



ECCO

The Eye Care Community Outreach Program

Eyes first: Eye exams as a gateway to diabetes care for the medically underserved.

Authored by

Dewana Allen, MPH, John F. Yannessa, Ph.D, Edwin Marshall, OD,
MPH

Mission Statement



To improve the quality of vision health care for medically underserved residents of central Indiana through collaboration, screening, education, advocacy, and the services of optometrists and ophthalmologists.



When & Why Was ECCO Formed?



- ECCO Began in April 2004 (3 years old)
- Formed to give low-income & uninsured people access to affordable vision care.
- The few existing charity programs could not meet large need for vision care in community.
- Over 98,000 uninsured in Marion County (2002, Hudson institute)
- Minority populations – Higher rates of being uninsured & having eye diseases.^{2,3}
Improving access to care will help to decrease health disparities in Central IN.

[1] Hargraves, J. Lee (October 2004). Center for Studying Health System Change. Tracking Report No. 11, "Trends in Health Insurance Coverage and Access Among black, Latino and White Americans, 2001-2003.

[2] National Eye Institute & National Center on Minority Health and Health Disparities. (August 9, 2004). "U.S. Latinos Have High Rates of Eye Disease and Visual Impairment."



ECCO



ECCO works to provide uninsured and underinsured residents access to eye care and eyeglasses through donations of optometrists and ophthalmologists.



ECCO



ECCO also provides vision education, arranges screenings, and assists with any other medical or social needs of the individual.



