

Identifying Disparities in Ophthalmology Clinic Visits

Ashlie Bernhisel MD



Background

- Homelessness in the United States
 - On a single night in 2017: 553,742 people were experiencing homelessness
 - Collected by the Department of Housing and Urban Development (HUD)
 - This was the first increase in 7 years
 - 2/3 in emergency shelters, 1/3 on the street

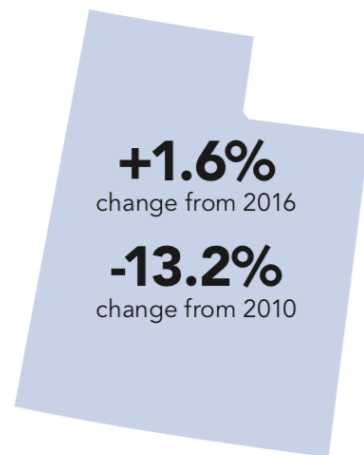
Background

- Who is homeless?
 - Most are transiently homeless
 - $\frac{3}{4}$ of homeless at any point in time have only been so for under 1 year
 - $< \frac{1}{4}$ of those who are homeless are chronically homeless
 - Usually mentally ill or those with some type of disability

	All People	Individuals	Families with Children	Unaccompanied Homeless Youth	Veterans	Individuals with Chronic Patterns of Homelessness
2017 PIT Estimate:	553,742	369,081	184,661	40,799	40,056	86,962
Change from 2016	+1% ▲	+4% ▲	-5% ▼		+2% ▲	+12% ▲

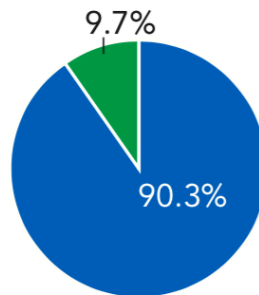
Homelessness in Utah

UTAH



Total Homeless, 2017
2,852

9 in every **10,000**
people were experiencing
homelessness



■ Unsheltered (278)
■ Sheltered (2,574)

Estimates of Homelessness

1,882 individuals

970 people in families
with children

180 unaccompanied
homeless youth

220 veterans

163 chronically homeless
individuals

53 percent of Utah's homeless families and 71 percent of Utah's homeless individuals exit emergency shelters within one month of entering them

Healthcare for the Homeless

- Health related morbidity
 - Same rates of:
 - Obesity, diabetes mellitus, sexually transmitted diseases, urinary tract infections
 - However, homeless patients are at a higher risk for these to turn into life-threatening emergencies
 - Higher rates of:
 - Uncontrolled hypertension, respiratory illness, tuberculosis, HIV, infestations, skin disorders, dental problems, vision complaints

