



Advancing Vision Health

Design, Action, Impact

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MINNEAPOLIS
PUBLIC SCHOOLS
Urban Education. Global Citizens

2016

Chart based vision screening
HOTV

MD5M KidSight Foundation,
Inc engaged MPS in
instrument based screening.

Initial strategy:

- Implement Instrument
based screening
- Use Leo's and
preceptor volunteers

2017

Scale instrument based
screening at all screening
locations.

Nurse professional
development project
analyzing 3 months of year
over year data and
disseminate results in non-
profit, health care and public
jurisdiction and districts.

2018

Purchase second instrument
screener and use in most
settings.

UMN Research Intern
Deployed. Convene local
early childhood vision health
task force. Apply to NCCVEH
BVT.

Strategy alignment across
task force agencies.

2019

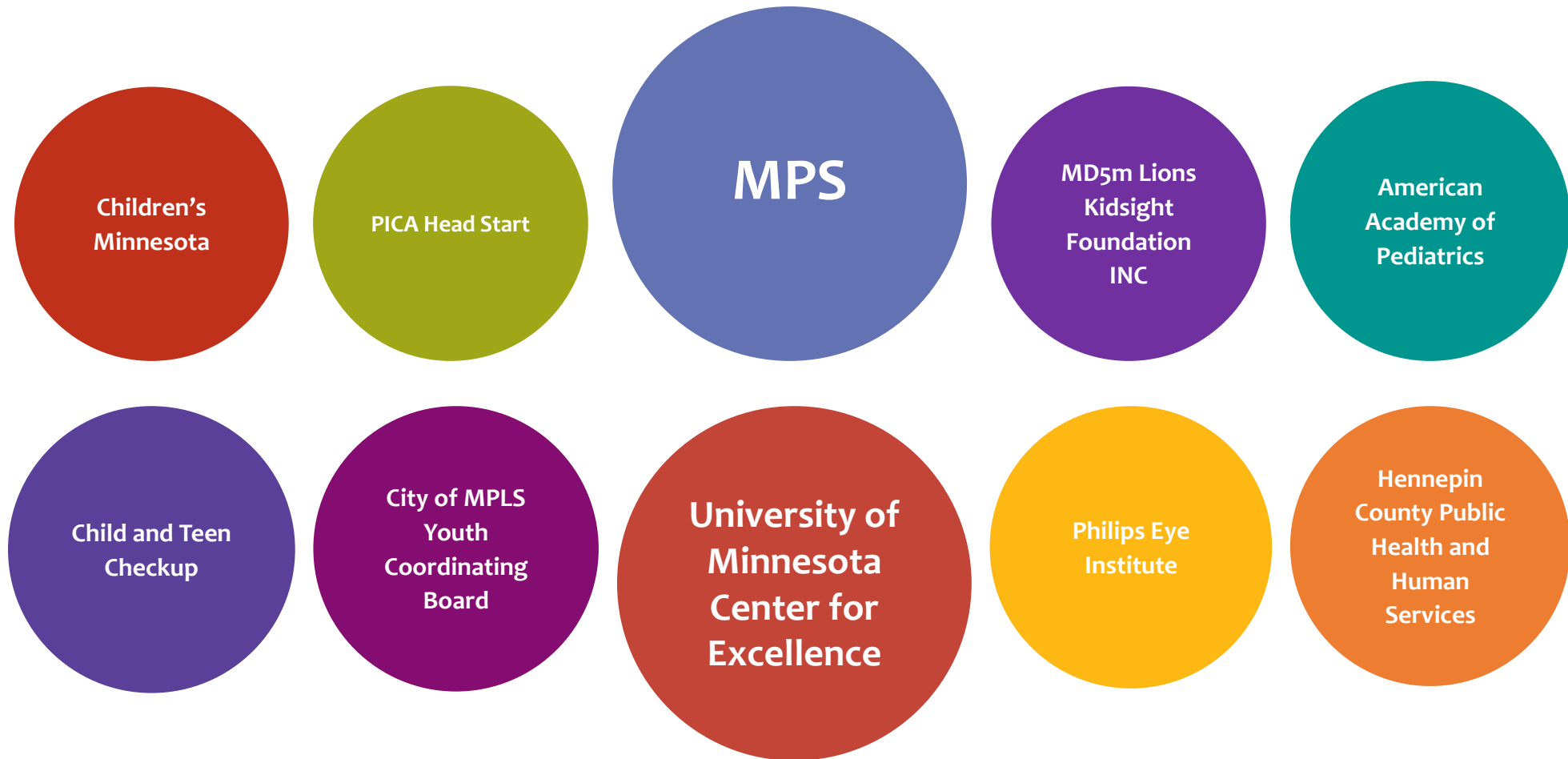
Implemented 3rd instrument
based screener.

Spread instrument screening
protocol to MPS ECSE
Program.

