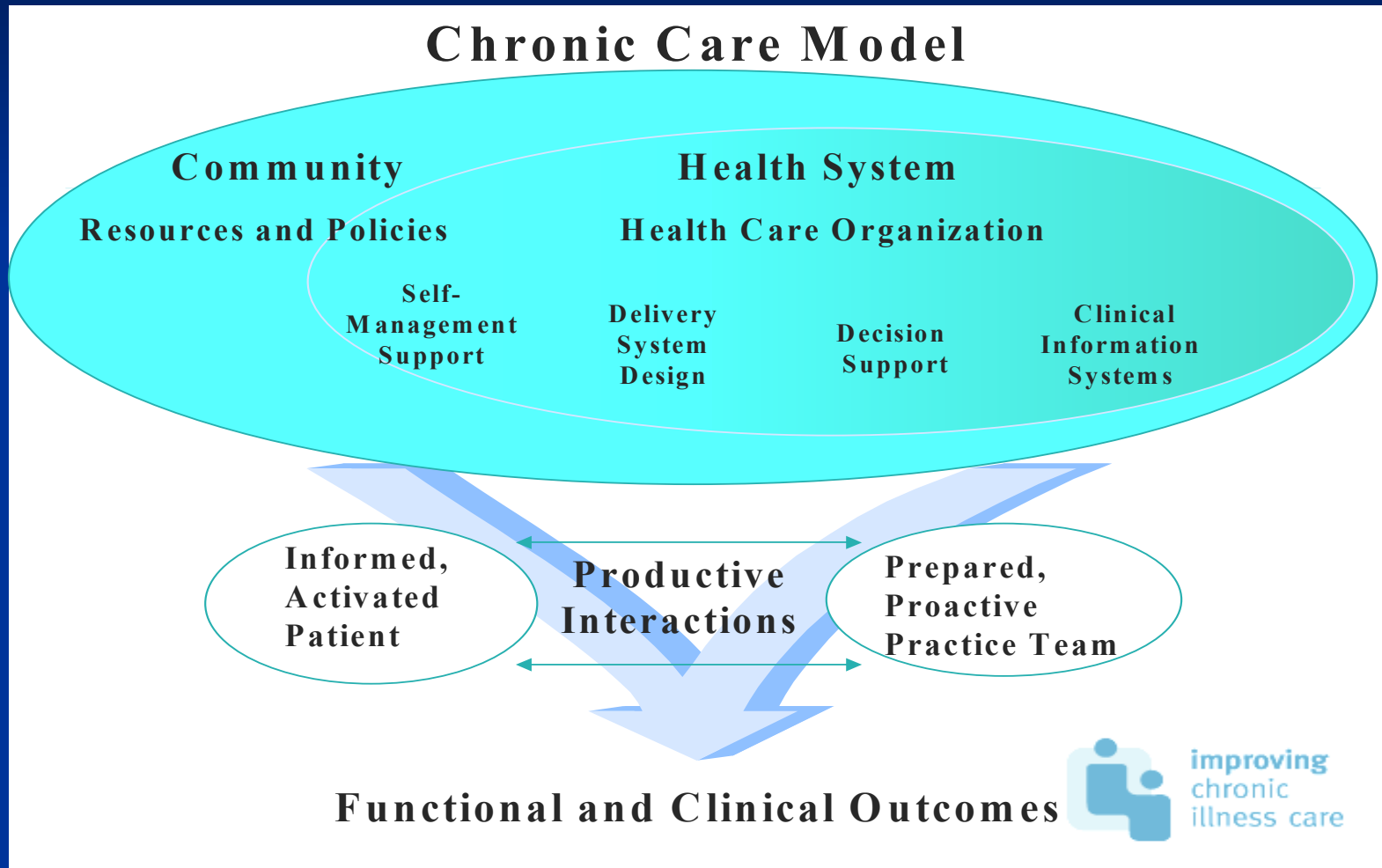


# Point-of-Care Registries

Alan Glaseroff MD  
Chief Medical Officer  
Humboldt Del Norte IPA  
[alang@hdnfmc.com](mailto:alang@hdnfmc.com)

