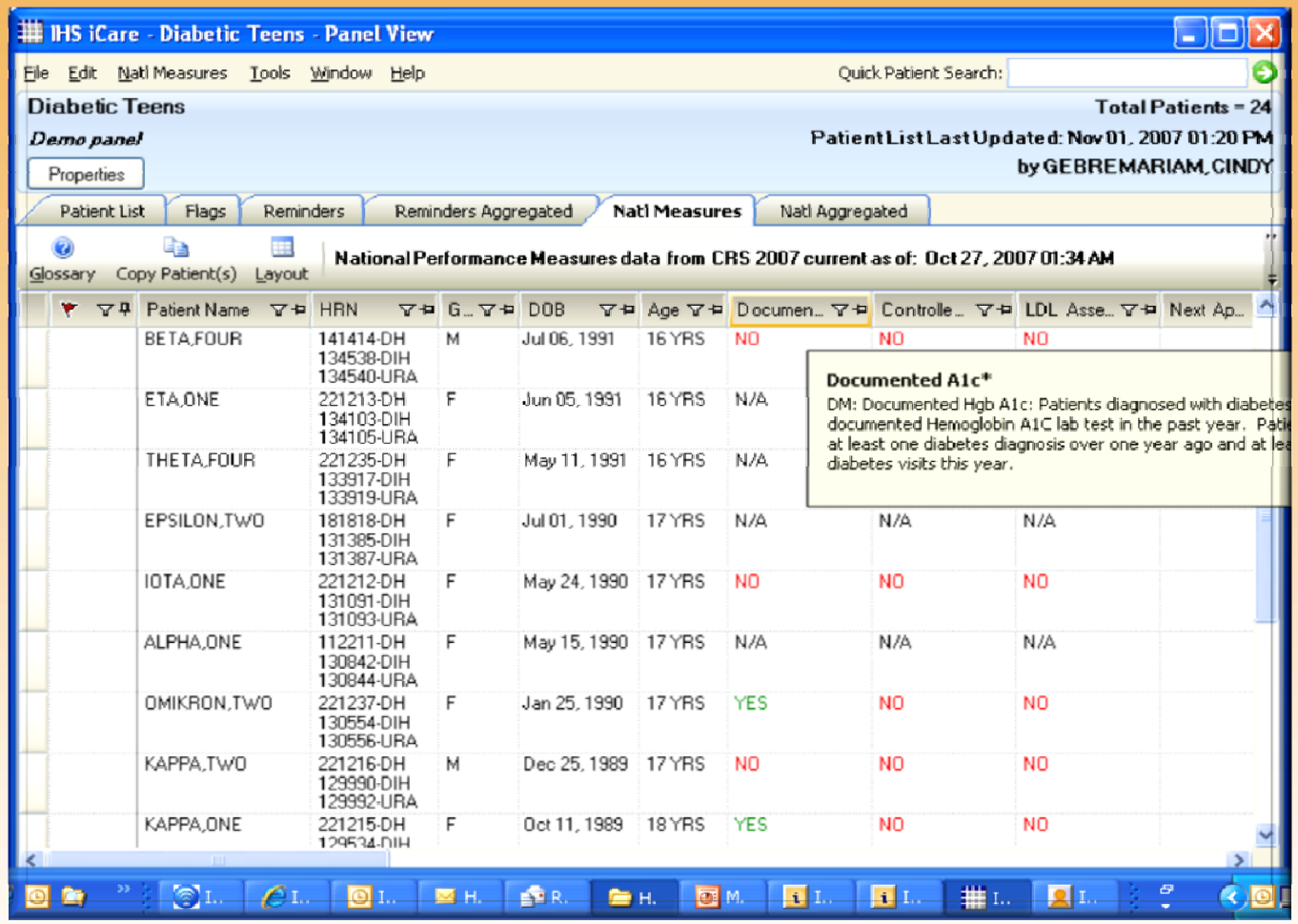


See How Your Panel Meets Outcomes



Category	Clinical Group	Measure Name	# Patients in Denominator	# Patients in Numerator	% Met	2007 Goal	IHS National 2006 Performance	2010 Goal
National GPRA	BEHAVIORAL HEALTH	Depression Screen 18+	2	0	0.0%	Maintain	15.0%	68.0%
		FAS Prevention 15-44	13	2	15.4%	Maintain	28.0%	25.0%
		IPV/DV Screen 15-40	13	2	15.4%	Maintain	28.0%	40.0%
	CANCER-RELATED	Colorectal Cancer 51-80	0	0	0.0%	Maintain	22.0%	33.0%
		Mammogram Rates 52-64	0	0	0.0%	Maintain	41.0%	70.0%
		Pap Smear Rates 21-64	0	0	0.0%	60.0%	59.0%	90.0%
		Tobacco Cessation	5	0	0.0%	Maintain	12.0%	72.0%
	CVD-RELATED	Children 2-5 w/BMI =>95%	0	0	0.0%	Maintain	24.0%	Reduce
		IHD: Comp CVD Assessment	0	0	0.0%	Baseline	N/A	15.0%
	DENTAL	Dental Access General	24	0	0.0%	24.0%	23.0%	40.0%
		Sealants		0		Maintain	246,645	N/A
		Topical Fluoride-# Pts		0		Maintain	95,439	N/A
	DIABETES	Controlled BP <130/80	9	0	0.0%	Maintain	37.0%	50.0%
		Diabetes Dx Ever*	24	22	91.7%	N/A	11.0%	N/A
		Documented A1c**	9	3	33.3%	N/A	79.0%	50.0%
		Ideal Glycemic Control <7	9	1	11.1%	32.0%	31.0%	40.0%
		LDL Assessed	9	0	0.0%	Maintain	60.0%	70.0%
		Nephropathy Assessed***	9	0	0.0%	Baseline	55.0%	70.0%
		Poor Glycemic Cont >9.5	9	2	22.2%	15.0%	16.0%	N/A
		Retinopathy (All Sites)	9	2	22.2%	Maintain	49.0%	76.0%
	IMMUNIZATIONS	Active IMM 19-35 mos****	0	0	0.0%	78.0%	80.0%	80.0%
		Influenza 65+	0	0	0.0%	59.0%	58.0%	90.0%
		Pneumovax Ever 65+	0	0	0.0%	76.0%	74.0%	90.0%
	OTHER CLINICAL	Prenatal HIV Testing	0	0	0.0%	Maintain	65.0%	95.0%
Other National Measures	CANCER-RELATED	Tobacco Use Prevalence	4	0	0.0%		N/A	12.4%
		Tobacco Assessment 5+	24	4	16.7%		TBD	N/A
	CVD-RELATED	20+: With Normal BP	0	0	0.0%	N/A	N/A	N/A