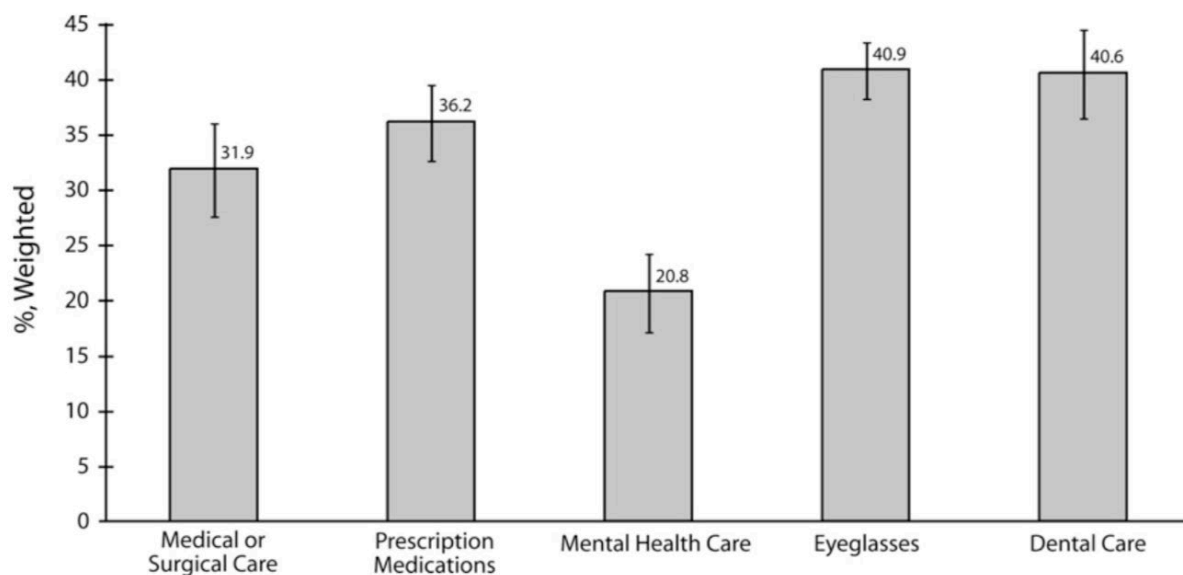
Healthcare for the Homeless

The Unmet Health Care Needs of Homeless Adults: A National Study

| Travis P. Baggett, MD, MPH, James J. O'Connell, MD, Daniel E. Singer, MD, and Nancy A. Rigotti, MD

- National Healthcare for the Homeless Council(HCH)
- The HCH program serves more than 700,000 people annually through 205 grantees in all 50 states
- 30 grantee clinics, geographically spread out were chosen with 33 surveys given at each
 - 70% response rate
 - 966 completed surveys

Healthcare for the Homeless



Note. Percentages were weighted with sampling weights provided by Research Triangle Institute International. Tick marks indicate the bounds of 1 standard error.

FIGURE 1—Prevalence of past-year unmet health care needs among homeless US adults (n=966): Health Care for the Homeless User Survey, 2003.

Mortality in the Homeless: The sum may be greater than its parts

Premature Mortality in Homeless Populations: *A Review of the Literature*

by James J. O'Connell, MD

Vision impairment predicts 5 year mortality

Catherine A McCarty, Mukesh B Nanjan, Hugh R Taylor

Ophthalmic Care for the Homeless

- All prior studies have been screening studies
- The handful of publications demonstrate that refractive error and limited access to eye care are much higher than the general population
- Most don't attempt to compare specific ophthalmic pathology rates to that of non-homeless
 - LA -1997
 - Newark, NJ – 2009
 - 31% of adults 25 and older screened positive for vision threatening eye disease which was estimated to be 18 times higher than the general population
 - Toronto, Canada- 2015
 - Oahu mobile screenings – 2010
 - East London- 2016
 - London- 2017

AIM- 4th Street Data

- To better understand the most common chief complaints of the homeless population at our local 4th street clinic
- To gather data on the primary diagnoses of these patients
- To find out how often they followed up with subspecialties and how often they completed recommended surgery
- To compare this data to controls at the Moran Eye Center

Methods- 4th Street Data

- Data collected from November 2008 to February 2013 at our once monthly ophthalmology clinics
- Patients with specific ophthalmic or vision complaints referred by their PCP at the 4th street clinic
- Patient demographics, chief complaint, best corrected visual acuity (BCVA), diagnoses, follow-up, specialty referrals, and surgeries

Moran Data

- The data collected from January 2012 to December 2013.
- This particular time frame was selected as it overlapped the years where data from the 4th Street Clinic was collected.
- It was also the first two years that the electronic medical record was active at the Moran Eye Center at the University of Utah

Methods Cont.

- Patients who were seen presenting to the comprehensive or triage clinic for the first time were selected
- Only patients seen by comprehensive ophthalmologists were included as we felt this most clearly mirrored the situation under which the homeless population was seen