# Chronic Care Model



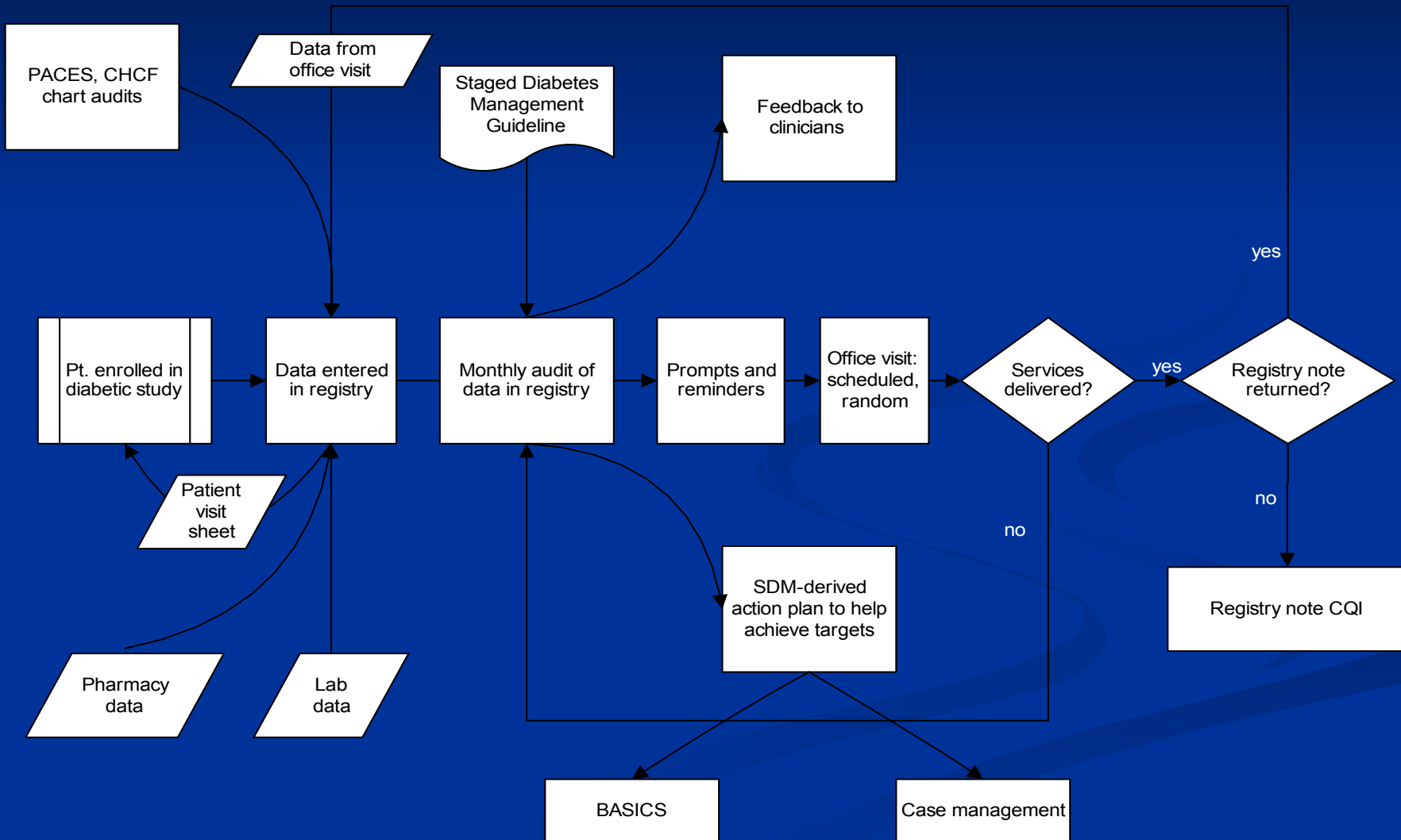
# Point-Of-Care

- Administrative data vs. point-of-care
- Registry as a *planned visit* protocol
- Availability of clinical data: BMI, blood pressure, foot exam, aspirin, tobacco, self-management goals
- Lab, pharmacy, services billed (>30 day delay) available administratively only in managed care
- Offices need a single system for all patients