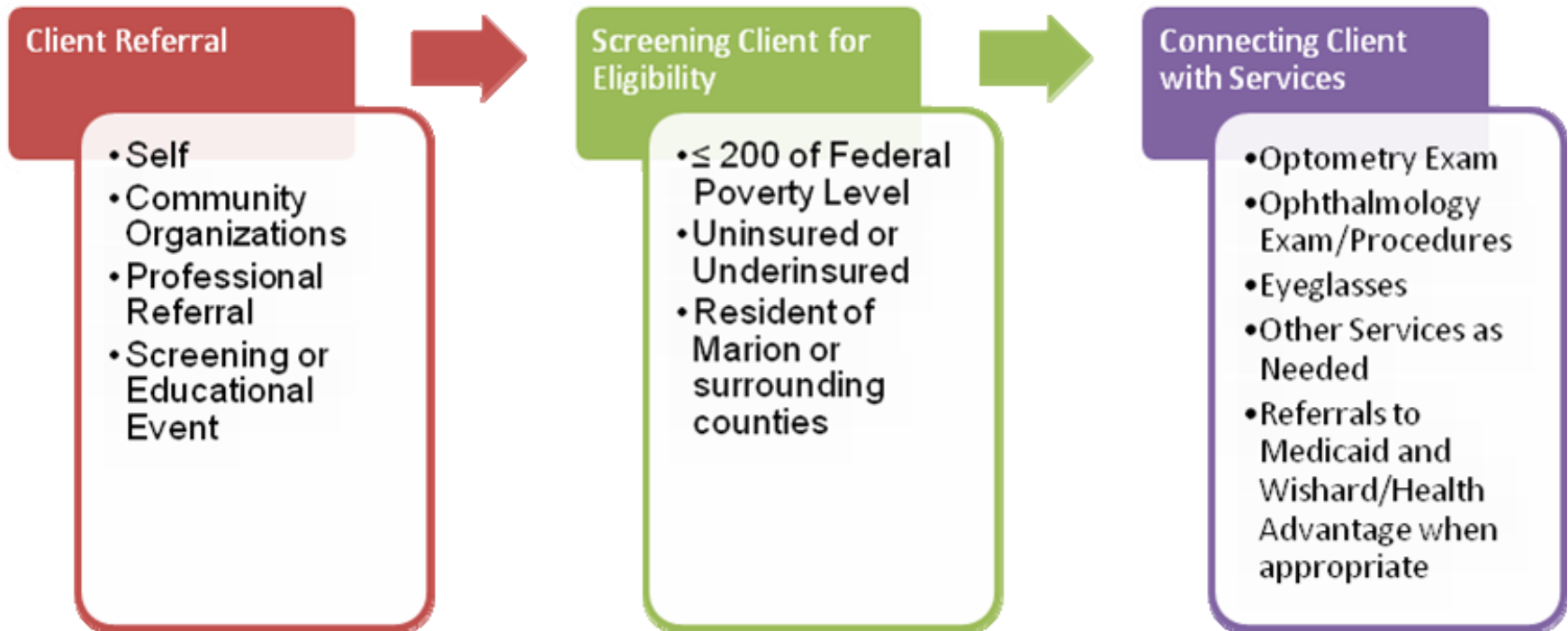
ECCO



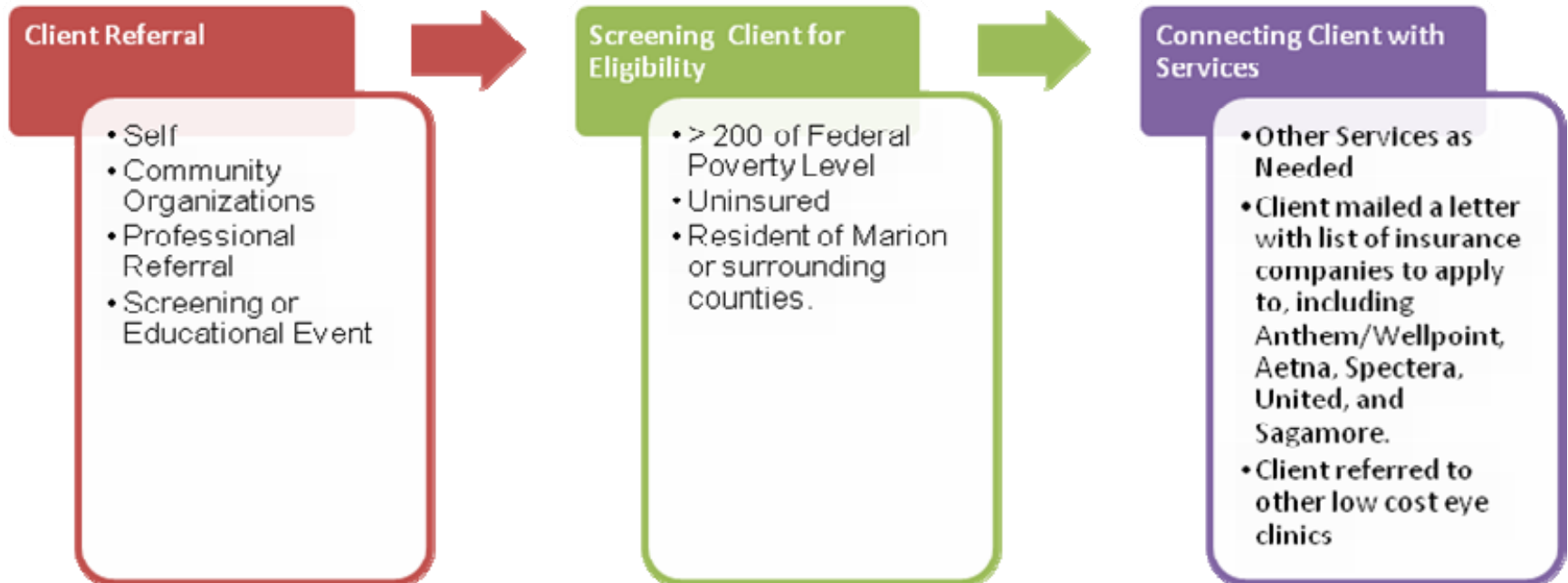
- Central component of intervention is a donated comprehensive eye exam.
- Connection to medical services such as referral to primary care physicians/low cost clinics, insurance coverage, and/or consultation/ surgeries for further eye care services to optimize quality of health.
- Follow up for continuity of care b/w primary care and eye care.



ECCO Process for Qualifying Individuals



ECCO Process for Non-Qualifying Individuals



Purpose of the ECCO program



Highlight the importance of eye exams as a diagnostic tool & gateway to care for medically underserved people.



Purpose of the ECCO Program



- Not only does an eye exam detect diabetes or diabetic eye disease but can be the first step in detecting the following:
 1. Sickle Anemia disease
 2. High Cholesterol
 3. cardiovascular disease
 4. Sexually Transmitted Infections
 5. multiple sclerosis



Defining the Need



During 1999-2004, Indiana had the 2nd highest percentage decline in employer-sponsored health insurance.

As a result, it is estimated that Hoosier families, will pay **51%** more by the year 2010 to cover the cost of the uninsured.