See How Well Individual Patients Meet Outcomes



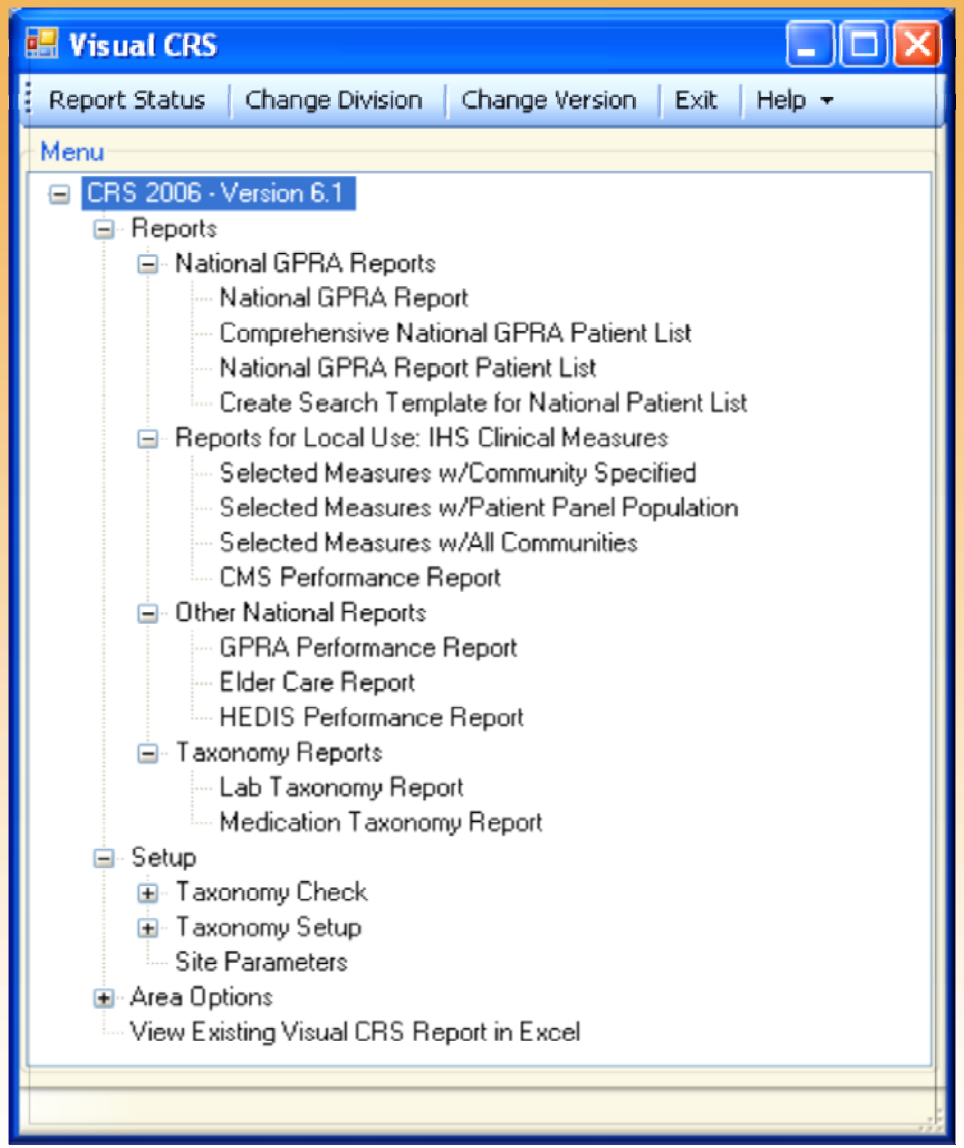
Clinical Reporting System

- Clinical Reporting System (CRS)- since 2000
  - Automated tracking of clinical performance
  - Eliminates the need for manual chart audits
  - Used at over 95% of I/T/U facilities (data on 1.5 M)
  - All patients served by IHS direct sites and over 80% of tribally operated health facility users report data into the national data set

Clinical Reporting System

- Reporting tool used by:
  - Local site and local community
  - Reports to tribal health departments/ facility boards/etc
  - Department of Health and Human Services (DHHS)
  - Congress
- Used to improve clinical performance
- Supports IHS' commitment to a culture of quality

Types of Reports



Summary Reports

SK May 03, 2006 Page 1

*** IHS 2006 National GPRA Clinical Performance Measure Report ***

DEMO HOSPITAL

Report Period: Jul 01, 2005 to Jun 30, 2006

Previous Year Period: Jul 01, 2004 to Jun 30, 2005

Baseline Period: Jul 01, 1999 to Jun 30, 2000

CLINICAL PERFORMANCE SUMMARY

	Site Current	Site Previous	Site Baseline	GPRA06 Goal	Nat'l 2005	2010 Goal
DIABETES						
*Diabetes DX Ever	10.1%	9.6%	8.5%	N/A	11.0%	N/A
*Documented A1c	83.2%	73.2%	84.2%	N/A	78.0%	50.0%
Poor Glycemic Control >9.5	23.9%	14.8%	25.4%	Maintain	15.0%	TBD
Ideal Glycemic Control <7	27.7%	12.8%	23.7%	32.0%	30.0%	40.0%
*BP Assessed	98.1%	91.3%	93.9%	N/A	89.0%	N/A
Controlled BP <130/80	37.4%	32.9%	35.1%	Maintain	37.0%	50.0%
LDL Assessed	39.4%	0.7%	10.5%	56.0%	53.0%	70.0%
Nephropathy Assessed	58.1%	14.1%	0.9%	50.0%	47.0%	70.0%
Retinopathy Exam	57.4%	61.7%	53.5%	@ BASELINE	@50.0%	70.0%
				# Maintain	#50.0%	70.0%
*Depression Assessed	3.9%	4.0%	3.5%	N/A	N/A	N/A
*Influenza Vaccine	76.1%	65.8%	65.8%	N/A	N/A	N/A
*Pneumovax Vaccine Ever	86.5%	84.6%	87.7%	N/A	N/A	N/A
DENTAL						
Dental Access General	16.9%	19.6%	20.1%	Maintain	24.0%	40.0%
Sealants	145	469	420	Maintain	249,882	TBD
Topical Fluoride						
*# Applications	158	157	64	N/A	113,324	N/A
# Patients	120	135	61	Maintain	85,318	TBD
IMMUNIZATIONS						
Influenza 65+	77.4%	67.5%	68.4%	Maintain	59.0%	90.0%

