



# **State of the College**

## **6 February 2019**

David A. Heath, OD, EdM, FAAO  
President



# Educating for the present: Anticipating the future

1st

- Steam Revolution
- 18<sup>th</sup> – 19<sup>th</sup> Century: U.K. Iron and Textile Industries



2nd

- Electrical Revolution
- Early 20<sup>th</sup> Century: Electricity powers mass production



3rd

- Digital Revolution
- 1980's + : Information Technology, Computers, Internet



4<sup>th</sup>

- Super-Intelligence
- Early 21<sup>st</sup> Century: AI, Robotics, The Internet of Things



# The 4<sup>th</sup> Industrial Revolution

- Superintelligence: Robotics/AI/Nanotechnology
- Early evidence:
  - Objective data collection: Disruptive/emerging technology and the advent of telemedicine. When skill is no longer a part the equation?
  - Probabilistic diagnostic and treatment strategies: AI and case management.
  - Health Information Exchanges: Accessing information & big data
- The 4<sup>th</sup> Industrial Revolution & the Power of the Patient: Immediate access, convenience & continual care.
- Schools and Colleges of Optometry: Obligated to the 2<sup>nd</sup> & 3<sup>rd</sup> industrial revolutions while preparing for the 4<sup>th</sup>.







# Environmental Forces: The future...?

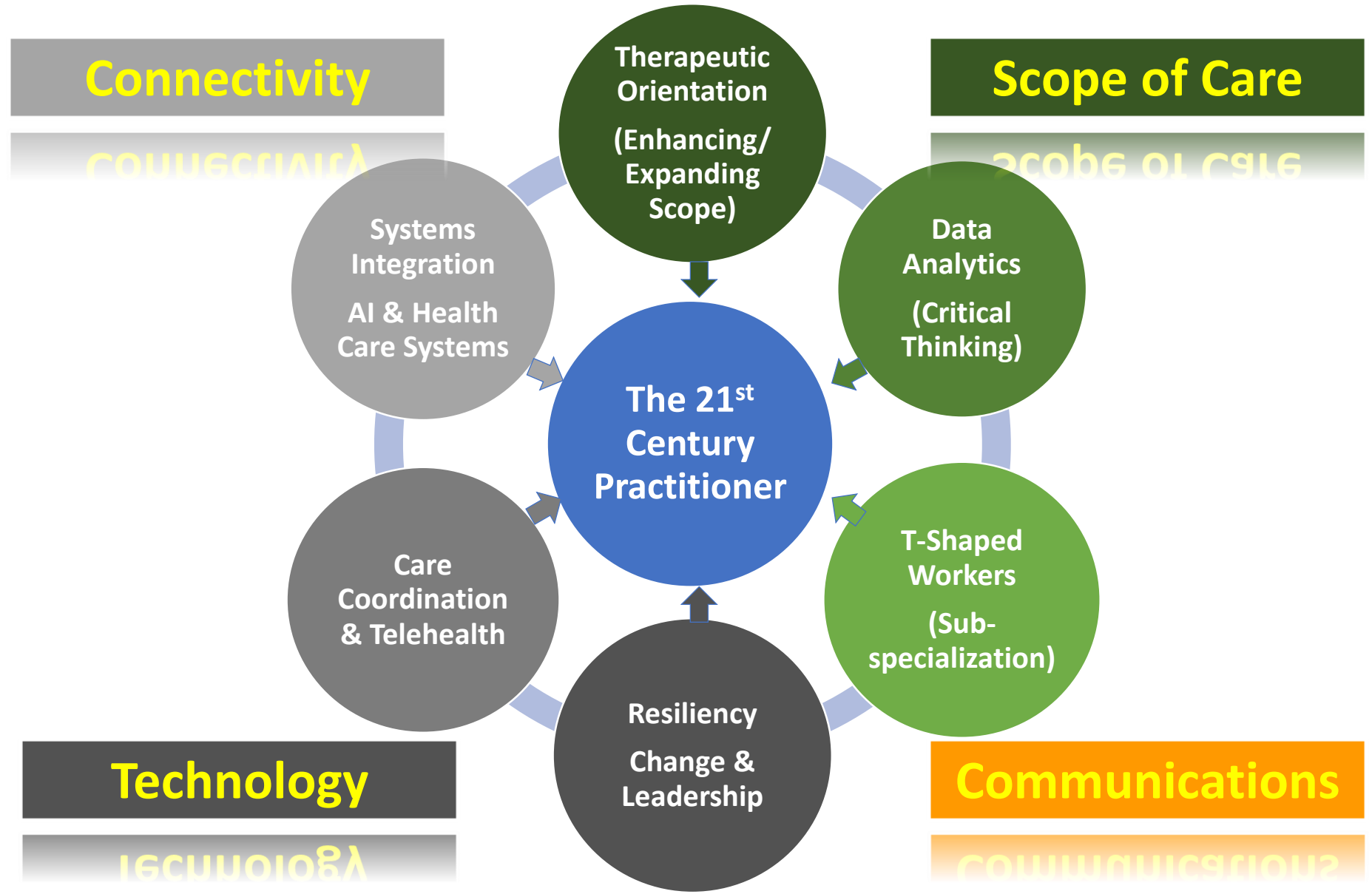
- Integration into the health care delivery system
- Connectivity: Health Information Exchanges, big data and the integration of all things
- Patient/Consumer-Centeredness: The Internet of Things
- Expanding Scope of Practice: Advanced In-Office Primary Care Ophthalmic Procedures
- Enhancing Scope of Practice (e.g. myopia control, gene therapy, wearable technology)
- Federal Health Policy: CMS and changing reward structures
- CMS 2019: Patient Over Paperwork Initiative