Defining the Need



- Nearly **one-third of Hoosiers** have incomes below 200% of the federal poverty level
- Central Indiana ranks **15th nationally** in overall unmet need for low-income medical services



Defining the Need



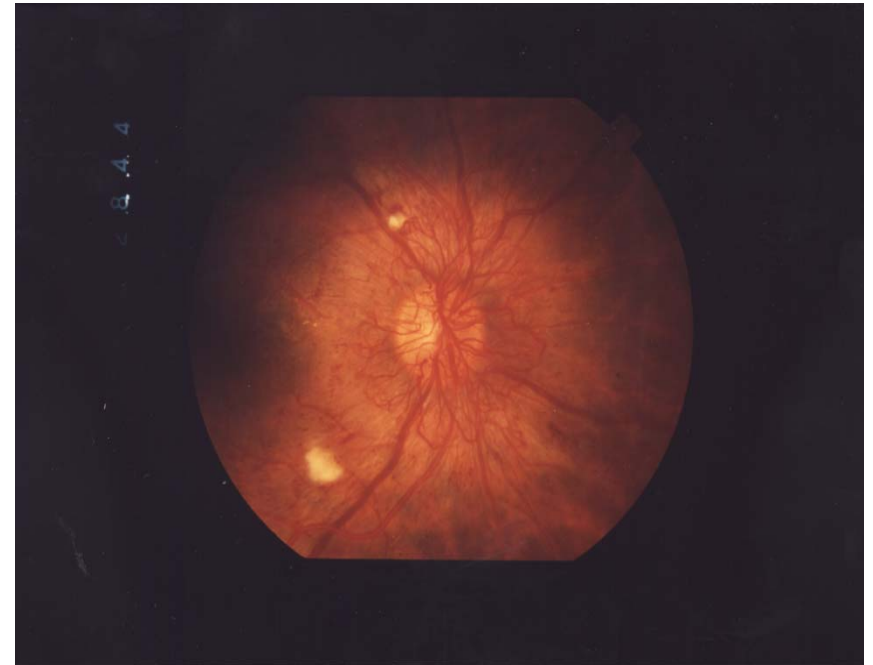
- In Indiana, the highest levels of unmet vision needs are those who are African American or in poor health
- 50% of children in Indiana who need eye exams after their initial vision screening never receive them



Defining the Need: Diabetes in Indiana



- 21% of Indiana residents are at increased risk for morbidity and mortality from diabetes and its complications
- Over 112,000 in Indiana have diabetic retinopathy



Defining the Need: ECCO intervention



- 2815 medically underserved people screened for eye health, early signs of diabetes, retinopathy, glaucoma, and cataracts.
- 22% (n=627) of those screened had symptoms of diabetes that might have remained undetected or untreated had the person not attended screening.
- 39% (n=1091) of those screened did not have a primary care physician.



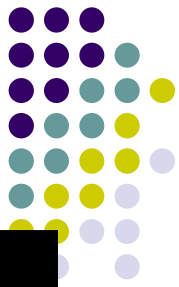
Defining the Need: ECCO Intervention



- All individuals failing screening were referred for a donated comprehensive eye exam and/or Ophthalmology services if needed.
- Those referred include: never had eye exam, history of blindness or eye disease, or chronic illness such as, diabetes, hypertension, sickle cell anemia, and those failing screening.
- Follow up sent to primary care doctors for continuity of care.



Program Ocular and Systemic cases



Total and Newly Diagnosed Cases				
	Total	% of Total	newly diagnosed	% of New diagnoses
Diabetes	773	43.0%	19	2.5%
Hypertension	626	34.8%	7	1.1%
Glaucoma	192	10.7%	69	35.9%
Cataract	269	15.0%	79	29.4%
Diabetic Retinopathy	131	7.3%	67	51.1%
Macular Degeneration	25	1.4%	4	16.0%
Kerataconous	29	1.6%	22	75.9%
Retinal Detachment	39	2.2%	21	53.8%
Other	235	13.1%	21	62.6%
Total Examinations	1798			

Other Category include ocular diseases such as: Sickle Cell Retinopathy, Lattice Degeneration, Choroidal Nevus, Pterygium, Hystoplasmosis, Ptosis, and/or other diseases not listed above.