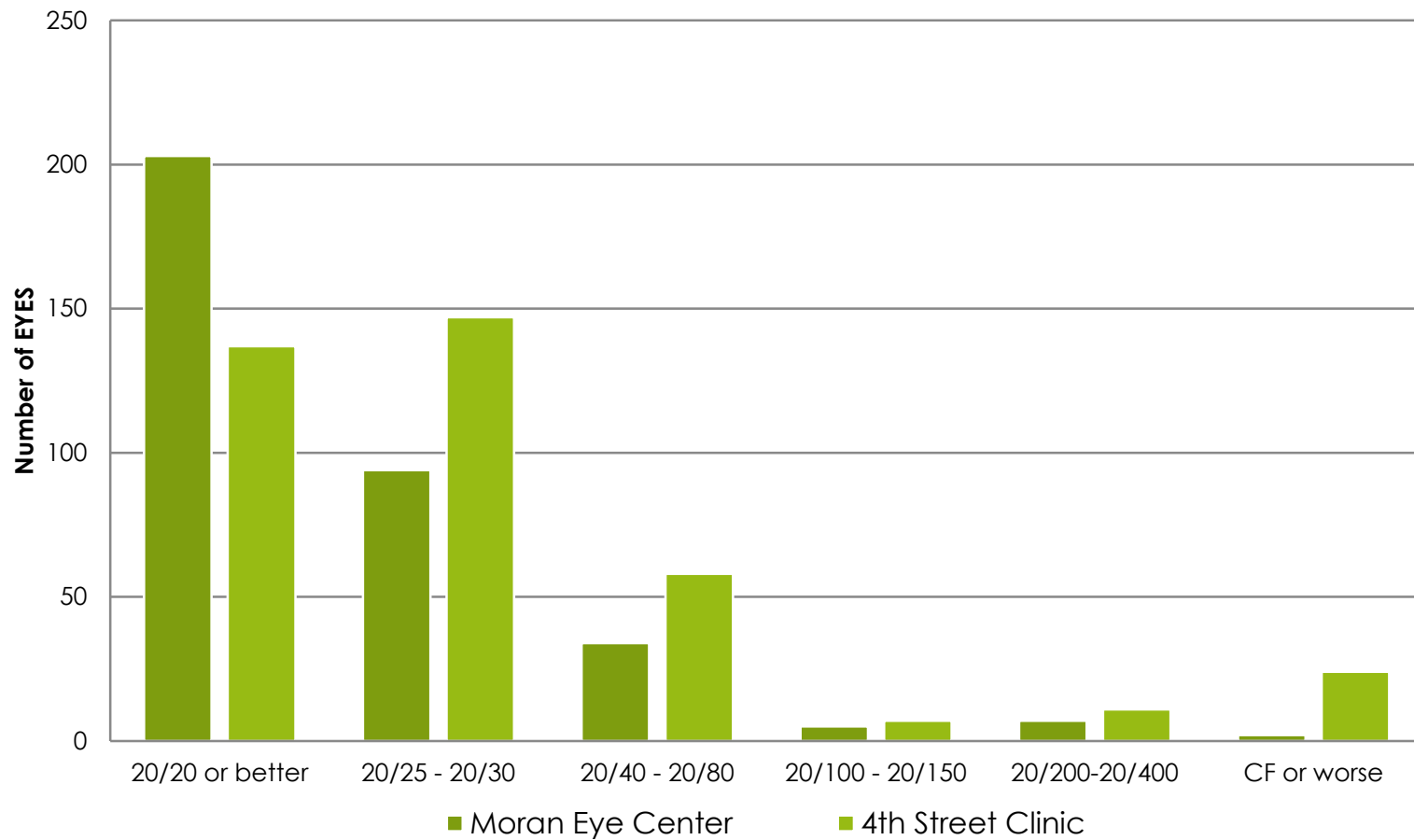
Demographics

Table 1: Demographics of Patients Evaluated

Characteristics	Participants, No. (%)	
	Moran Eye Center (n=181)	4th Street Clinic (n=178)
Sex		
Male	83 (45.9%)	114 (65.5%)
Female	98 (54.1%)	60 (34.5%)
Age, y		
Average	41.7	50.5
Past Medical History		
Average # of Dx	1.83	4.17
SD	3.21	3.02

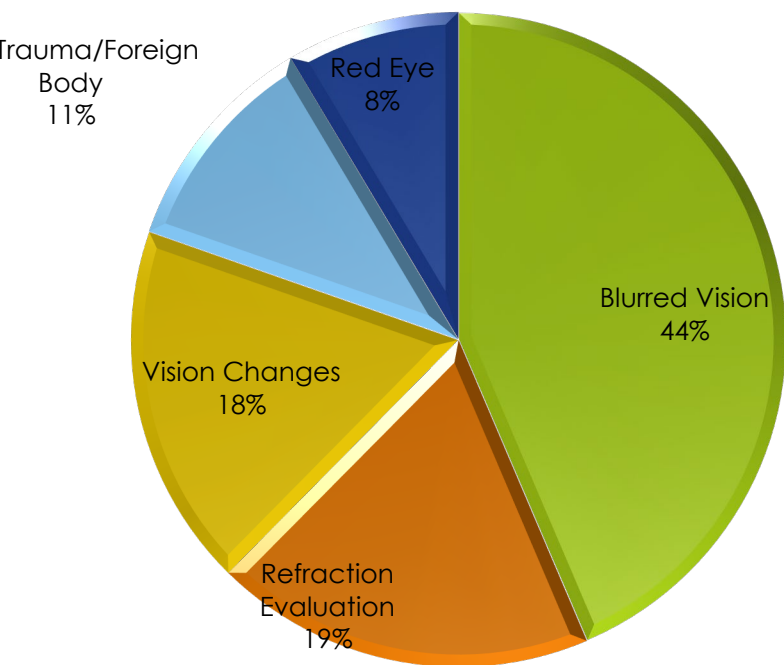
^a Several patient records did not contain sex, age, and/or previous diagnoses