## ASCO Motion (11/18):

To endorse the *Framework for Developing Optometric Curriculum Guidelines and Educational Standards for Advanced In-Office Primary Care Ophthalmic Procedures* as presented by the American Optometric Association and modified by the [ASCO] Government Affairs Committee.



# Educating the Practitioner of the Future



# The Future of Optometric Practice: Transformation

Past	Now/Future
Subjective Data Coll.	Objective Data Coll.
Data Collection Skills	<b>Data Analysis/ Treatment</b>
Clinical Pearls	<b>Evidence-Based Practice</b>
In-Person	+ Virtual
General Practice	+ Sub-Specialization
Mode of Practice	Patient Outcomes
Small Business	Large System
Non-Connected	Connected
Independent	Integrated



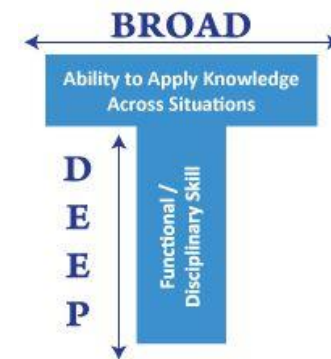
The Evidence Hierarchy, Questions about Treatment

Image courtesy of: SUNY Downstate Medical Center. Medical Research Library of Brooklyn. Evidence Based Medicine Course.

A Guide to Research Methods: The Evidence Pyramid. Available from: <http://library.downstate.edu/EBM2/2100.htm>

# Essential Skills for the Changing World:

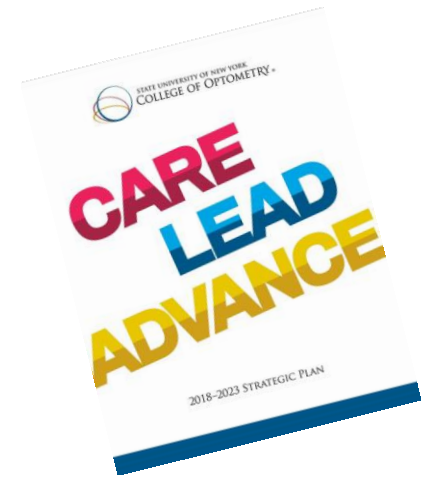
- Inter-cultural Competence
- Collaborative Practice (team-based care)
- Ethical and Transformational Leadership
- Innovation and Entrepreneurship
- Data Analytics and Critical Thinking
- Communications, Communications, Communications
- Resiliency (and evolving career opportunities)
- T-Shaped Workers – Depth of expertise combined with breadth of skills
  - Sub-specialization
  - Micro-credentials





