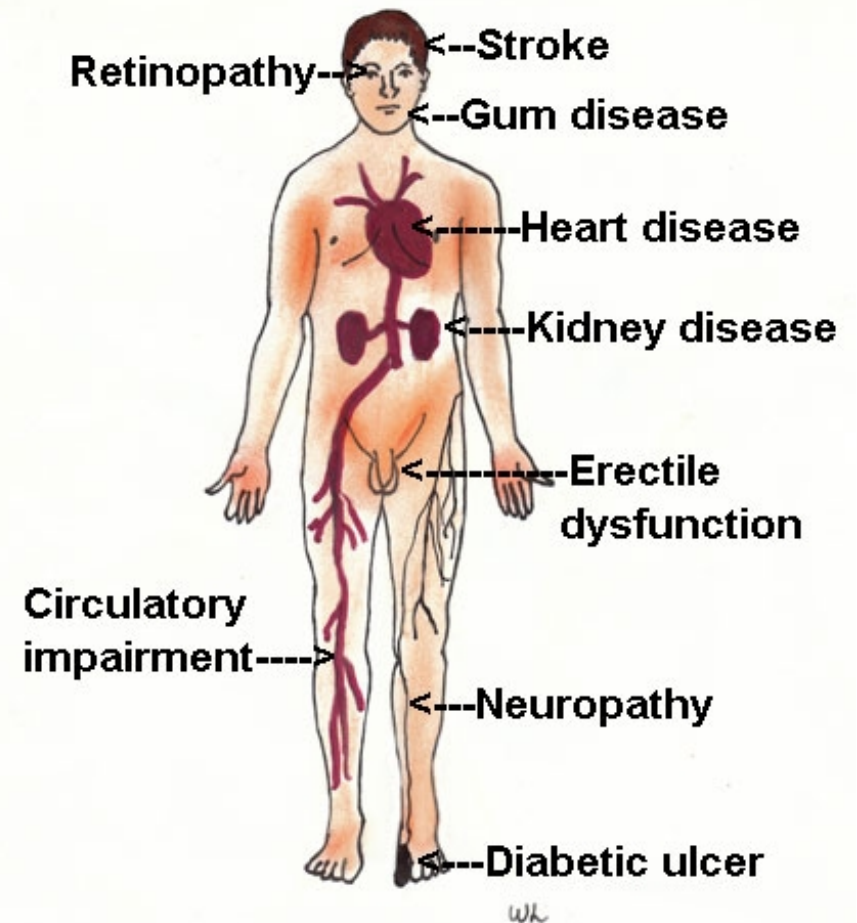
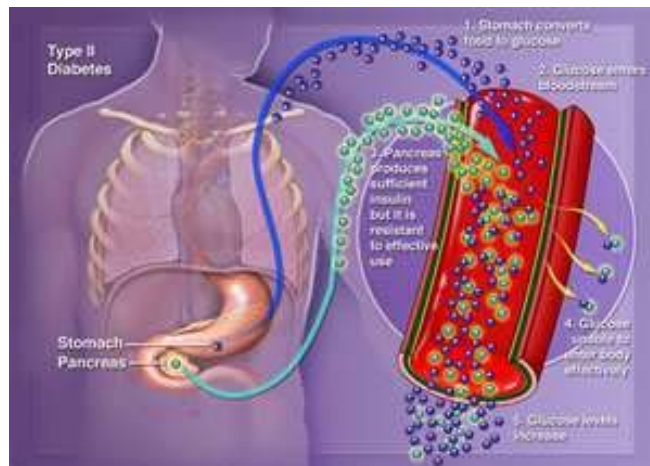