BCVA

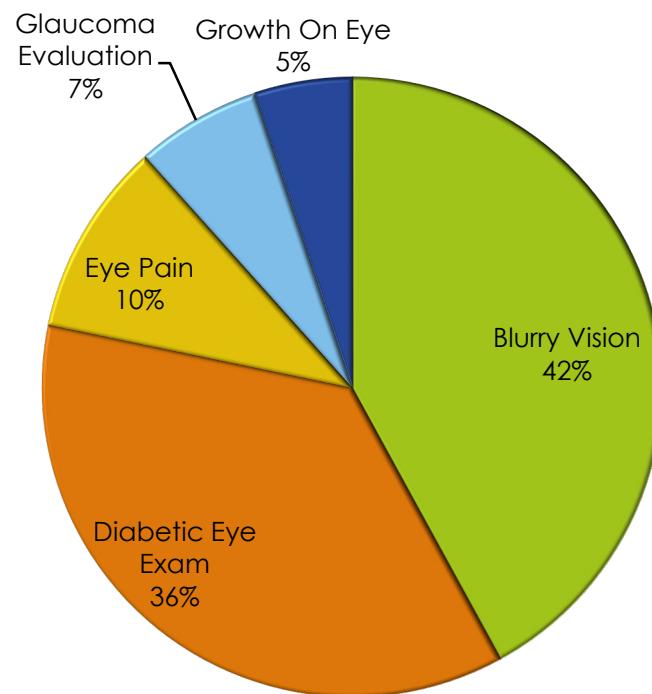


Chief Complaint

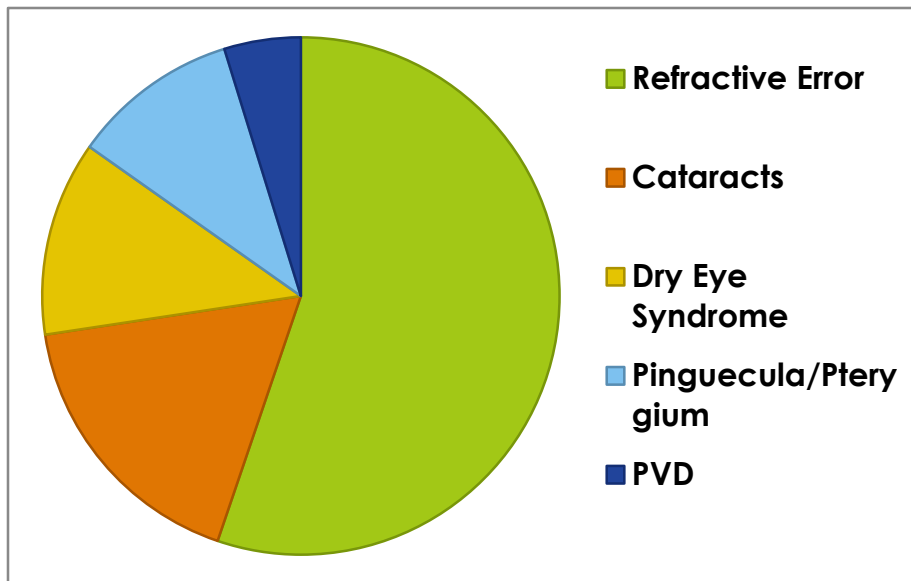
Moran



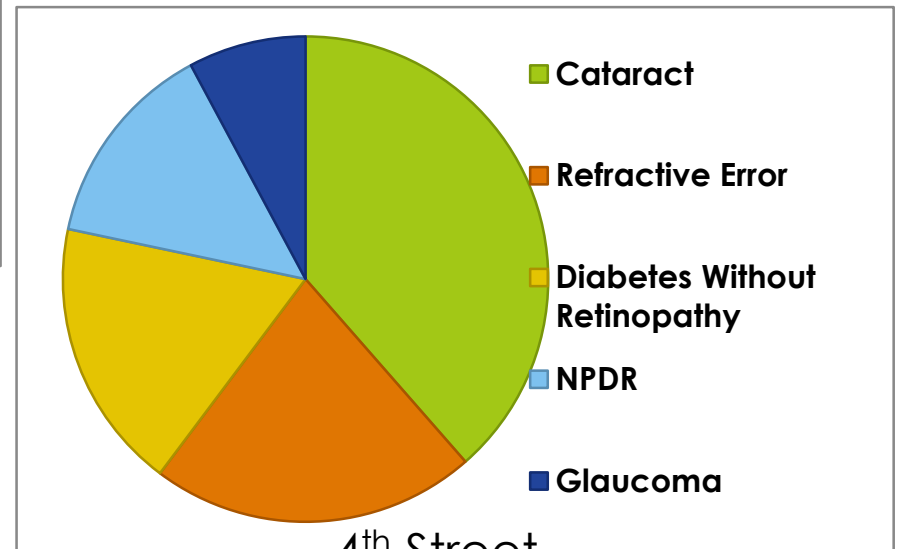
4th street



Diagnoses



Moran



4th Street

Comparing Severity

Cataracts		
Diagnosis of Cataracts	41	67
Grading		
Trace	18 (44%)	9 (13%)
1+	15 (37%)	25 (37%)
2+	4 (10%)	11 (16%)
3+	4 (10%)	9 (13%)
4+/White	0 (0%)	13 (19%)

Comparing Severity

Diabetes		
Diagnosis of Diabetes	7	55
Grading		
DM without Retinopathy	7 (100%)	30 (55%)
Mild NPDR	0 (0%)	16 (29%)
Moderate NPDR	0 (0%)	4 (7%)
Severe NPDR	0 (0%)	3 (5%)
PDR	0 (0%)	2 (4%)

Comparing Severity

Glaucoma		
Total # of Diagnoses	7	23
<u>Dx</u> of Glaucoma Suspect	3 (43%)	10 (43%)
<u>Dx</u> of Glaucoma	4 (57%)	13 (57%)
Grading		
IOP >24 mmHg	1 (20%)	7 (30%)
Cup-to-disc ratio >0.4	4 (80%)	16 (70%)

Follow up

- Follow-up was completed in 58% of patients from the Moran
- Follow-up was completed in 34% of patients from 4th street
- Referrals: The percent of individuals who completed their referral was lower in the 4th Street group compared to the Moran group for both retina (50% vs 100%) and glaucoma specialists (24% vs 100%).

Surgery

- 8.3% of patients seen at the Moran and 18.0% of 4th Street patients were recommended to have a surgical procedure.
- 100% the patients in the Moran group completed their surgery while only 59% of 4th Street patients did so

Conclusions