Policy work with MN Dept of
Health to develop vision
health plan for state.

UMN Research Intern
support local task force and
participate in NCCVEH BVT.

Minneapolis Early Childhood Vision Health Taskforce



Minnesota Infrastructure:

A universal vision health touchpoint before kindergarten

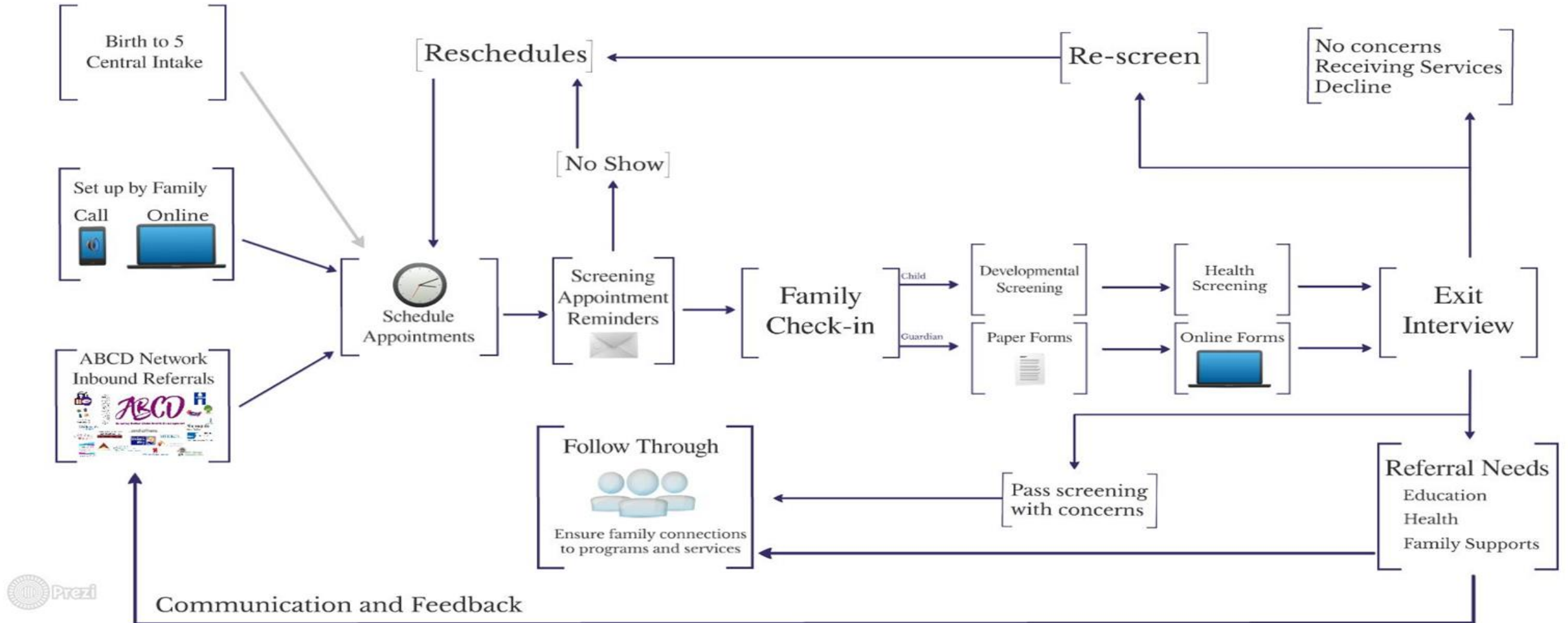
Minnesota Early Childhood Screening Statute 121A.12

- <https://www.revisor.mn.gov/statutes/cite/121A.17>
- Mandated
- Universal
- 3-5 year olds.
- Only Minnesota surveillance data on vision screening, exams and treatment

Greater Twin Cities United Way Screen @ 3

- Expanded the National Academy of State Health Policy Assuring Better Child Health and Development. Initiative.
- Schools-Healthcare Systems-Early Care and Education-Philanthropy.
- Coordinating systems, realizing results.

ABCD School District Work Flow Diagram



Minneapolis Public Schools First Stop Data Summary SY 2018-2019

- 4269 Children
- 1567 Screen @ 3
- 2945 Children of Color
- 1218 English Learners
- 2049 School Readiness Referrals (3-6 years).
- 2415 Early Intervention Referrals (Birth-6).
- 8796 Follow through contacts
- 2760 Confirmed links to services
- 149 Health and community partners including philanthropy and public funding.



U of M MCH Overview and Research Intern Project

Year 1

- Coordinate cross-department meetings to present information from strategy development.
- Meeting planning and facilitation, process development, change strategy implementation, and improvement training.

Year 2

- Supports local improving vision health initiative.
- Data analysis of research project, conduct comparative analysis of data.
- Support the local and national vision health meetings and work.