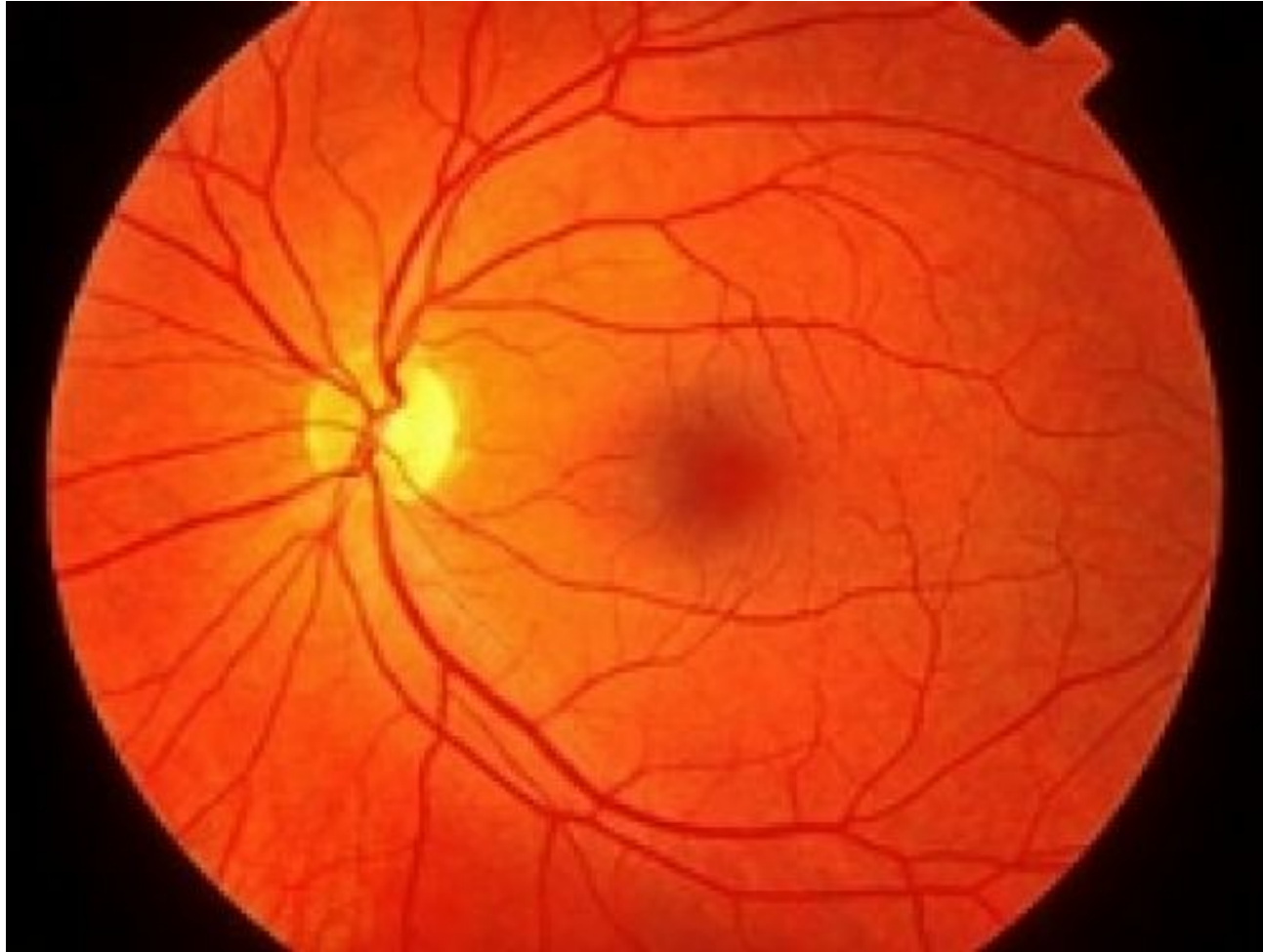


Using Health Information Technology to Improve Diabetes Care In Rural Community Health Centers

Terry Yonker RN, MS, FNP-BC
Finger Lakes Community & Migrant Health

COMPLICATIONS OF DIABETES





Digital Image of Retina





Evidence of Diabetic Retinopathy

FLCMH 1.2012

Comprehensive Annual Dilated Eye Exam



The Reality Is.....