2007 NATIONAL DASHBOARD

In 2007, IHS direct and tribal facilities met 82% of the 22 clinical GPRA measures. This exceeds the 73 percent met in 2006. Two measures that were not met are Poor and Ideal Glycemic control. These measures are difficult to improve because they rely on funding for medications as well as patient compliance in Diabetes management. The Dental Sealants measure was missed by less than 1% and the Cervical Cancer screening measure was missed by 1%. Performance in 2007 is a true indication of the improvement in quality of care across the Indian Health Service.

These results are representative of 191 IHS Direct and Tribal programs.

2007 National Dashboard (IHS/Tribal)

DIABETES	2007 Final	2006 Final	2005 Final	2007 Target	Final Results
Diabetes Dx Ever	11%	11%	11%	N/A	N/A
Documented HbA1c	79%	79%	78%	N/A	N/A
Poor Glycemic Control	16%	16%	15%	15%	NOT MET
Ideal Glycemic Control	31%	31%	30%	32%	NOT MET
Controlled BP <130/80	39%	37%	37%	37%	MET
LDL Assessed	61%	60%	53%	60%	MET
Nephropathy Assessed	40%[a]	55%	47%	baseline	MET
Retinopathy Exam	49%	49%	50%[b]	49%	MET
DENTAL					
Access to Services	25%	23%	24%	24%	MET
Sealants	245,449	246,645	249,882	246,645	NOT MET
Topical Fluoride- Patients	107,934	95,439	85,318	95,439	MET
IMMUNIZATIONS					
Influenza 65+	59%	58%	59%	59%	MET
Pneumovax 65+	79%	74%	69%	76%	MET
Childhood Izs	78%[c]	78/80%[c]	75%[c]	78%	MET
PREVENTION					
Pap Smear Rates	59%	59%	60%	60%	NOT MET
Mammogram Rates	43%	41%	41%	41%	MET
Colorectal Cancer Screening	26%	22%	NA	22%	MET
Tobacco Cessation	16%	12%	34%[d]	12%	MET
FAS Prevention	41%	28%	11%	28%	MET
IPV/DV Screening	36%	28%	13%	28%	MET
Depression Screening	24%	15%	NA	15%	MET
Comp. CVD-related Assessment	30%	48%[e]	43%[e]	baseline	MET
Prenatal HIV Screening	74%	65%	54%	65%	MET
Childhood Weight Control	24%	24%	64%[f]	24%	MET

[a] *New baseline in FY 2007 due to change in Standards of Care (IHS Division of Diabetes Treatment and Prevention)*

[b] *Data collected from pilot sites only in FY 2005*

[c] *FY 2007 data from CRS IZ IMM package only; FY 2006/2005 data from IZ program report; 78% CRS IZ IMM baseline set in 2006*

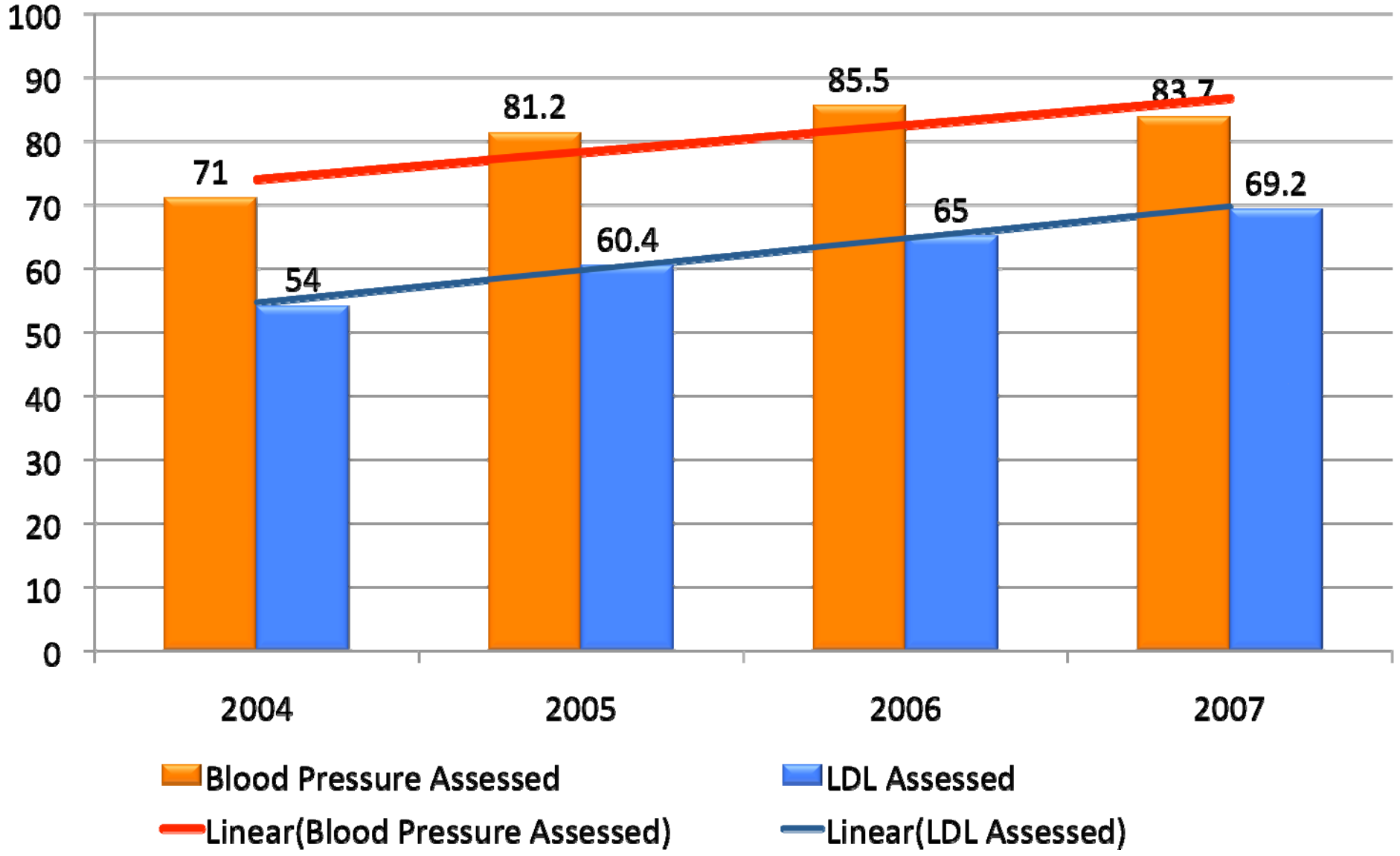
[d] *Tobacco Assessment (changed to Tobacco Cessation - FY 2006)*