Defining the Need: Diabetes in Indiana



- 773 ECCO patients with diabetes have had eye exams; of those, 19 were diagnosed with diabetes as a result of their eye exam.
- Of the 773 ECCO patients with diabetes, 17% were diagnosed with Diabetic Retinopathy, (n=131).
- Over 51% (n=67) of retinopathy cases being new diagnoses.



What is Diabetic Eye Disease?



- The effects of Diabetes on the eye.
- Diabetic Retinopathy is the leading cause of blindness among adults in the US.
- Over 112,000 people in Indiana alone have diabetic retinopathy. That's ~20% of all persons with diabetes.
- In Indiana, ~60% of people with diabetes receive an annual eye exam.

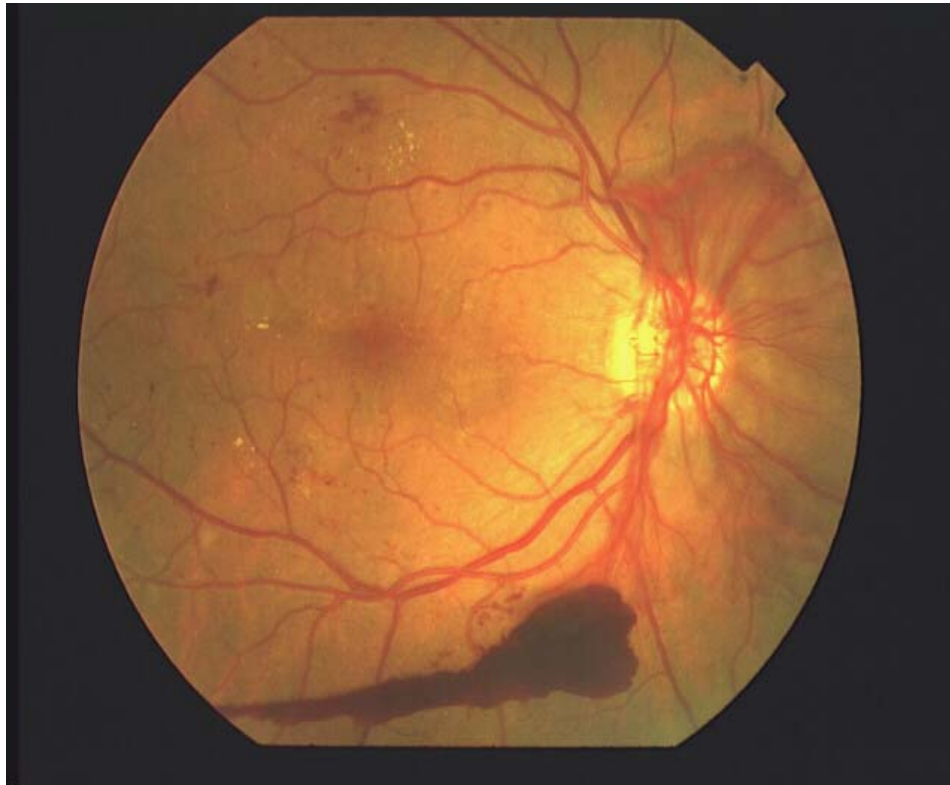


Where does it affect the eye?



- Lens: variations in blood sugar can cause variations in the power of the lens. Uncontrolled Diabetics are prone to intermittent blurry vision.
- Retina: Diabetic Retinopathy is when the eye's blood vessels become **leaky** and can ultimately **bleed** profusely.

Serious Diabetic Retinopathy



- If **leaky** blood vessels go unnoticed and untreated, they can ultimately **bleed**.
- **Bleeding means Blindness!**



Additional effects on the eyes



- In addition to the damaging effects of diabetes on the eye, diabetic eye disease also increases the risk for developing:
 - Cataracts-
 - A clouding of the natural lens of the eye
 - Glaucoma-
 - High eye pressure associated with nerve damage