Patients do not seek annual eye exams because:



- DR is asymptomatic
- Socioeconomic factors
- Lack of transportation
- Lack of knowledge re: need for regular retinal exam
 - Inconvenience (loss of work time)
 - Cultural and language barriers

▶ Fundus Photography in PCMH

What the Literature Says:

Cost Effective

Preserves Sight

Increases Access for Patients in
Remote and Rural areas

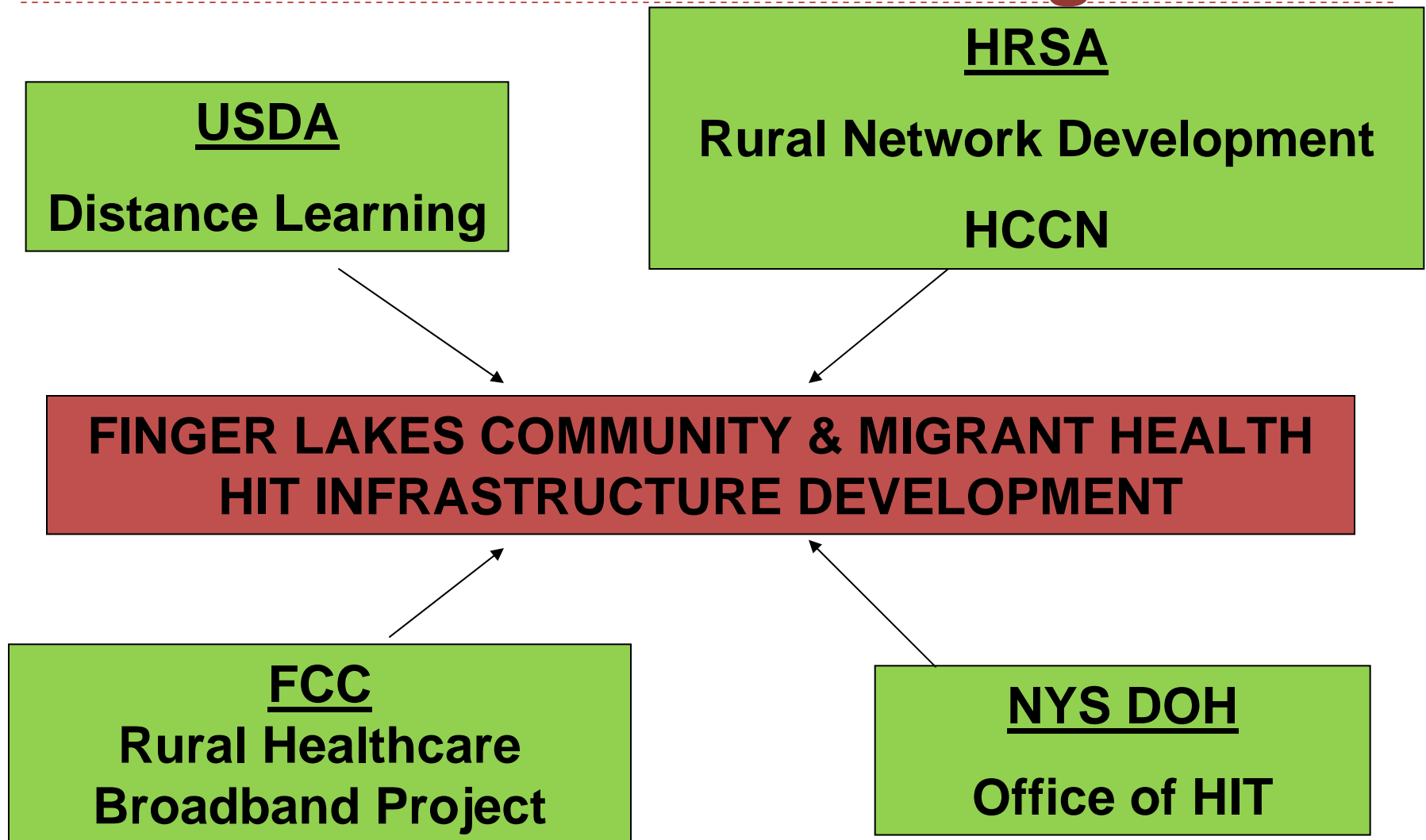
Decreases time to treatment

Decreases Time and Distance traveled



-Jones & Edwards (2010). *Diabetic Medicine*, 27 (30), 249-256

Telehealth Funding



Our Funders Challenged Us.....



....TO DEMONSTRATE BETTER OUTCOMES

Improved A1C levels (normal <7) = a measure of the average blood sugar over time

Improved B/P ($< 130/80$)

Improved LDL (< 100) = measures “bad” cholesterol

Improve kidney function (microalbumin screen/use of ACE-I)

Foot Exams

Retinal Exams

Smoking Cessation Counseling

Use of Aspirin with high risk patients

Immunizations (Flu and Pneumonia)

Medical Nutrition Therapy/Self Management Goals

Dental Exams

Using HIT to Improve Diabetes Care

EMRVideoconference***Digital Imaging***
Store & Forward TechnologyTelephone Monitoring
Care Management





Step #1: EMR & Creation of a Registry