# Anticipating the (near) future?

- The Eye Care Workforce
- A Diverse and Highly Qualified Applicant Pool
- Evidence-Based Practice and the Translational Research Pipeline
- State Law and Licensure requirements? The future of Assessment
  - Critical Thinking & Clinical Decision Making
  - Scope Expansion/Enhancement
  - Communications Skills
    - Patient
    - Health Informatics
- Post Graduate Education, Residency & Subspecialization
- Integration into the Health Care System
- The economics of public higher education in NYS



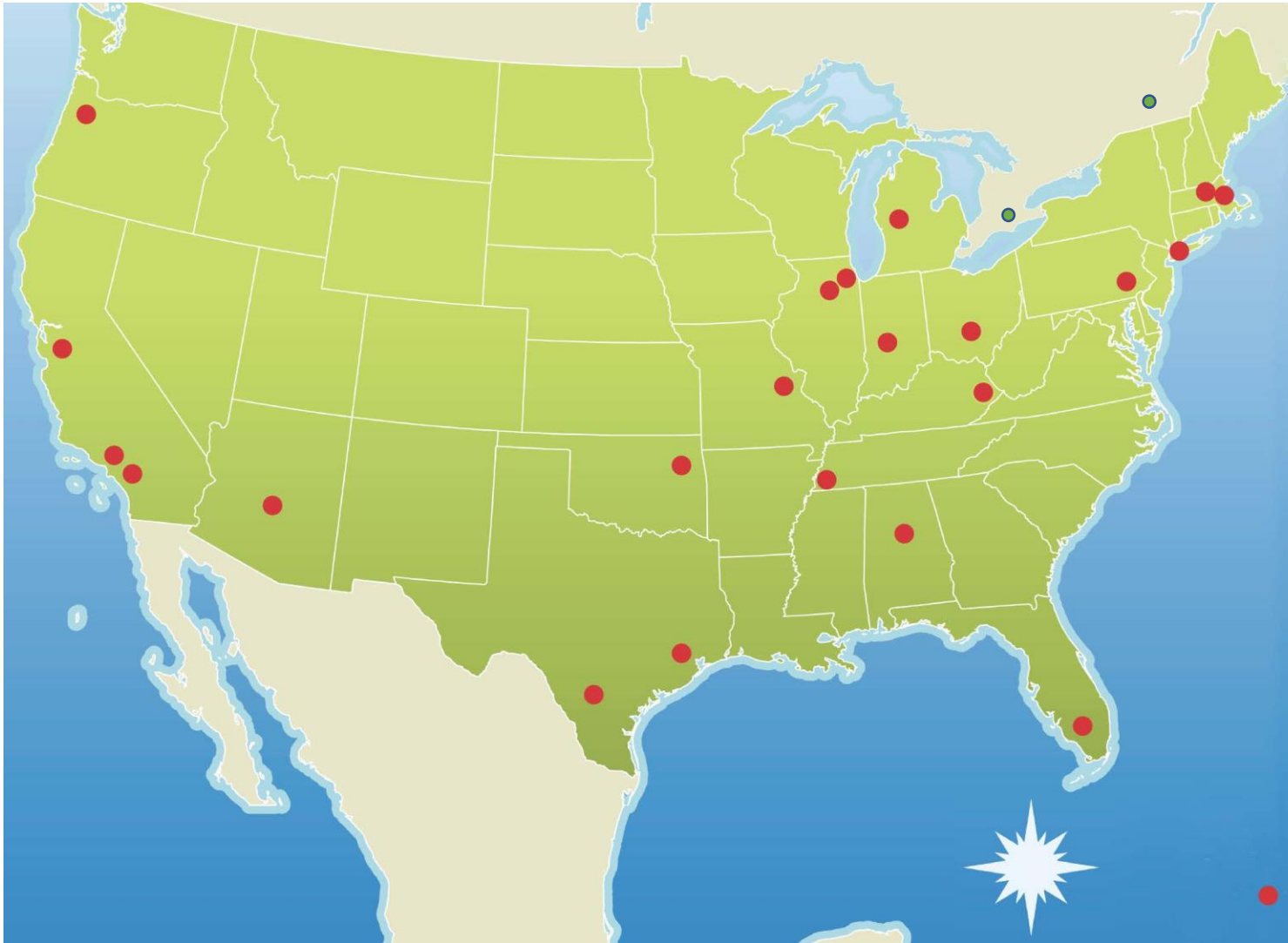
## **NEWS** Part III Revisions 18 June, 2018