ECCO Program Report

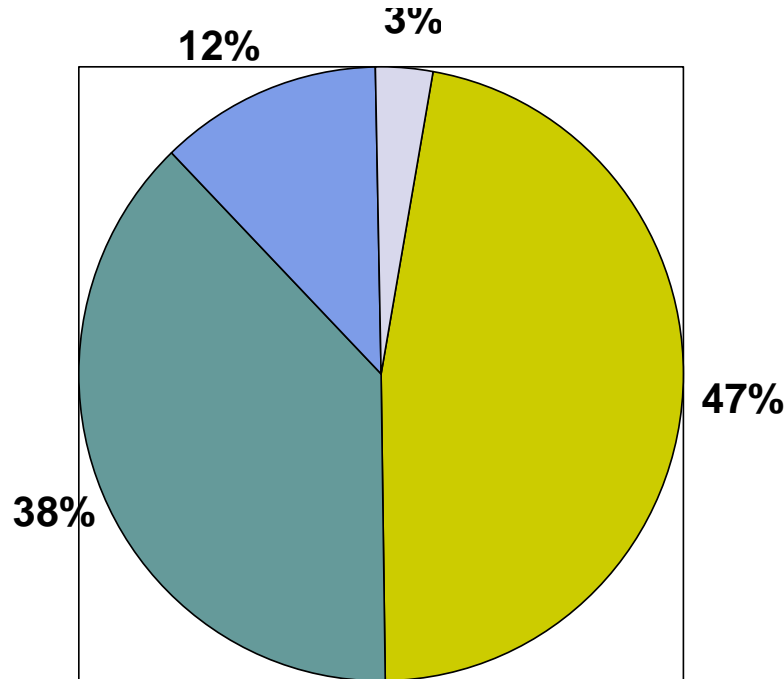


- 1798 primary eye examinations have been completed
- 1092 pair of eyeglasses have been dispensed
- 206 referred for secondary examinations and surgeries with an ophthalmologist



ECCO Patient Information

Employment Status



- 47% of ECCO patients are employed
- 38% are unemployed
- 12% are disabled
- 3% are retired

■ Employed

■ Unemployed

■ Disabled

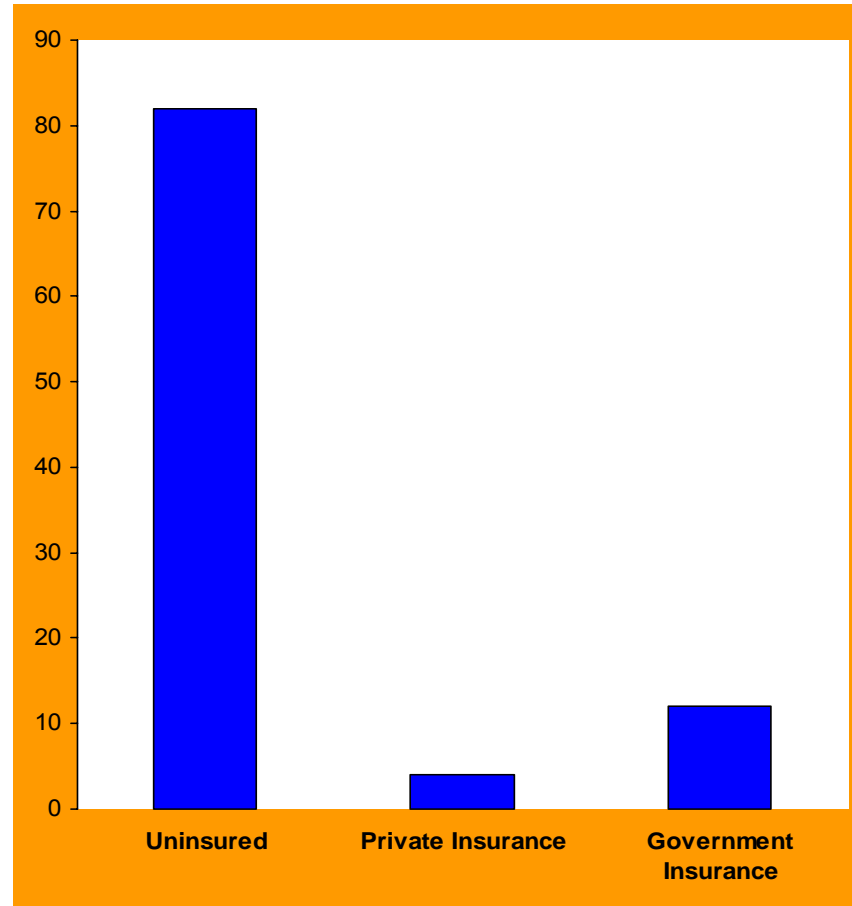
■ Retired



ECCO Patient Information Insurance Status



- 82% of ECCO patients are uninsured
- 4% have private without vision care coverage
- 12% have Government Insurance