# Humboldt Diabetes Project

- IPA with >95% of clinicians (MDs, advanced practitioners, behavioral health professionals, podiatrists)
- Managed care <10% of patients
- Point-of-care as primary source of data
- Functionality key to sustaining programs
- CLG: “Invite implementers into the planning process...”
- Pilot systems before wide implementation
- Office managers, medical assistants critical to design

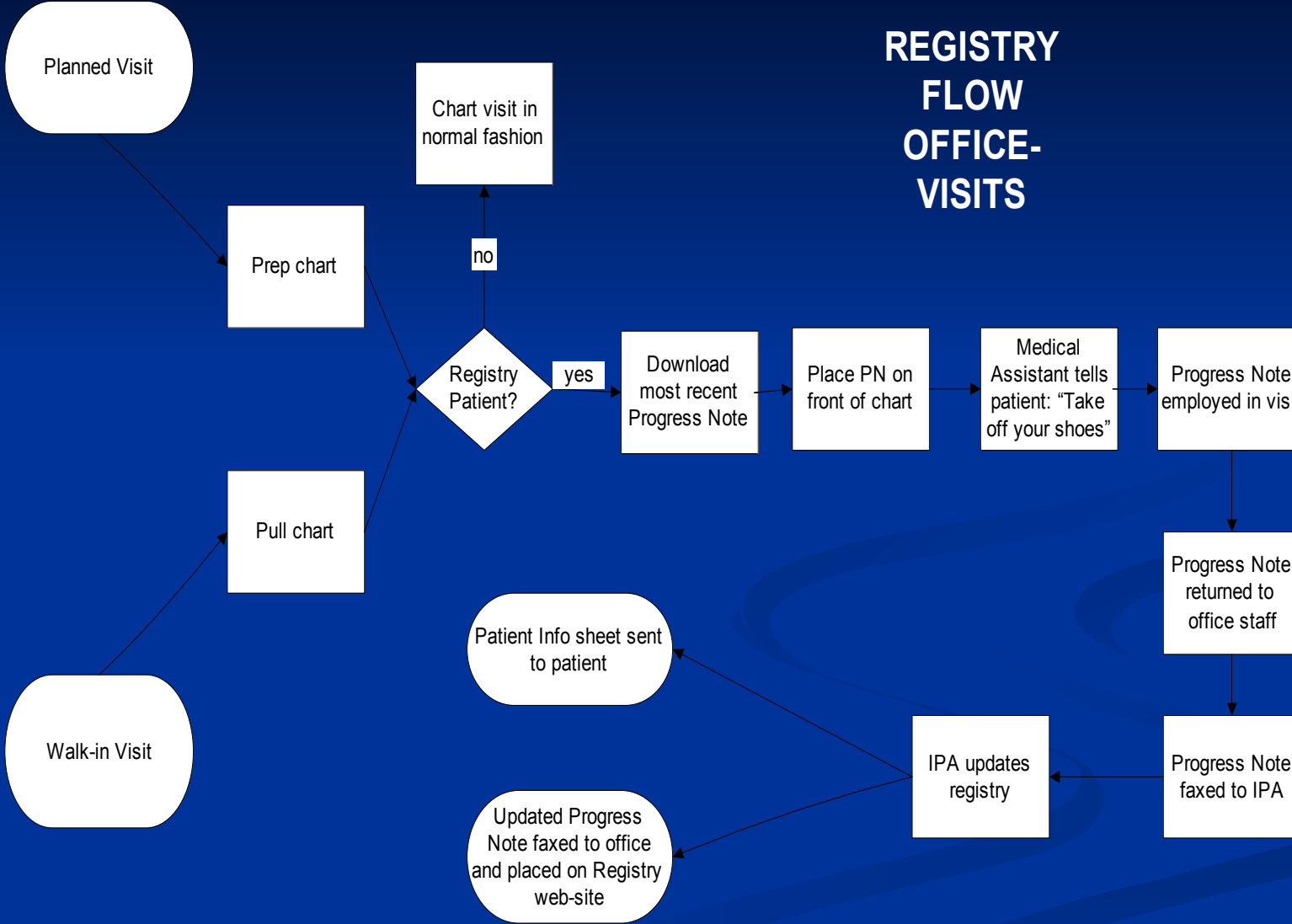