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After several years of research, review and discussion with the Association of Regulatory Boards of Optometry (ARBO), including feedback from ARBO's National Board Examination Review Committee (NBERC), and the Association of Schools and Colleges of Optometry (ASCO), the National Board of Examiners in Optometry will begin work to revise the Part III Clinical Skills Examination (CSE). Initial planning meetings have begun to develop the timeline to examination implementation and will provide further information as it becomes available.



# The Eye Care Workforce



23 United States Programs

2 Canadian Programs

23 Accredited Programs

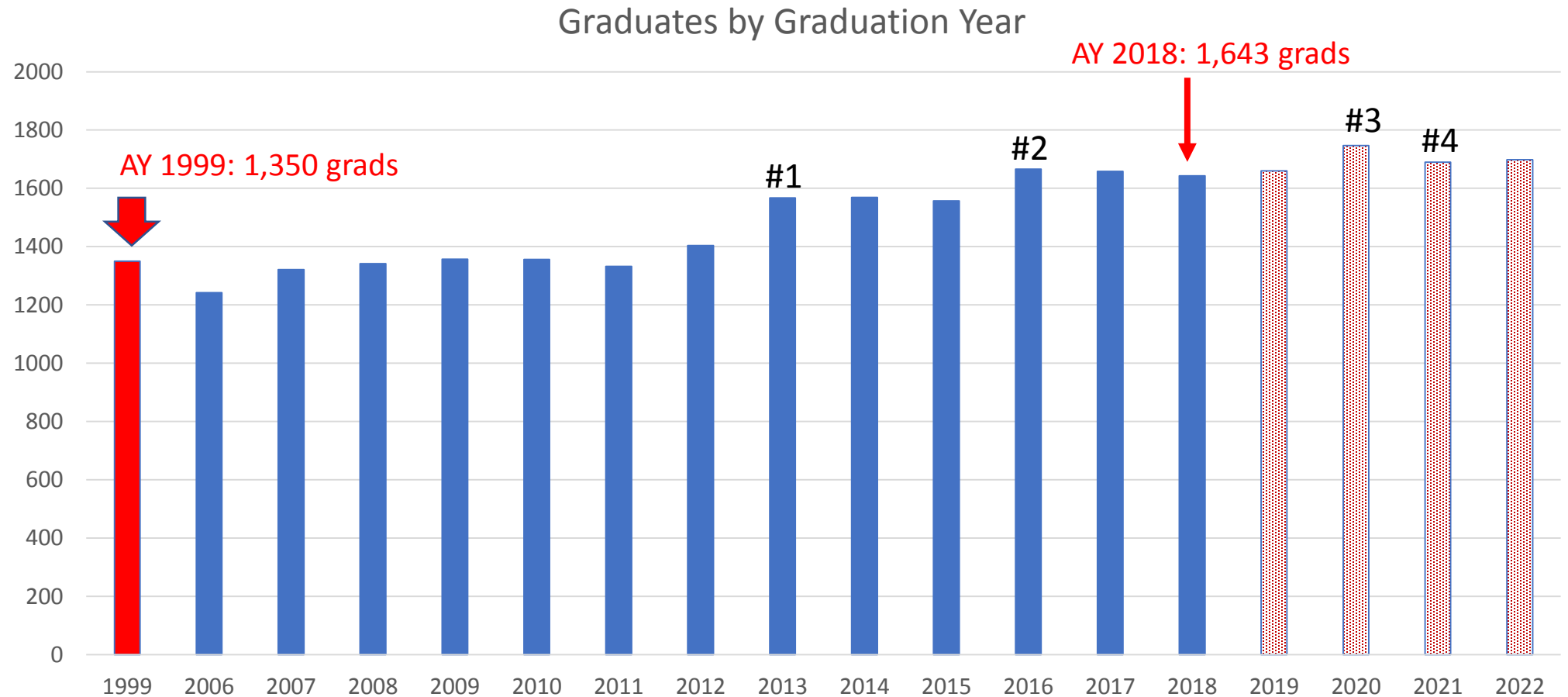
2 Pre-Accreditation

1 Stage One Application



# The Eye Care Workforce: Graduation Rates & Projections

There were 21% more graduates in 2018 than in 1999.