[e] *Cholesterol Screening (changed to Comprehensive CVD-related Assessment - FY 2007)*

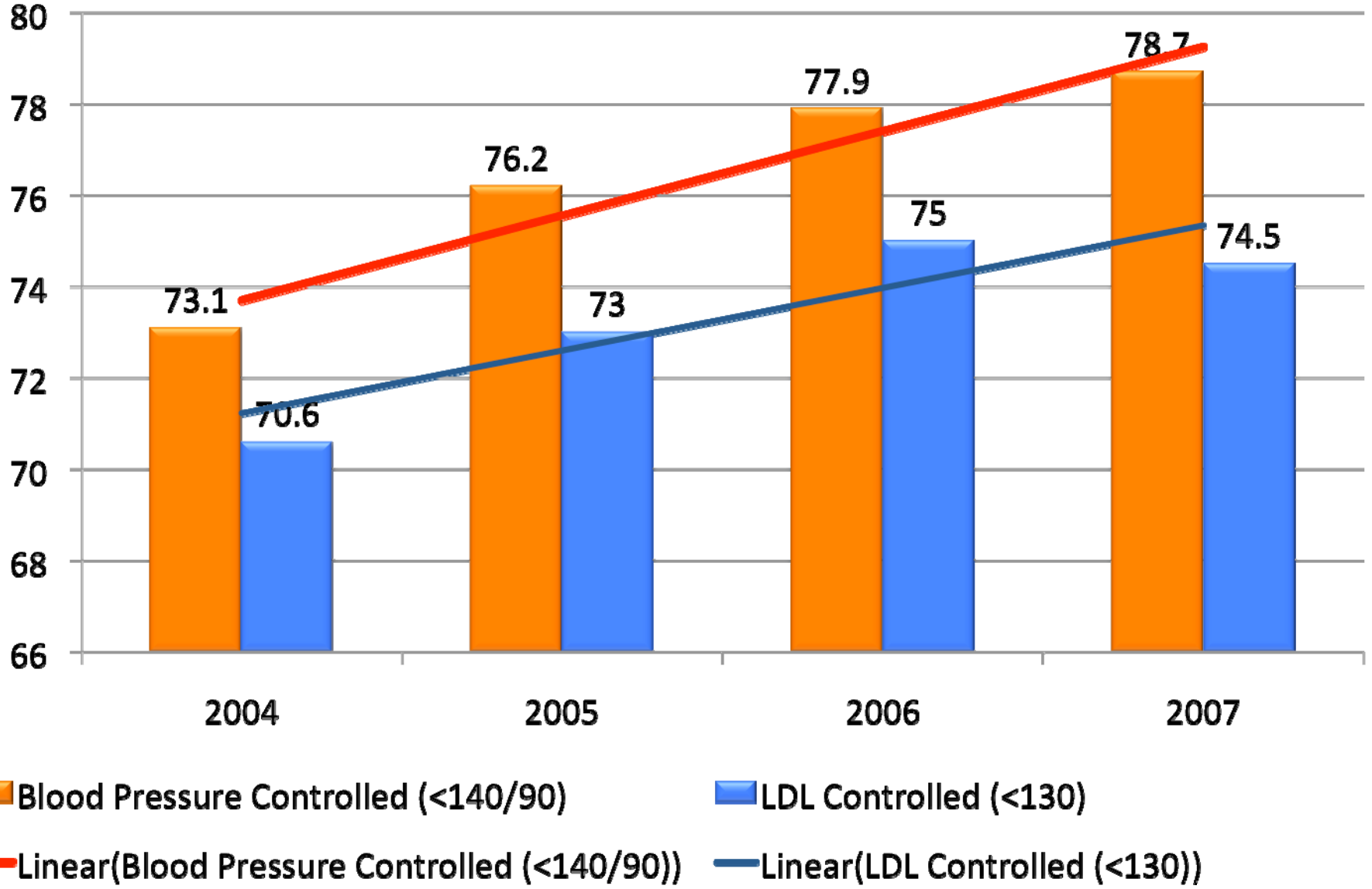
[f] *BMI Assessed (changed to Childhood Weight Control - FY 2006)*