Data Clean Up: Tracking Progress

Data review for all treatments accessed:

I looked at the 2017-18 nurse's data including the first, second and third call. Below is a table of the most occurring treatments in vision care and most occurring nurses' notes. The next step is to determine how many children received each of the treatments below.

Most Occurring Treatments	Most Occurring Nurse's Notes
Child received glasses for astigmatism	Went to an eye doctor, astigmatism found in one or both eyes
Child had an eye exam and received glasses	Primary care referred to specialist and RX glasses
Passes vision and hearing at clinic	Insurance lost or dropped. Family going to a free clinic
Child had an eye exam, no refractive or deviation error found	A few cases of no photo screening report available
Child had an exam but no need for glasses	Parent reports appointment scheduled
Glasses optional. Recheck in 1-2 years	Normal vision, no glasses needed
Prescribed glasses for lazy eye	LVM, letter
New glasses RX for amblyopia r eye	Unable to contact

[illegible]

Public Health System Driver Diagram to Increase Detection and Diagnosis of Vision Impairment in Children Aged 5 Years and Younger

AIM

By 2018, increase by 20% over 2011-2012 levels the proportion of children aged 5 years and younger who receive vision screening and diagnosis in 5 states according to the National Survey of Children's Health measure.

Goals

- Strengthen statewide partnerships and coordination among key stakeholders in children's vision and eye health
- Increase access to and utilization of vision health services in hard to reach communities
- Increase early detection and treatment of vision problems
- Establish state-level surveillance
- Implement vision health system measures of accountability

PRIMARY DRIVERS

Families and professionals* understand and endorse the importance and urgency of vision in child development

Broad Access to Preventive Care and Treatment

Infrastructure and capacity supports optimal outcomes

Data Monitoring and Population-level Surveillance

SECONDARY DRIVERS

Patient, Population, Provider Knowledge

- Increase knowledge of role of vision in overall child development
- Outreach to high-risk and underserved groups
- Professionals in key stakeholder groups have the knowledge necessary to address vision health as a population health issue
- Engage families and caregivers regarding importance of vision health and support their adoption of these behaviors

Diverse Care Settings, Affordability

- Expand awareness and use of insurance coverage for vision services
- Increase diversity of professionals providing evidence-based vision screening methodology
- Increase and strengthen publicly funded vision coverage
- Increase proportion of primary care and public health settings that include an integrated vision health program

Professional Education, Partnerships, Planning

- Integrate vision health education and OD/MD students into clinic settings with primary care and allied health professionals
- Primary care providers and other stakeholder groups have the skills to support a comprehensive vision system including: vision assessments, screenings, prevention, eye health education, referral and follow-up
- Increase stakeholder engagement and skill building to ensure capacity and improve vision health outcomes
- Establish capacity at the primary care and public health levels to collect vision data (including screening through treatment outcome data) in a secure data collection system
- Implement comprehensive systems and policies that lead to improvements in children's vision health

Surveillance, Analysis, Feedback

- Identify high-risk populations with comorbidities
- Identify risk and protective factors at the individual, family, school, and community levels
- Integrate uniform vision screening and outcome data collection standards
- Track population-level vision health status

* The term "professions" is inclusive of pediatric and allied health, public health, early education, childcare, early intervention, nursing, and state administrative professions.

Improving Vision Health of Minneapolis Children B-5

Aim

By March 1 2021, we will increase vision and eye health in the City of Minneapolis through increasing by 50% the number of children ages birth to 5 who receive vision screening, eye exams, follow through support and access to medical treatment.

Key Drivers

Early Identification

Access to Health Care

Family Supports

Data and Tracking

Partnerships and Policy

Communication

Change Ideas

- Design community wide vision screening strategies where children are: child care, library, ~~wic~~ clinic, parks
- Increase instrument based vision screening in preschool population.
- Develop strategies to engage families of children pre 5 who are most underserved
- Incorporate culturally specific, language appropriate communication (*e.g. bilingual culturally specific staff*)
- Id family barriers to screening, exams and follow through, engage in problem solving barriers and build bridges to new services.

- Provide vision screening at places families and children frequent; engage families most underserved
- Improve partner capacity to improve and support systems change to improve timely access
- Design reliable cross sector processes in outreach, referral and follow through.
- Coordinate strategies with Birth-5 Central Intake and Region 11 IEC.