# DIABETIC PROJECT FLOW DIAGRAM



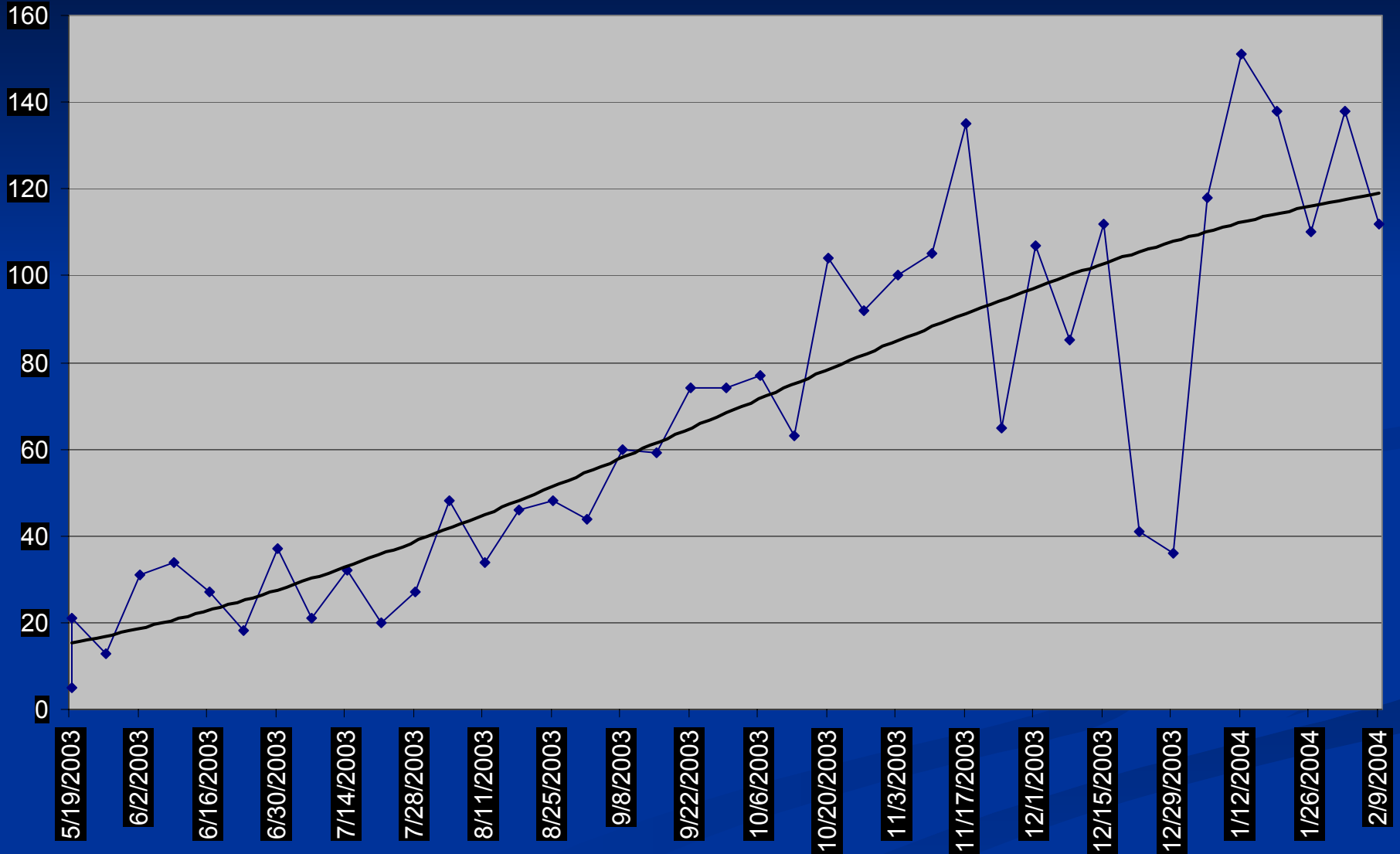
# Information/Decision Support

- Build vs. buy (public domain vs. proprietary)
- C-DEMS: public domain, open source, customizable, control data and reporting
- 2770 total (803 study, 1967 registry only)
- Progress Note: *best practice tool actualized*
- Patient summary: focus group
- Prompts and reminders: keep it simple (HbA1c > 9, no HbA1c in past 6 months)