Measures Met = 18
Measures Not Met = 4
Total Measures = 22

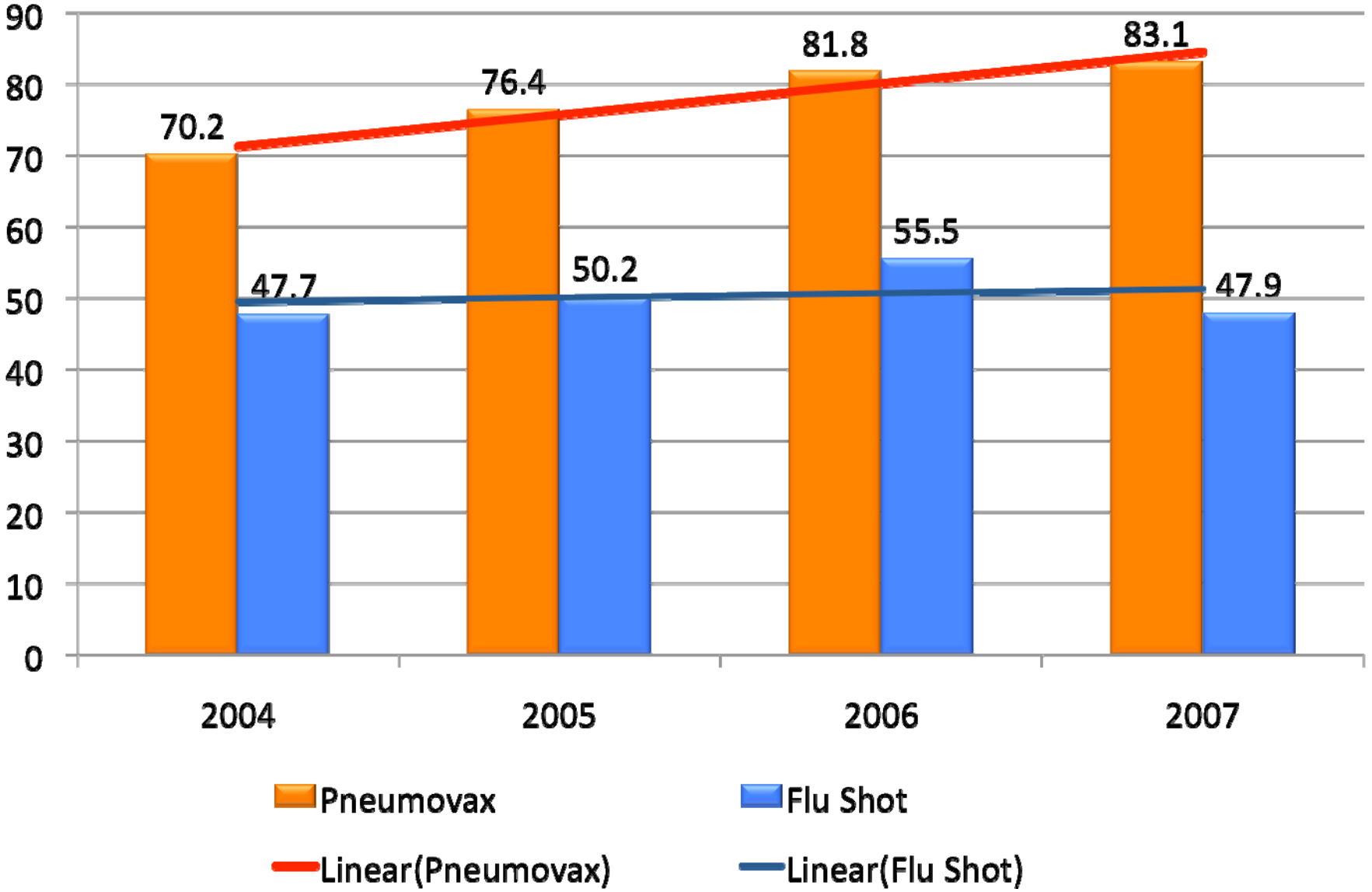
Facility #1- Assessment



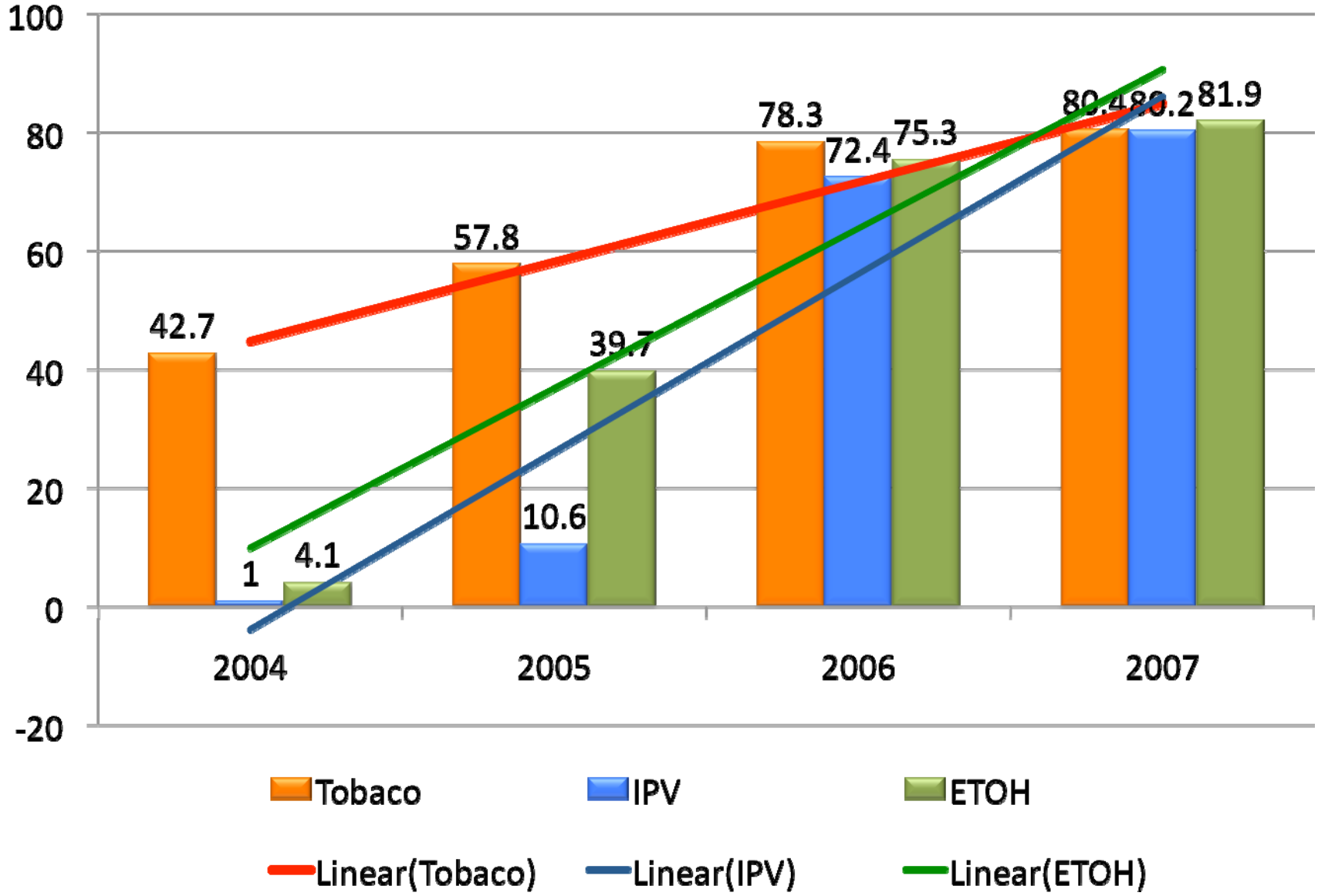
Facility #1- Control



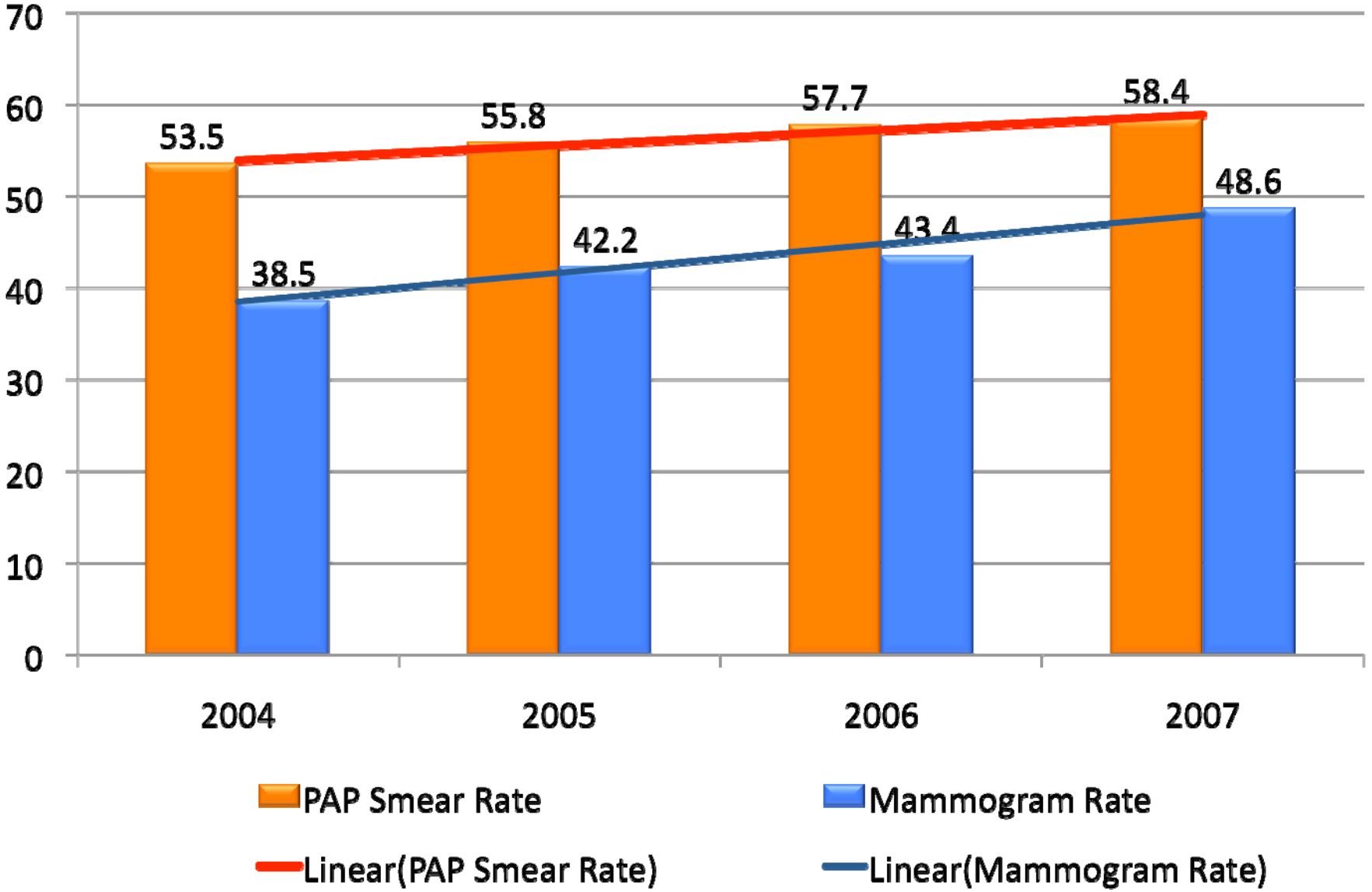
Facility #1- Immunizations