- Identify lost cost opportunities for services and treatment (e.g. eye exams, treatment, therapies.
- Target services, referrals, follow through for families who need most support to access resources.
- Follow Through with family after first contact to assure links to services, support new referrals

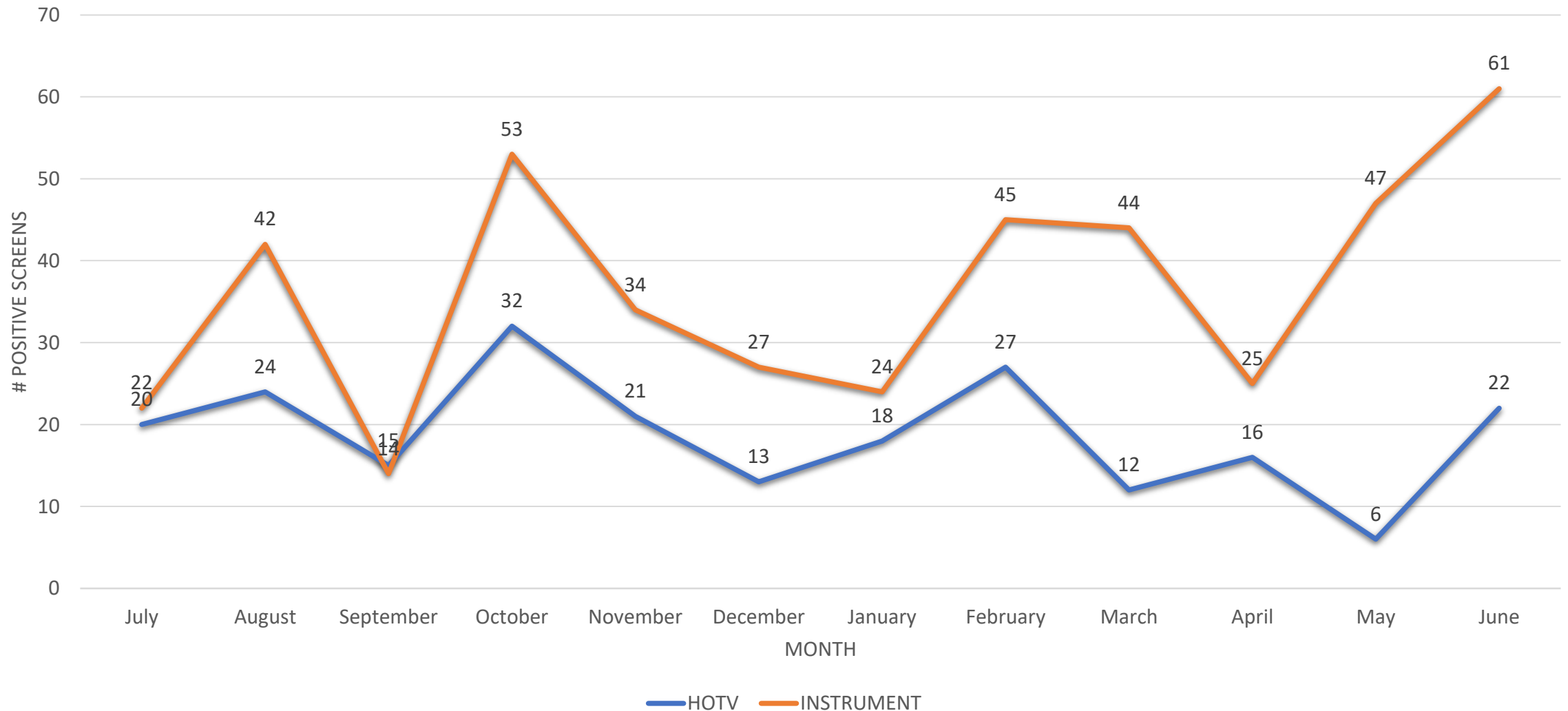
- Establish data sharing portal to reduce duplication of vision screening
- Establish shared process and outcome measures disaggregated by race and stratified by age.
- Utilize database/spreadsheet/software for tracking based on established tracking interval
- Communicate referral outcomes and status with referring providers (links to services)

- Advocate for the development of comprehensive state vision health plan.
- Create cross sector partnerships for immediate access to screening, eye exams and treatment-no wait lists.
- Connect with families in regard to follow-up services (referrals, resources, outcomes post-screening.
- Communicate screening results/outcomes to clinics, community providers, and other sources.
- Build capacity to meet demand from increased screening and referrals through cross sector alignment
- Address billing reimbursement for instrument based screening and care coordination across settings; cooperate with DHS to bill for services for those without IEP or IFSP