# REGISTRY FLOW OFFICE- VISITS



# Visits by Week





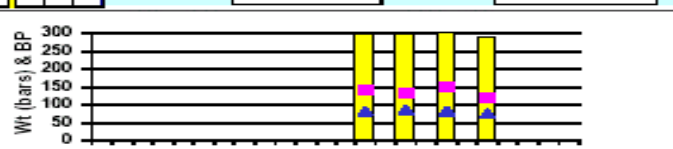
Patient Progress Note

Lindsay & Glaseroff, MDs

Humboldt Diabetes Project - Fax 443-2527

<b>Last Visit</b>	<b>This Visit</b>	<b>BOGUS</b>	<b>Clinician:</b> Glaseroff, Alan	<b>Diabetes Diagnosis Date:</b> 5/10/1986
<i>Date (mmddyy)</i> 5/10/2003		<b>Last Name:</b> Doe	<b>First Name:</b> Jane	<b>Sex</b> F <b>DOB:</b> 1/ 1/1950
<i>Weight (lbs)</i> 290.00		<b>Address:</b> 12345 Main Street; Eureka, CA 95501	<b>Phone (H):</b> (707) 555-1212	
<i>Height (ins)</i> 72.00		<b>Language:</b> English	<b>Ethnicity:</b> White	<b>BMI:</b> 39.3 <b>Insurance:</b> CaliforniaCare
<i>BP - Sys/Dia</i> 120 / 75				

Conditions	Dx	D/C	Add
Cerebrovascular	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CVD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Depression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DM-1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DM-2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HTN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hyperlipidemia	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hypothyroidism	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metabolic Syndrome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nephropathy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neuropathy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Periph Vascular	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Retinopathy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Date	Wt	Sys	Dia
11/1/2002	295.00	141	82
1/1/2003	296.00	132	87
3/1/2003	300.00	150	80
5/10/2003	290.00	120	75

**STUDY**

Meds	Rx	C/I	D/C	Add
ACE Inhibitor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ARB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ASA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BP Med	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diuretic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glucosidase Inhibito	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lipid Agent	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meglitinide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metformin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sulfonylurea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TZD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

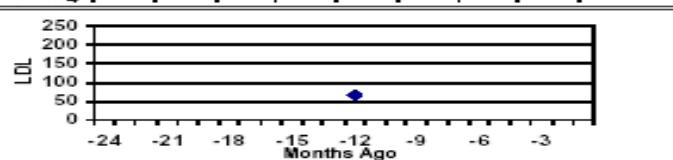


Date	Result
4/1/2002	9.0
10/1/2002	8.5
4/1/2003	8.0

**Clinician-Patient Interface Time:**  
\_\_\_\_\_ min

**Total Counseling Time:**  
\_\_\_\_\_ min

**Other Vitals**  
Pulse \_\_\_\_\_  
Resp: \_\_\_\_\_  
Temp \_\_\_\_\_  
MA Inits \_\_\_\_\_



Date	Result
10/1/2002	68

**SDM Stage**

MNT	<input type="checkbox"/>	Insulin 2	<input type="checkbox"/>
Orals	<input checked="" type="checkbox"/>	Insulin 3	<input type="checkbox"/>
Combo	<input type="checkbox"/>	Insulin 4	<input type="checkbox"/>

Services	Last Date	Done	Ref	Decl
Alcohol Asmnt	DUE - 10/03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tobacco Asmnt	DUE - 10/03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exer Asmnt	DUE - 10/03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dental Ex	1/2/2003	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Retinal Ex	2/5/2003	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BASICS	DUE - 10/03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SM Review	DUE - 10/03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Foot Ex	DUE - 06/03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monofilament Ex	DUE - 10/03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flu Vac	DUE - 10/03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pne Vac	3/1/2003	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Self Management Goals**