MR #	Last visit		A1C Date		Result		B/P date		LDL		Malb		DR		Foot		Sm
	Date	Date	Value	Date	Value	Date	Date	Value	Date	Value	Date	Value	Date	Value	Exam	oke	
A07362500	10/20/11	10/20/11	7.3	10/20/11	124/79	4/11/11	71	7/26/11	<6	7/26	mild NPDR	6/21/11	N				
A07343203	11/28/11	11/28/11	10.3	11/28/11	124/80	3/1/11	38	11/28/11	150	1/5	mild NPDR	3/3/11	N				
A07317705	11/15/11	11/15/11	5.9	11/15/11	107/72	6/20/11	59	4/8/11	13	7/21	neg	4/8/11	N				
3617386	11/01/11	9/8/11	14	11/1/11	106/66	9/25/11	231	9/8/11	<6	9/29	?glaucoma	9/8/11	N				
10002	12/06/11	12/6/11	6.4	12/6/11	126/83			12/6/11	ACE-I				N				
A07273833	10/25/11	8/25/11	7.3	10/25/11	129/80	6/2/11	85	8/25/11	16	8/25	neg	8/25/11	yes				
A07228967	12/29/11	11/22/11	7.7	12/29/11	145/85	12/1/11	100	8/16/11	131	8/2	mild NPDR	11/22/11	N				



Step #2 Care Coordination

Concurrent Chart Review
Coordinate Outreach with Case
Manager
Quality Assurance Reports
Lead Team Meetings
Quality Improvement





Step # 3 Case Management

- ❖ Diabetes Case Manager/Community Health Worker
- ❖ Outreach
- ❖ Make Appointments
(PCP, labs, eye specialist, RD, dental)
- ❖ Transportation/Interpretation
- ❖ Insurance Access
- ❖ Health Education
- ❖ DRS Photography
- ❖ Home Visits
- ❖ Out of State Linkage