- 4th street clinic patients are more likely to be male, were older, and had twice as many comorbidities as their Moran counterparts
- Homeless patients on average presented with worse BCVA, higher rates of vision-threatening pathologies, and more severe cases of diabetic retinopathy and cataracts.
- More than twice as many homeless patients were recommended for surgery or specialty follow-up than non-homeless patients but a lower percentage received surgery or follow-up.

Discussion/Questions

- Follow up rates and surgical rates for the homeless population in this study are most likely higher than national averages because 4th street clinic patients have access to Moran through outreach
- What's next?
 - Comparing this with other cities
 - National data
 - Comparative studies on how to effectively deliver eye care to the homeless

Thank you

- Joshua Heczko, MD
- Brian Stagg, MD
- Al Vitale, MD
- Jeff Pettey, MD

References

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- The 2017 Annual Homeless Assessment Report (AHAR) to Congress

Homelessness is something you experience, not who you are



QI Project – Reducing Drug Toxicity

- Problem: Patients presenting with hypotension, bradycardia and hypokalemia due to ophthalmic medications
- Situation
 - IOP lowering topical and oral medications being used in excess
 - Older patients
 - Poor kidney function
 - Cardiac disease and other co-morbidities
- Solution
 - Phase 1- Protocol for resident use
 - Phase 2- EMR based warning system