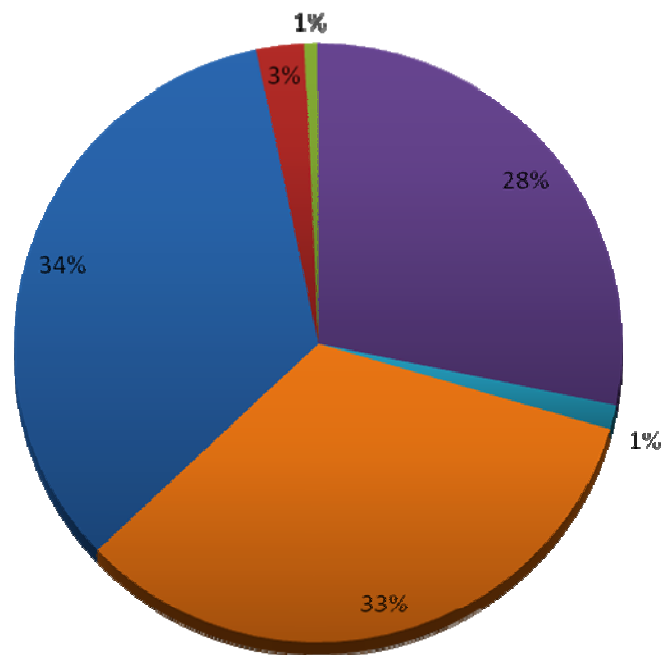


ECCO Patient Information



Race/Ethnicity of ECCO Patients

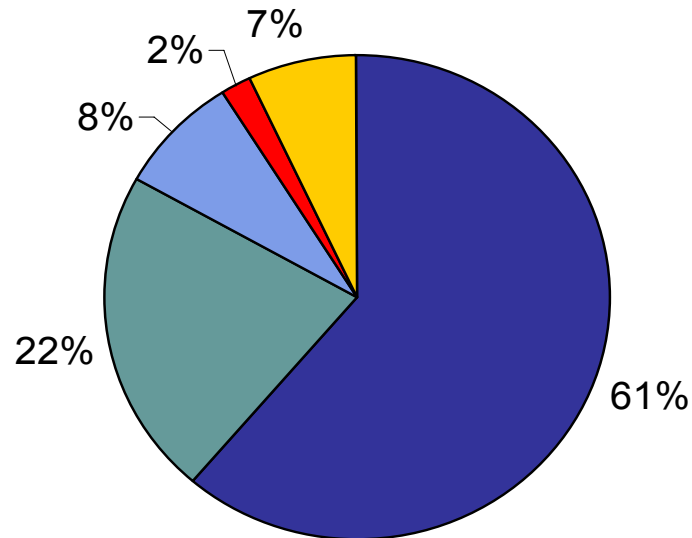
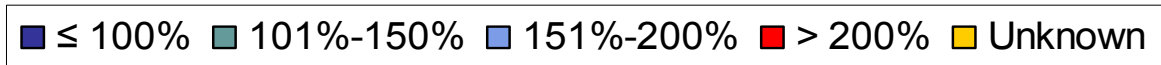
■ African American ■ Asian ■ Caucasian ■ Hispanic ■ Other ■ Unknown



ECCO Patient Information



ECCO Applicant Income as a Percentage of Federal poverty Level



ECCO Successes to Date...



- Has partnered with over 100 community agencies
- Over 3000 patients have been referred to ECCO by these community partners





References

- Kaiser MD, Peter, K., Neil J. Friedman MD, Roberto Pineda II MD. “The Massachusetts Eye and Ear Infirmary Illustrated Manual of Ophthalmology.” 2nd ed. Saunders 2004.
- Derek Y. Kunimoto MD, Kunal D. Kanitar MD, Mary S. Makar MD. Editors. Mark A. Friedberg MD, Christopher J. Rapuano MD. Founding Editors: “The Wills Eye Manual.” 4th ed. Lippincott Williams and Wilkins 2004.
- National Eye Institute
 - www.nei.nih.gov/health/diabetic
- American Diabetes Association
 - www.diabetes.org
- Diabetes “Sight for Life” - funded by the AOA and Roche Diagnostics
- New Hampshire “Sight for Life”
- Simon Foundation
- Healthy Indiana Plan, 1st ed., February 2007