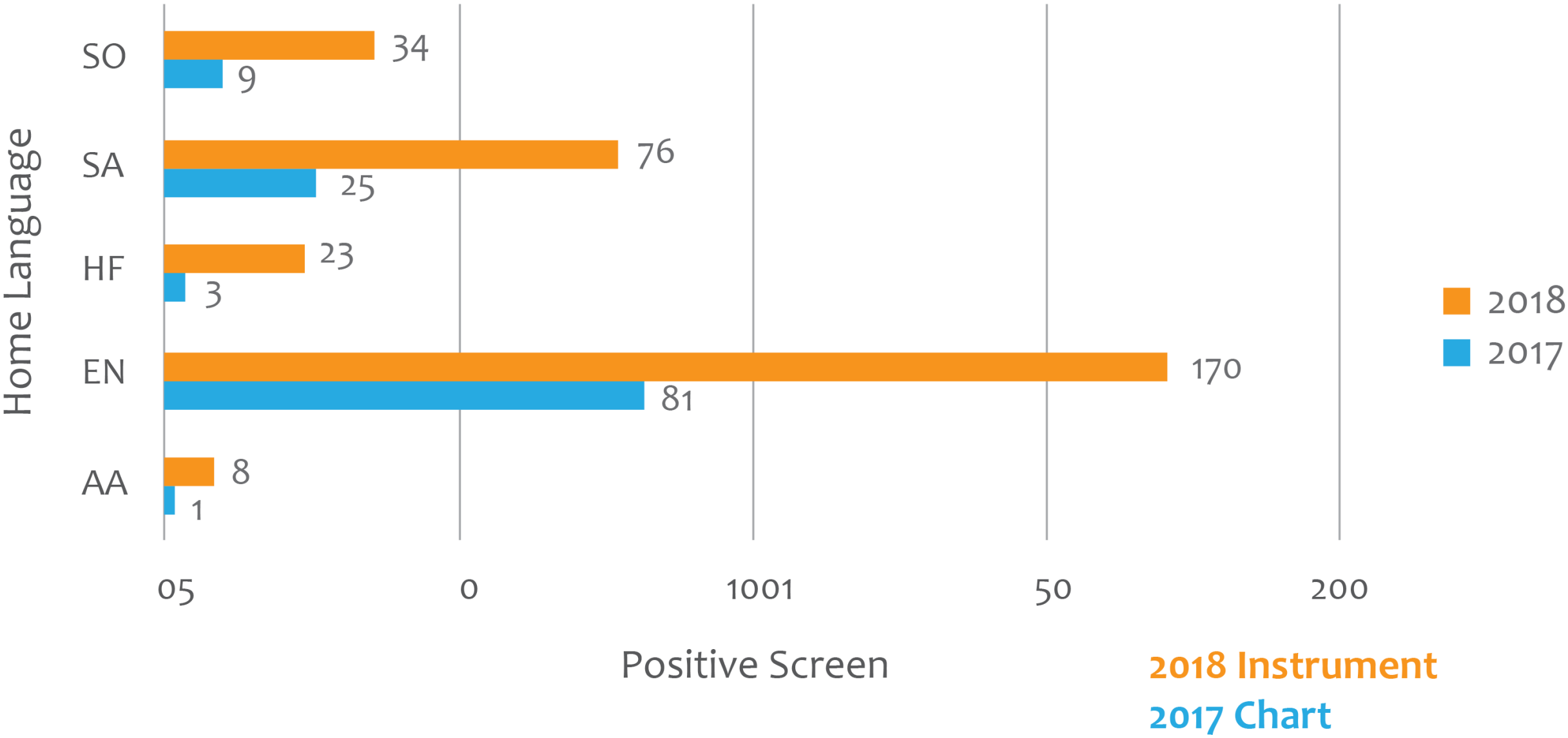
- Target messaging regarding what/why/how/when of vision screening and benefits for families and providers
- Meet with partners (clinics, community partners) to examine current processes & workflow and identify areas of improvement.
- Develop workable cross-sector data sharing while advocating for the development of long term data sharing portal.