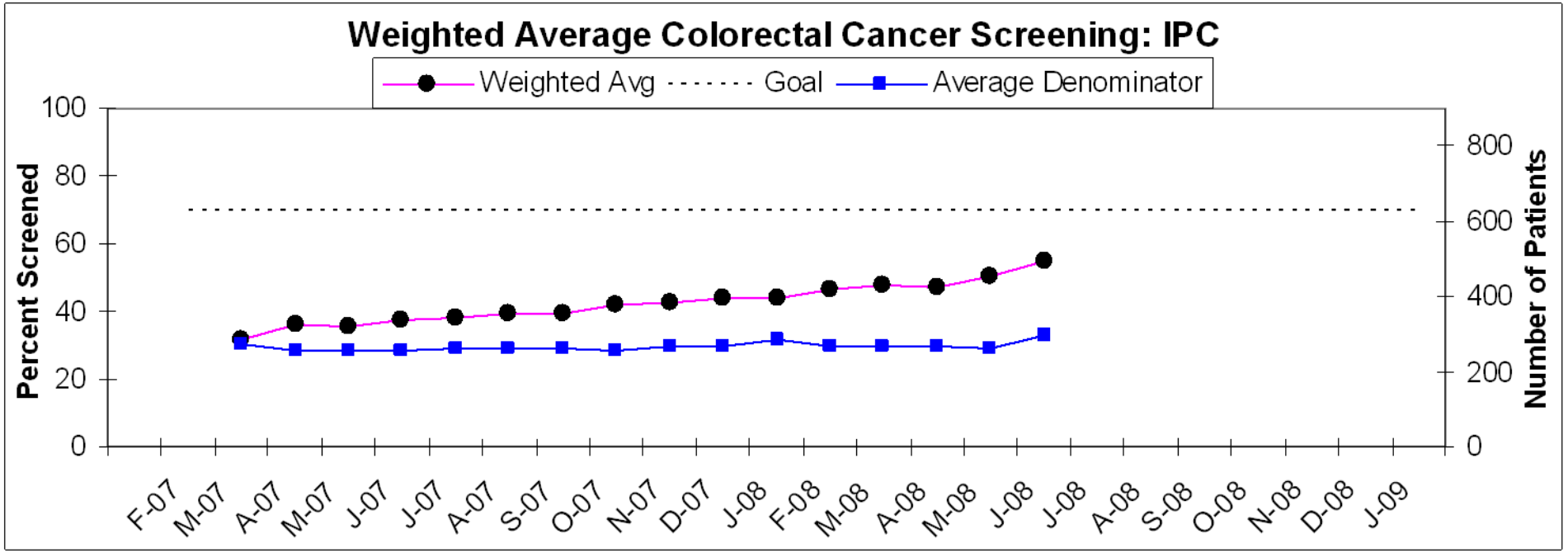
Facility #1- Screening



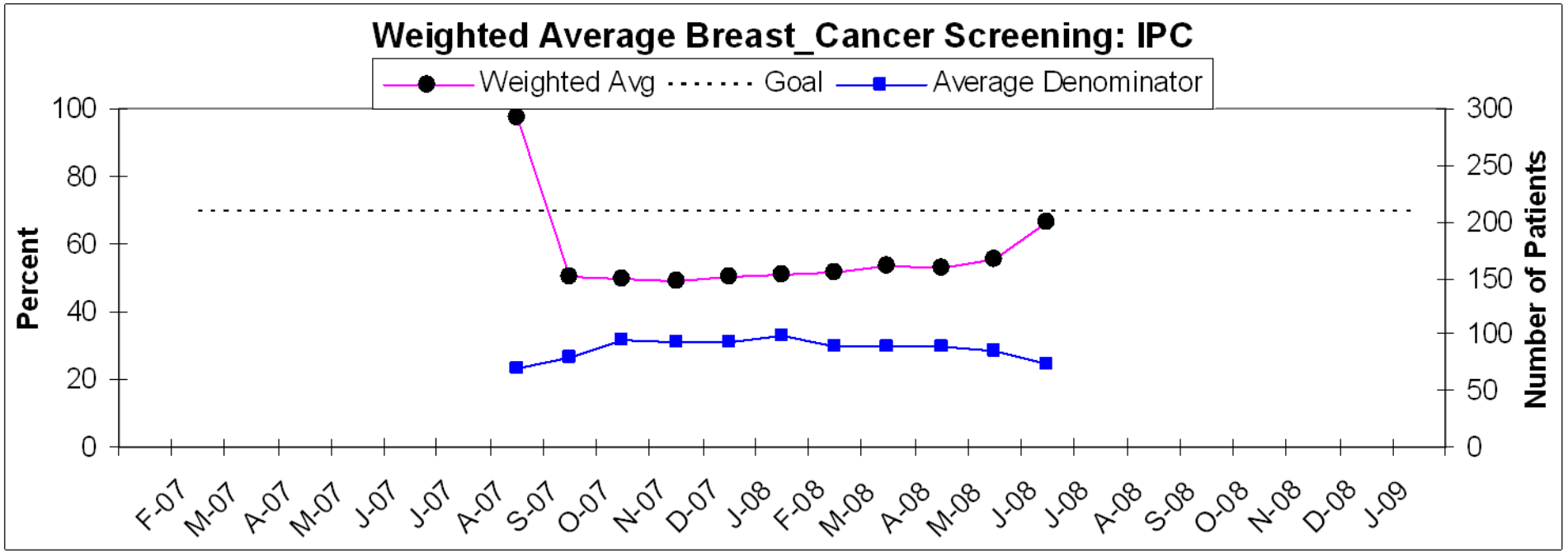
Facility #1- Women's Health



Chronic Care Initiative: Colorectal Cancer Screening



Chronic Care Initiative: Breast Cancer Screening



Patient Wellness Handout

- Information provided to the patient