**Home BG Goals:**  
Between 70 and 140

**Nutritional:**  
veggies for a pre-meal snack

**Exercise:**  
brisk walking 20 minutes each day

Labs	Last Date	Last Result	New Date	New Result	Ref	Decl
HbA1c	DUE - 10/03	8			<input type="checkbox"/>	<input type="checkbox"/>
Cholesterol	DUE - 10/03	117			<input type="checkbox"/>	<input type="checkbox"/>
HDL	DUE - 10/03	46			<input type="checkbox"/>	<input type="checkbox"/>
LDL	DUE - 10/03	68			<input type="checkbox"/>	<input type="checkbox"/>
Triglycerides	DUE - 10/03	52			<input type="checkbox"/>	<input type="checkbox"/>
BUN					<input type="checkbox"/>	<input type="checkbox"/>
Serum Creatinine	DUE - 10/03				<input type="checkbox"/>	<input type="checkbox"/>
K+					<input type="checkbox"/>	<input type="checkbox"/>
ALT (SGPT)	DUE - 10/03				<input type="checkbox"/>	<input type="checkbox"/>
Gross Proteinuria	DUE - 10/03	180			<input type="checkbox"/>	<input type="checkbox"/>
Al/Cree Ratio	DUE - 10/03				<input type="checkbox"/>	<input type="checkbox"/>
MicrAl	DUE - 10/03				<input type="checkbox"/>	<input type="checkbox"/>

**Notes:**

Clinician Signature: \_\_\_\_\_

# HUMBOLDT DIABETES PROJECT

## Diabetic Eye Exam Referral and Report

HDP#: \_\_\_\_\_

3100 Edgewood Road Eureka, CA 95501

(707) 443-4553

hdp@hdfnmc.com

Date:			Referred by:	
Referred to:				
Patient Name:				
DOB:	Gender:	Home Phone:		
Address:			Phone:	Fax:
Referring Provider Signature:				

Reason for Referral:

Findings:

<input type="checkbox"/> <b><u>NO RETINOPATHY</u></b>	<input type="checkbox"/> <b><u>EARLY NON PROLIFERATIVE DIABETIC RETINOPATHY (NPDR)</u></b>	<input type="checkbox"/> <b><u>NPDR MODERATE TO SEVERE</u></b>	<input type="checkbox"/> <b><u>PROLIFERATIVE DIABETIC RETINOPATHY</u></b>
	<input type="checkbox"/> Microaneurysms <input type="checkbox"/> Sparse Blot and Dot <input type="checkbox"/> Lipid	<input type="checkbox"/> Clinically Sig. Macular Edema <input type="checkbox"/> Nerve Fiber Layer Infarct (Cotton Wool Patch) <input type="checkbox"/> Venous Abnormality <input type="checkbox"/> Intraretinal Microvascular Abnormality	<input type="checkbox"/> Neovascular Optic Nerve Head <input type="checkbox"/> Neovascular Retinal Surface <input type="checkbox"/> Vitreous Hemorrhage <input type="checkbox"/> Traction - Retinal Detachment
<b><u>Treatment Recommended</u></b> <input type="checkbox"/> Recheck in 1 year	<b><u>Treatment Recommended</u></b> <input type="checkbox"/> Ophthalmology Consult <input type="checkbox"/> Angiogram <input type="checkbox"/> Laser-Focal Grid <input type="checkbox"/> Follow-up Appointment	<b><u>Treatment Recommended</u></b> <input type="checkbox"/> Ophthalmology Consult <input type="checkbox"/> Fluorescein Angiogram <input type="checkbox"/> Laser-Focal / Pan Retinal Photocoagulation (PRP) <input type="checkbox"/> Follow-up Appointment <input type="checkbox"/> Retinal Consult	<b><u>Treatment Recommended</u></b> <input type="checkbox"/> Ophthalmology Consult <input type="checkbox"/> Fluorescein Angiogram <input type="checkbox"/> Laser-Focal / Pan Retinal Photocoagulation (PRP) <input type="checkbox"/> Vitrectomy <input type="checkbox"/> Retinal Detachment Surgery <input type="checkbox"/> Endoscopic Laser
	<b><u>Status</u></b> <input type="checkbox"/> Stable <input type="checkbox"/> Improving <input type="checkbox"/> Worse	<b><u>Status</u></b> <input type="checkbox"/> Stable <input type="checkbox"/> Improving <input type="checkbox"/> Worse	<b><u>Status</u></b> <input type="checkbox"/> Stable <input type="checkbox"/> Improving <input type="checkbox"/> Worse