Impact

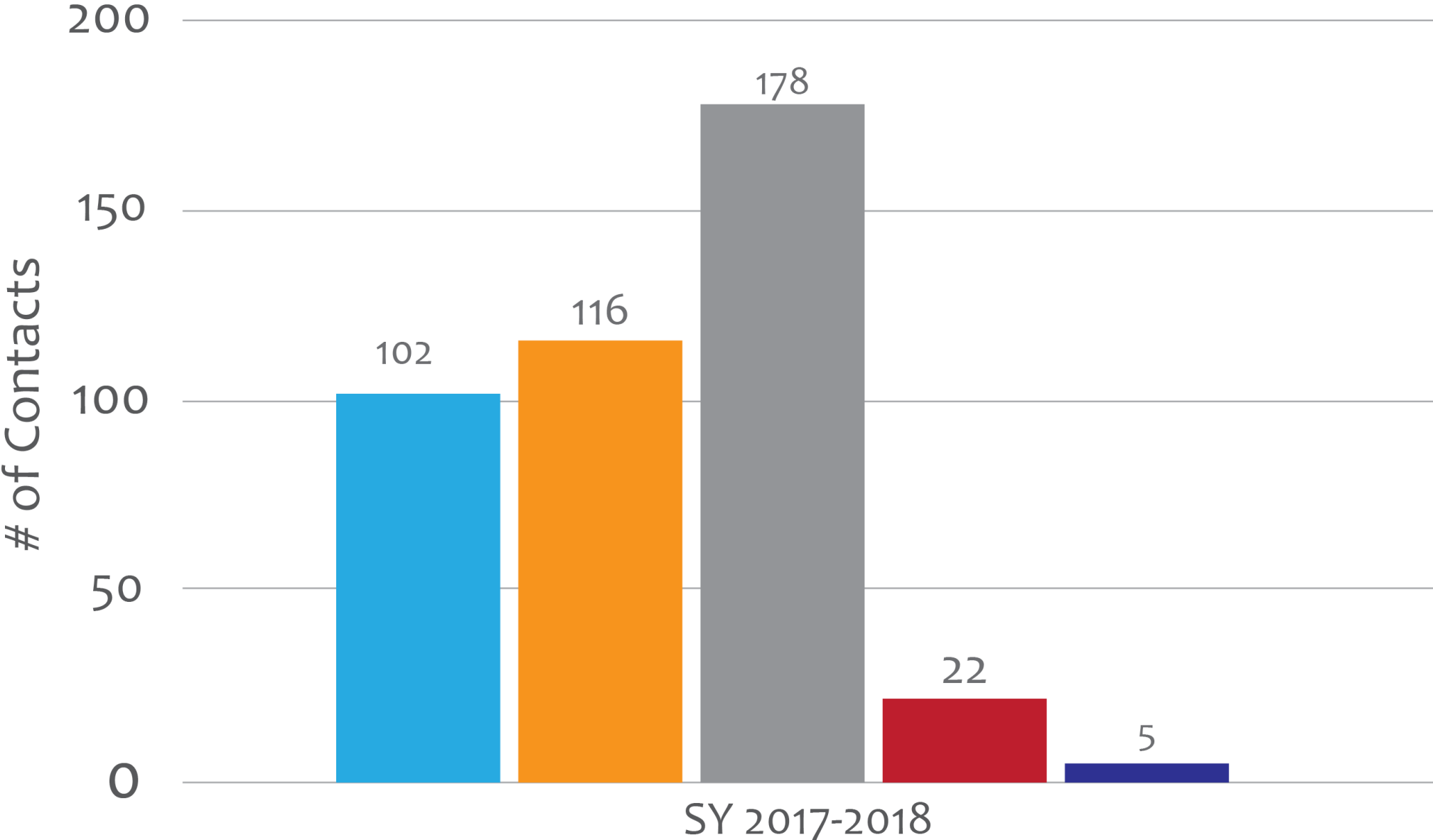
Minneapolis Public School 2017 Wallchart & 2018 Instrument Positive Screen Comparison



English Learners

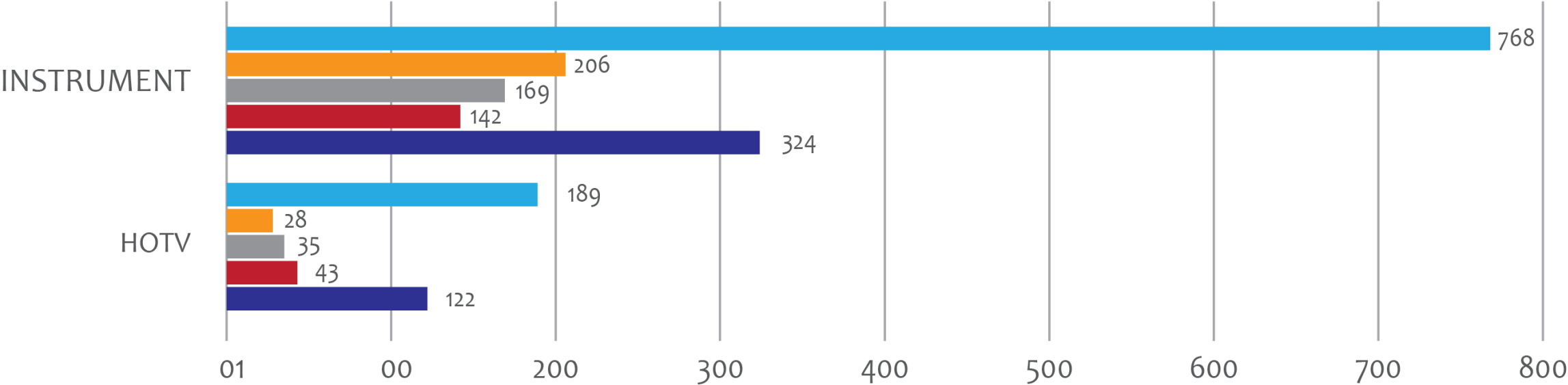


Contact Frequency Distribution



Comparison

Positive Screen, Exams, Diagnosis, Treatment



	HOTV	Instrument
Sum of Contacts	189	768
Sum of Exams	28	206
Sum of Treatment	35	169
Sum of Diagnosis	43	142
Sum of Positive Vision	122	324