  - Pre-screening information
  - Promotes Healthcare communications
  - Tool for medical record reconciliation

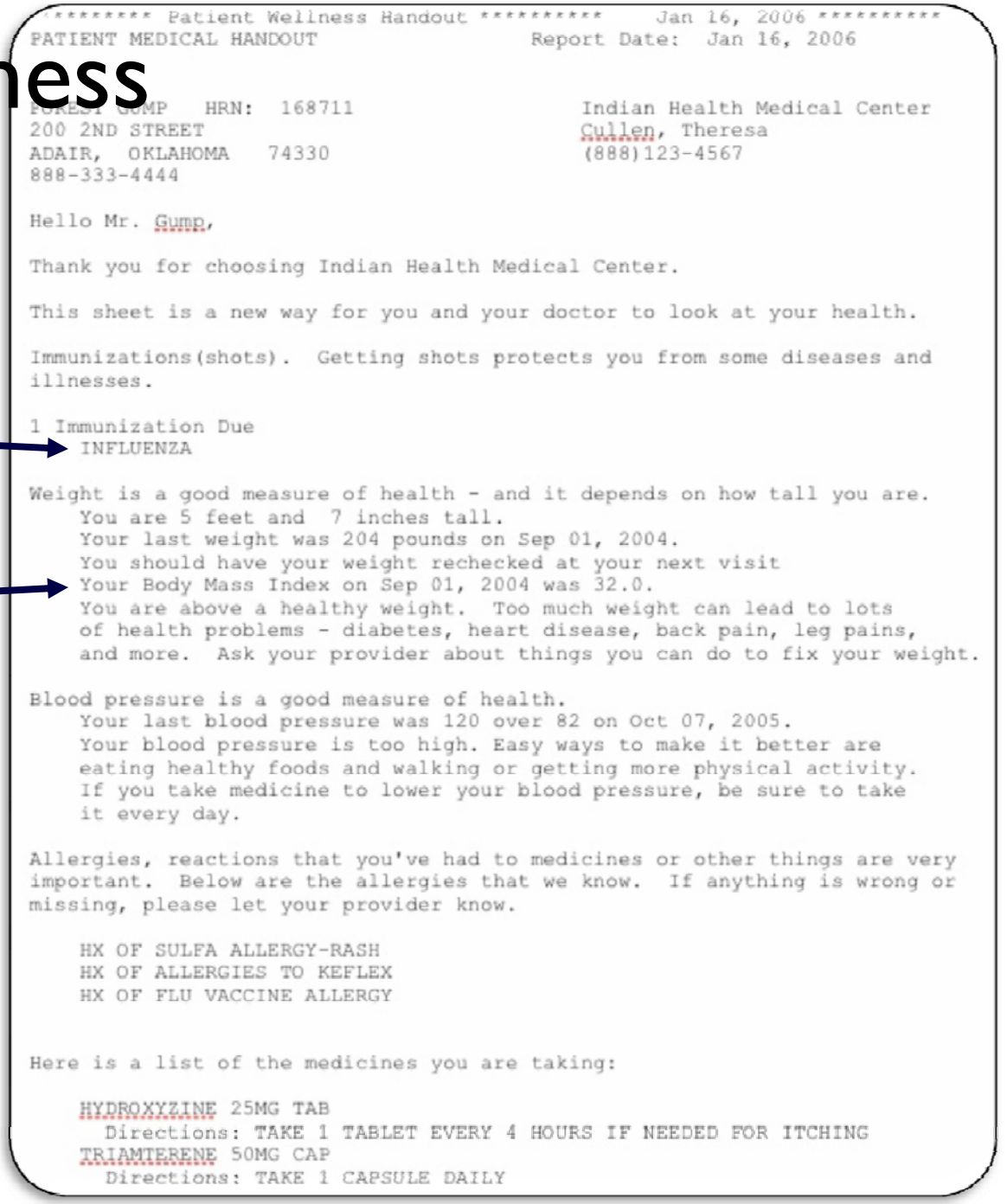
    - Immunizations Due
    - Weight, Height, BMI
    - Blood Pressure
    - Allergies
    - Medications