Step #4 Bilingual Nutrition Educator



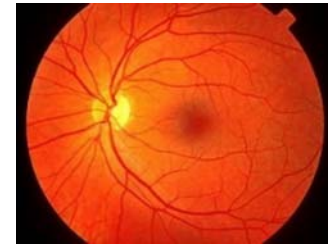
Step # 5 Live Videoconferencing



Step #6 Fundus Photography



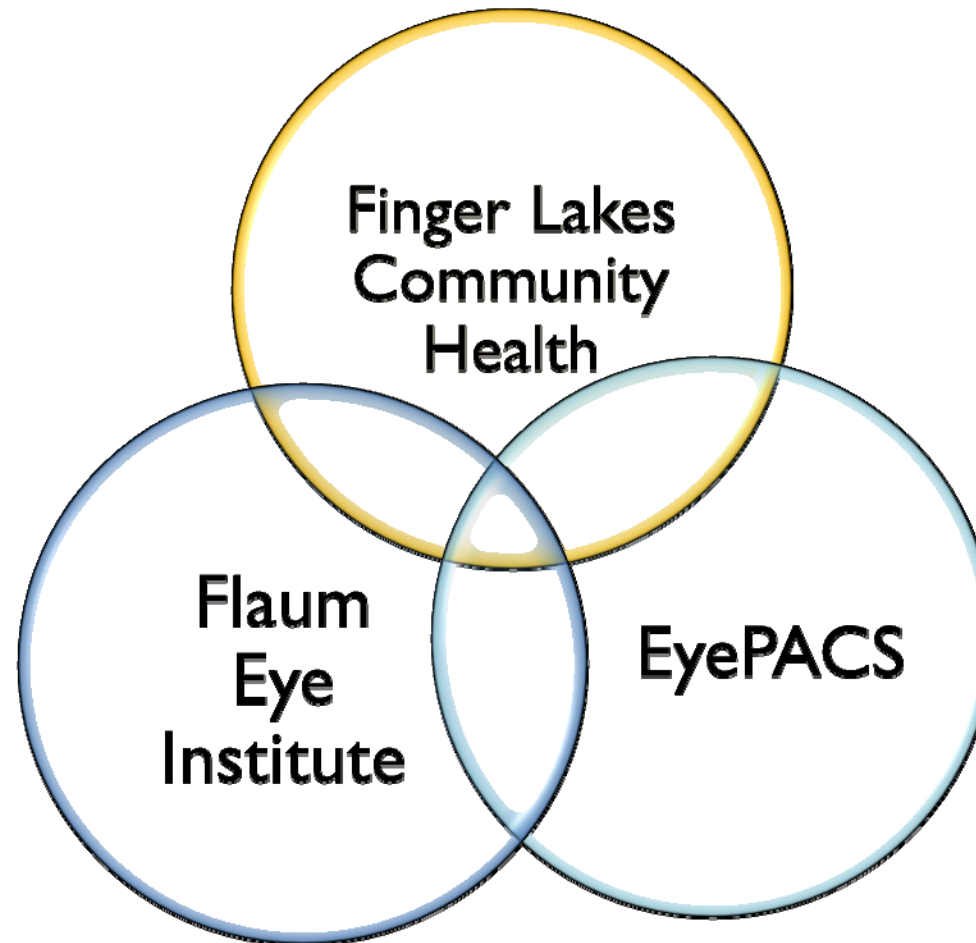

eyePACS
Picture Archive Communication System



Diabetic Retinopathy Screening In PCMH



Step # 7 Collaboration



Program Development

- *Informed Consent
- *Visual Acuity
- *History
- *Digital Imaging Order
- *Mydriasis (Pupil Dilating Agents)
- *Photography
- *Reading and Grading by Eye Specialist
- *Referrals
- *Patient Education
- *Out of state linkage
- *Calling eye MDs for Reports