	INSTRUMENT VS CHART % CHANGE
REFERRALS	265%
DIAGNOSIS	330%
EXAMS	735%
TREATMENT	482%
CONTACTS	406%

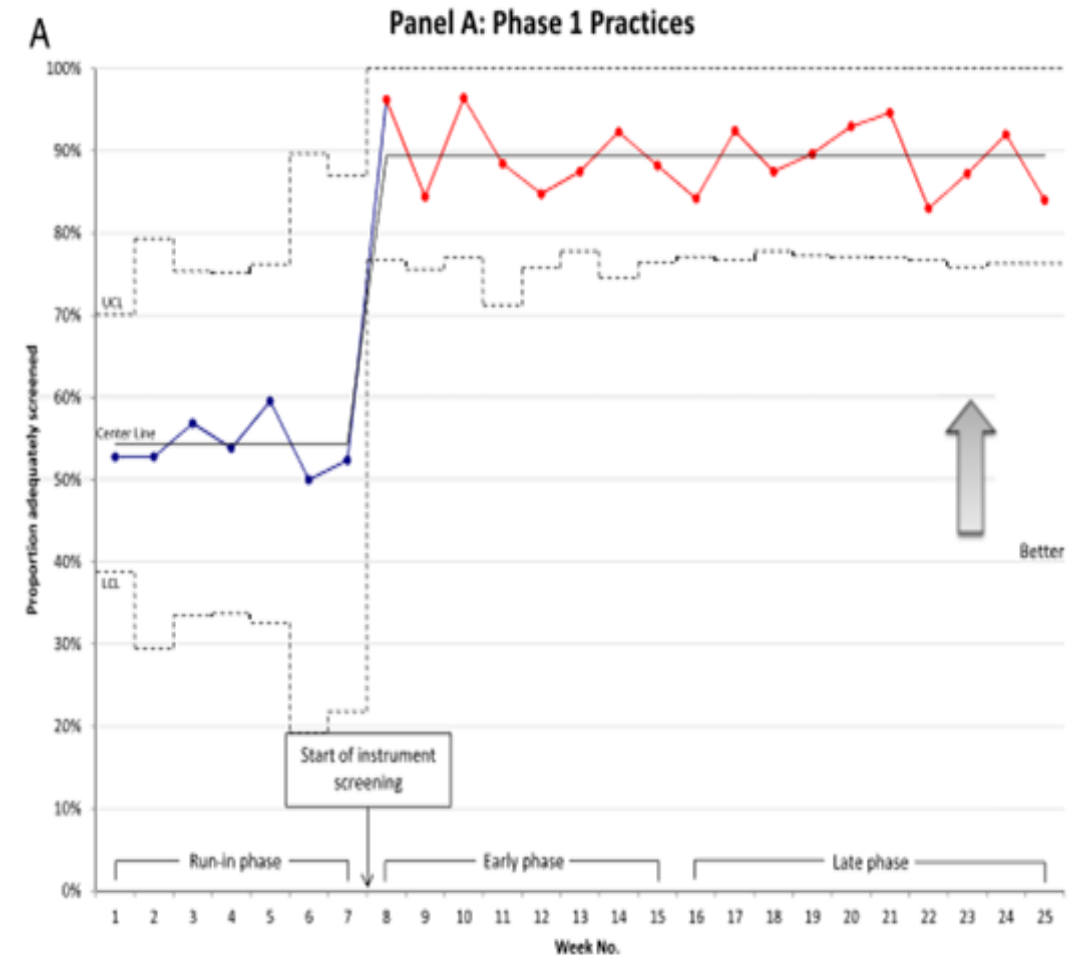
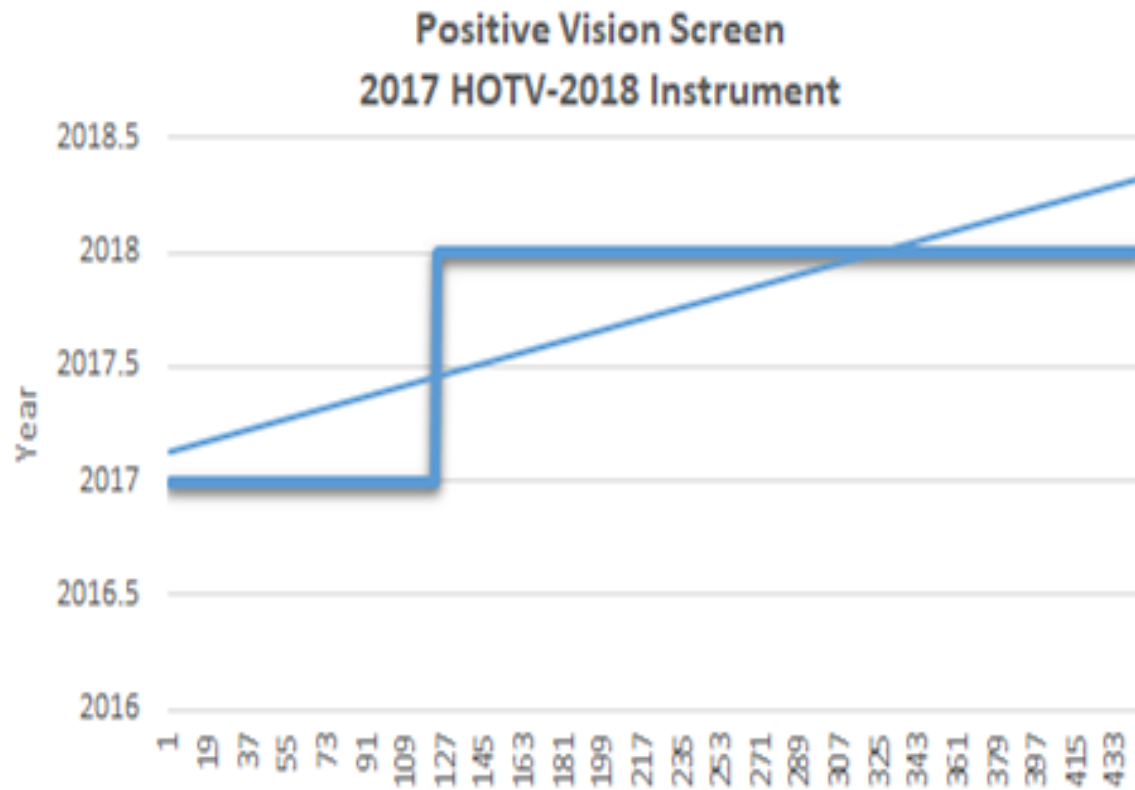
TREATMENT/POSITIVE SCREEN	PERCENTAGE
2017 CHART SCREENING	28%
2018-INSTRUMENT SCREEN	52%