Follow-up Recommended Return: \_\_\_\_\_ Days \_\_\_\_\_ Month(s) \_\_\_\_\_ Year(s) Alert Risk:  Minimal  Moderate  High

Clinician Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Fax Back to:	AND	Humboldt Diabetes Project (707)443-2527
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# HUMBOLDT DIABETES PROJECT

3100 Edgewood Road Eureka, CA 95501 (707) 443-4553 hdp@hdmfmc.com

Jane Doe  
12345 Main Street  
Eureka, CA 95501

Friday, July 25, 2003

## Patient Progress Summary

This summary is being provided to you to better enable you to manage your diabetes. Please take every opportunity to discuss with your health care provider what your personal goals are for the management of your diabetes.

Test/Type of Treatment	How Often?	Standard Goal	My Goal	Date Last Done	Last Result
<b>Blood Pressure Test</b> <i>to check for high blood pressure</i>	Every visit	Systolic: <130 Diastolic: <80		5/10/2003	Systolic: 120 Diastolic: 75
<b>Blood test for HbA1c</b> <i>to check your avg blood sugar over the prev. 2-3 mos.</i>	Every 3 months	less than 7%		4/1/2003	8
<b>Blood tests for HDL "good" cholesterol LDL "bad" cholesterol</b> <i>to check for risk of heart disease</i>	Every 12 months	HDL: greater than 40 LDL: less than 100		10/1/2002	HDL: 46 LDL: 68
<b>Urine test for protein level</b> <i>to check for signs of kidney damage</i>	One every 12 months				
<b>Gross Protein</b>		Negative		10/1/2002	
<b>Urine Albumin/Creatinine Ratio</b>		less than 30			
<b>Microalbumin</b>		0			
<b>Dental Exam</b> <i>to check for tooth decay and gum disease</i>	Every 6 - 12 months			1/2/2003	
<b>Eye Exam</b> <i>to check for eye damage caused by diabetes</i>	Every 12 months				
<b>Foot Exam</b> <i>to check for poor blood circulation and nerve damage</i>	Every 12 months			3/1/2003	
<b>Flu Vaccine</b> <i>to help prevent the flu</i>	Every Fall			10/1/2002	
<b>Pneumonia Vaccine</b> <i>to help prevent pneumonia, meningitis and sepsis</i>	Every 6 years			3/1/2003	
<b>BASICS Diabetes Education</b> <i>to learn self management methods</i>	Every 12 months				

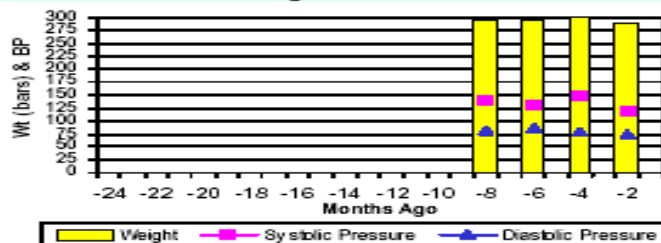
### Self Management Goals

**Exercise:** brisk walking 20 minutes each day

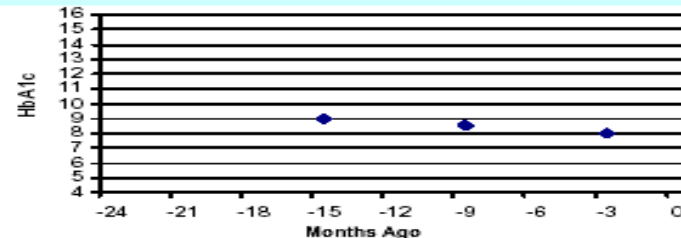
**Blood Glucose:** Between 70 and 140

**Nutrition:** veggies for a pre-meal snack

### Your Weight and Blood Pressure



### Your HbA1c



# Going Forward

- Co-morbidities the rule, not the exception
- Plan *all* care, not just chronic care
- Patient activation - overcoming barriers
- Informed consent checklist
- Shared decision-making tools
- Links to credible information
- Instantaneous QI – statistical process control