Patient Wellness Handout

Data extracted from RPMS

Logic used to provide information about results

Reviewed with patient by clinician, nurse, educator, or pharmacist



********** Patient Wellness Handout ********** Jan 16, 2006 **********
PATIENT MEDICAL HANDOUT Report Date: Jan 16, 2006

FOREST GUMP HRN: 168711 Indian Health Medical Center
200 2ND STREET Cullen, Theresa
ADAIR, OKLAHOMA 74330 (888)123-4567
888-333-4444

Hello Mr. Gump,

Thank you for choosing Indian Health Medical Center.

This sheet is a new way for you and your doctor to look at your health.

Immunizations(shots). Getting shots protects you from some diseases and illnesses.

1 Immunization Due
INFLUENZA

Weight is a good measure of health - and it depends on how tall you are.
You are 5 feet and 7 inches tall.
Your last weight was 204 pounds on Sep 01, 2004.
You should have your weight rechecked at your next visit
Your Body Mass Index on Sep 01, 2004 was 32.0.
You are above a healthy weight. Too much weight can lead to lots of health problems - diabetes, heart disease, back pain, leg pains, and more. Ask your provider about things you can do to fix your weight.

Blood pressure is a good measure of health.
Your last blood pressure was 120 over 82 on Oct 07, 2005.
Your blood pressure is too high. Easy ways to make it better are eating healthy foods and walking or getting more physical activity.
If you take medicine to lower your blood pressure, be sure to take it every day.

Allergies, reactions that you've had to medicines or other things are very important. Below are the allergies that we know. If anything is wrong or missing, please let your provider know.

HX OF SULFA ALLERGY-RASH
HX OF ALLERGIES TO KEFLEX
HX OF FLU VACCINE ALLERGY

Here is a list of the medicines you are taking:

HYDROXYZINE 25MG TAB
Directions: TAKE 1 TABLET EVERY 4 HOURS IF NEEDED FOR ITCHING
TRIAMTERENE 50MG CAP
Directions: TAKE 1 CAPSULE DAILY

Clinical Information System Optimization

Day-to-day Function

- Proactive Planned Care

- Optimization of the care team
    - Decision Support
        - Use an HER
        - Reminders: Align and use HER and Health Maintenance Reminders and quality reports.
        - iCare/CRS/traditional registry applications

    - Self Management
        - Use self-management goal setting
        - Maximize use of patient wellness handout
        - Access for patient and family to their own data
        - Handouts and other educational materials readily available

    - Care Plan
        - Maximize use of problems lists
        - Collaboratively develop a plan of care for each individual that summarizes all pertinent patient info in one place
        - Optimize care team data utilization and management
        - Use patient specific goals and standards (e.g. frequency of colonoscopy)

    - System Redesign
        - Utilize RPMS to plan for visits (iCare and reminders)
        - Manage the population proactively – finding groups I need of specific types of care and then delivering that care to them
        - Designated provider function to manage panels of patients and organize care teams.
        - Develop a multidisciplinary team that optimizes the role of each team member
        - Response to reminders
        - Integration of the care team – enhance sharing of info
        - Case management by nurses

    - Clinical Information System
        - Flow of information to and from systems outside of IHS
        - Improved documentation and input EHR

Facilitate Improvement

Create an ongoing Learning community

- Reporting
  - Website for reporting on measures for improvement on monthly basis
- Sharing/interconnectivity
  - WebEx infrastructure – maximize use of WebEx
  - Enhance training strategies (recorded sessions, user manuals)
  - Sharing of lessons learned
- Knowledge Management
  - A system where knowledge is continuously organized and utilized to increase knowledge levels throughout the organization
  - User manual for functions for planned care
  - A central location/system for knowledge sharing and accumulation
- Measurements for implement
  - Define quality goals
  - Align improvement measures with quality goals
  - Instruction manuals for measures and measure reporting

The IHS HIT VISION

- A health care IT system that INCORPORATES family, population, public and community health as a cornerstone of personal health care delivery (not just an afterthought) at the point of care
- Data standards that address the non traditional determinants of health status
- Inclusion of non traditional data information into the traditional patient, provider, family and community perspective
- The elimination of health inequities, using HIT as a major enabler

Indian Health Service

www.ihs.gov

In beauty may I walk.
All day long may I walk.
Through the returning seasons may I walk.
On the trial marked with pollen may I walk.
With grasshoppers about my feet may I walk.
With beauty may I walk.
With beauty before me may I walk.
With beauty behind me may I walk.
With beauty above me may I walk.
With beauty all around me may I walk.
In old age wandering on a trail of beauty, lively, may I walk.
In old age wandering on a trail of beauty, living again, may I walk.
If it finished in beauty,
It is finished in beauty.

DINE' PRAYER