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Ethnicity	Equal variances assumed	5.478	.020	-2.297	444	.022	-.312	.136	-.579	-.045
	Equal variances not assumed			-2.215	203.123	.028	-.312	.141	-.589	-.034
Treatment	Equal variances assumed	54.096	.000	6.493	215	.000	3.057	.471	2.129	3.985
	Equal variances not assumed			4.521	38.360	.000	3.057	.676	1.689	4.426
Diagnosis	Equal variances assumed	7.764	.006	-1.583	117	.116	-1.077	.680	-2.425	.270
	Equal variances not assumed			-1.629	94.882	.107	-1.077	.661	-2.390	.236
Exam	Equal variances assumed	6.744	.011	2.586	110	.011	.369	.143	.086	.652
	Equal variances not assumed			2.242	37.637	.031	.369	.165	.036	.702
Zipcode	Equal variances assumed	1.363	.244	.078	443	.938	15.391	197.813	-373.378	404.160
	Equal variances not assumed			.127	322.033	.899	15.391	121.490	-223.622	254.405

Comparing Results

MPS Positive Screens and Completed Screen Health



Follow Through Costs

Cost Item	Overall FT Cost	Vision Health FT Costs
Administrative-.1 FTE	15,000.00	5000.00
Staffing- .4 Licensed School Nurse .5 FT Coordinator .5 Bilingual Staff	195,000.00	60,000.00
Information Systems Integration & supplies	30,000.00	10,000.00
Total	\$240,000.00	\$75,000.00

Considerations

POLICY

- Require state surveillance and vision health plans: start by expanding state cohort, give guidance on vision health advisory boards to governors.
- Design state and local grants that focus on cross sector systems change, coordination and Improvement to advance population level vision health outcomes.
- Promote development of comprehensive system of vision care that align program and population measures, public, non profit & philanthropy
- Cultural representation in leadership and decision making allows differentiation to meet needs of specific population.

PRACTICE

- Strengthen guidance on instrument based screening; minimally for young children, English learners and people with disability in health and education settings.
- Advance follow through capacity in health and education, support direct funding for care coordination through state Medicaid funding.

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MPS Screen @ 3 Team:

Saundra Baxter	Charletta Mosley
Barb Bolin	Ker Vue
Diane Bonniwell	Mavis Gomez
Gwen Bush	Delphie Sorenson
Penny Castillo	Patti Dowdle
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Wanda Felder	
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Partners:

Hennepin Healthcare	Minneapolis Health
Southside Community Clinic	Department
Park Nicollet Health System	Hennepin County Health
PICA Head Start	Department
Children's Minnesota	Phillips Eye Institute
Sharing and Caring Hands	Foundation
Allina Health	UMN Center for Leadership
MD5M KidsSight Foundation	Maternal and Child Health
Lions Clubs International	
Minnesota Departments of	
Health and Education	

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