2009-09-19

Sodus Community Health DRS Screening Program Report 1/1/11-12/31/11

119 patients with diabetes

95 completed screening exam in past year = 80%

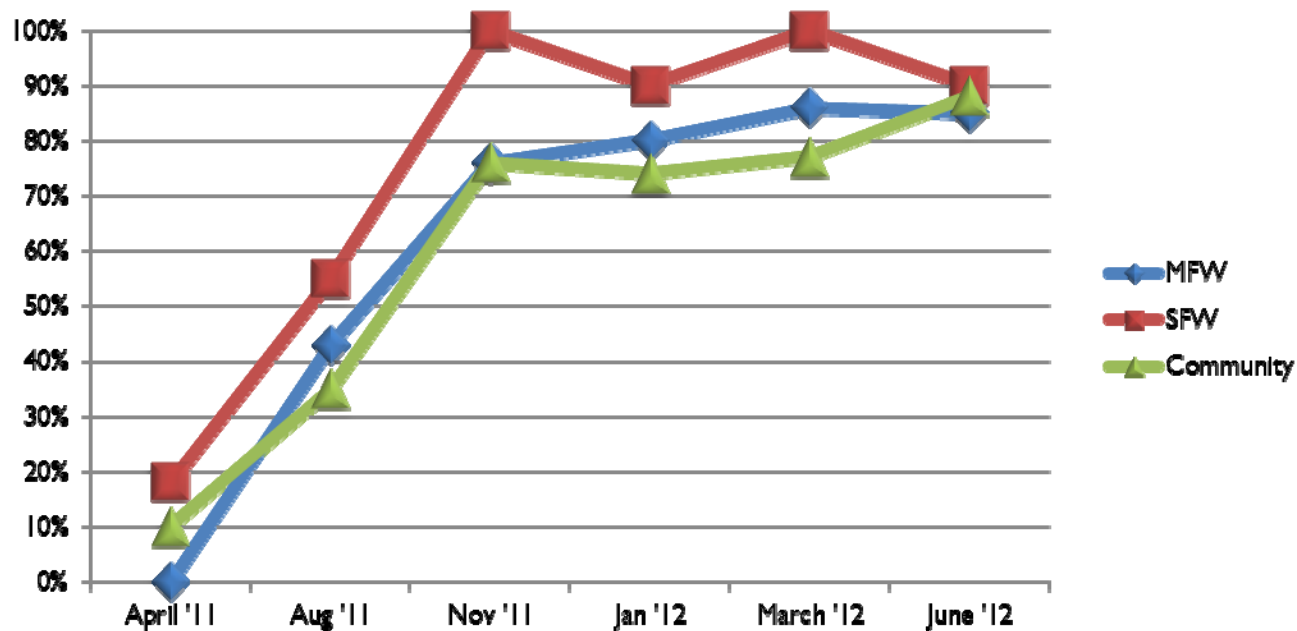
On-site – 47%

Off site – 53%

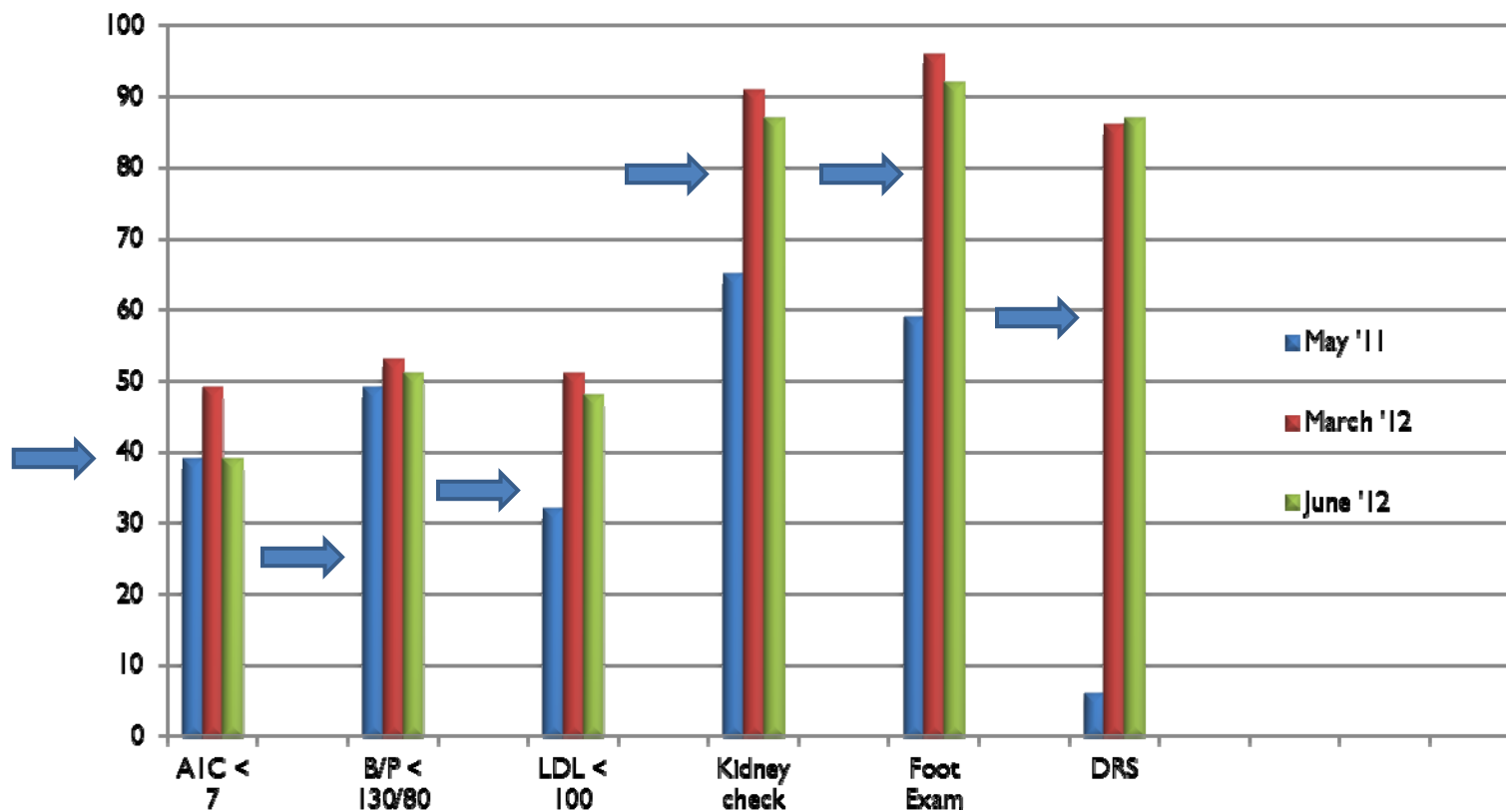
Prevalence of DR = 9.5%

Population	# DRS onsite	# OD screened	Mild NPDR	Severe PDR	? Glaucoma	Maculopathy
MFW	36	7	4	3	3	1
SFW	7	4	2	0	0	0
Community	2	32	1	0	1	0

Sodus Community Health Retinopathy Screening Results



Sodus Community Health Diabetes Quality Indicators



National Committee on Quality Assurance(NCQA)

> 40%

>25%

>36%

>80%

>80%

>60%

Looking Into the Future.....

Program implementation at Geneva CHC early in 2012

Program replication at Port Byron CHC and Penn Yan CHC

Program replication at Aurora, Illinois CHC (NFTN)

Diabetes Chronic Disease Self Management Programs

Diabetes Education Using Promotoras

Telehealth In-Home Monitoring Systems

Certified Diabetes Educators (CDE) Virtual Case Management

Virtual Case Management



Telehealth Programs At FLCH

- ▶ **Teledentistry**
- ▶ **Telepsychiatry**
 - ▶ **Telemental Health**
 - ▶ **Tele-ENT**
- ▶ **Tele-Pulmonary**
- ▶ **Tele-Diabetes**
 - ▶ **Tele-Peds**

To be developed in 2013....

- ▶ ***Tele-HIV/HCV***
- ▶ ***Tele-Dermatology***
- ▶ ***Tele-Recovery***

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585-314-7548

▶ **Neuro**

RESOURCES

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