Note # 1: 2013 - AZ, WUCO, UIWRSO

# 2: 2015 - MCPHSU

# 3: 2020 - Pikeville

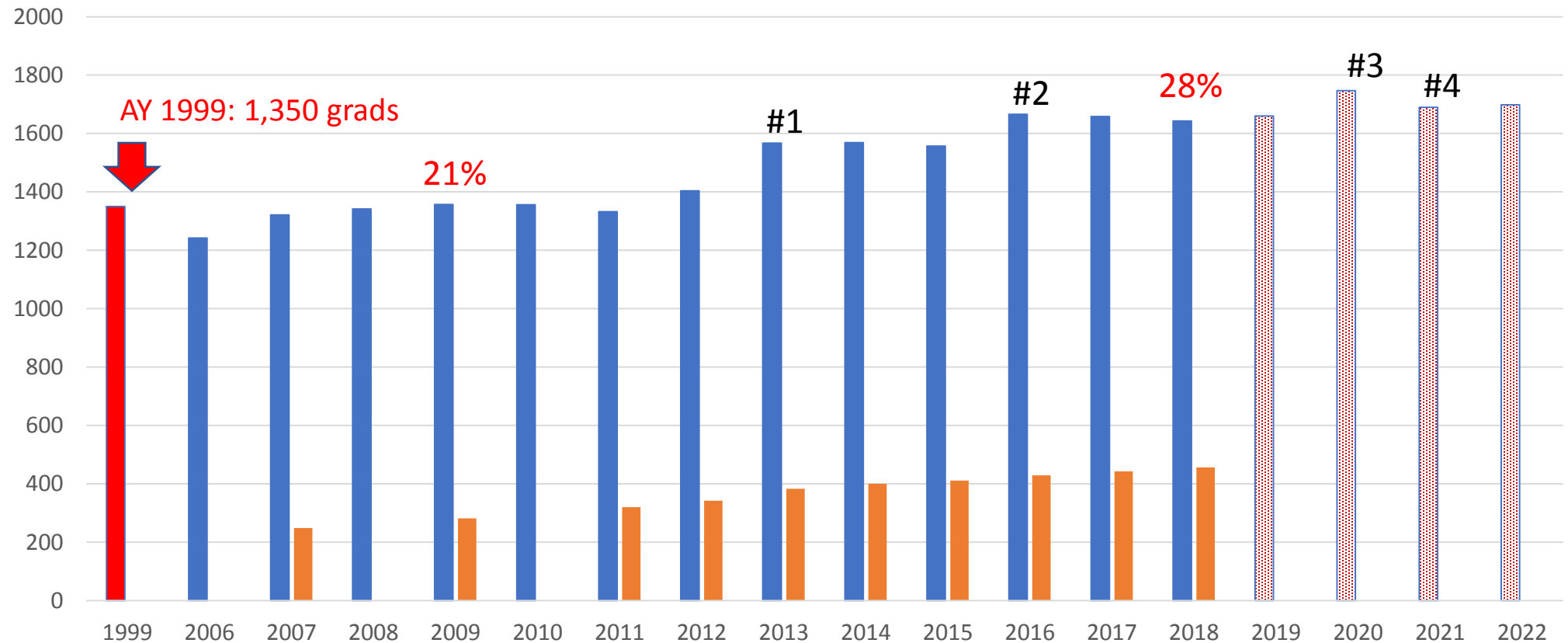
# 4: 2021 - Chicago



# The Eye Care Workforce: Residencies (28%)

Approx. 40% of SUNY  
Grads pursue residencies!

Graduates/Residents by Graduation Year



Note # 1: 2013 - AZ, WUCO, UIWRSO

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# 4: 2021 - Chicago

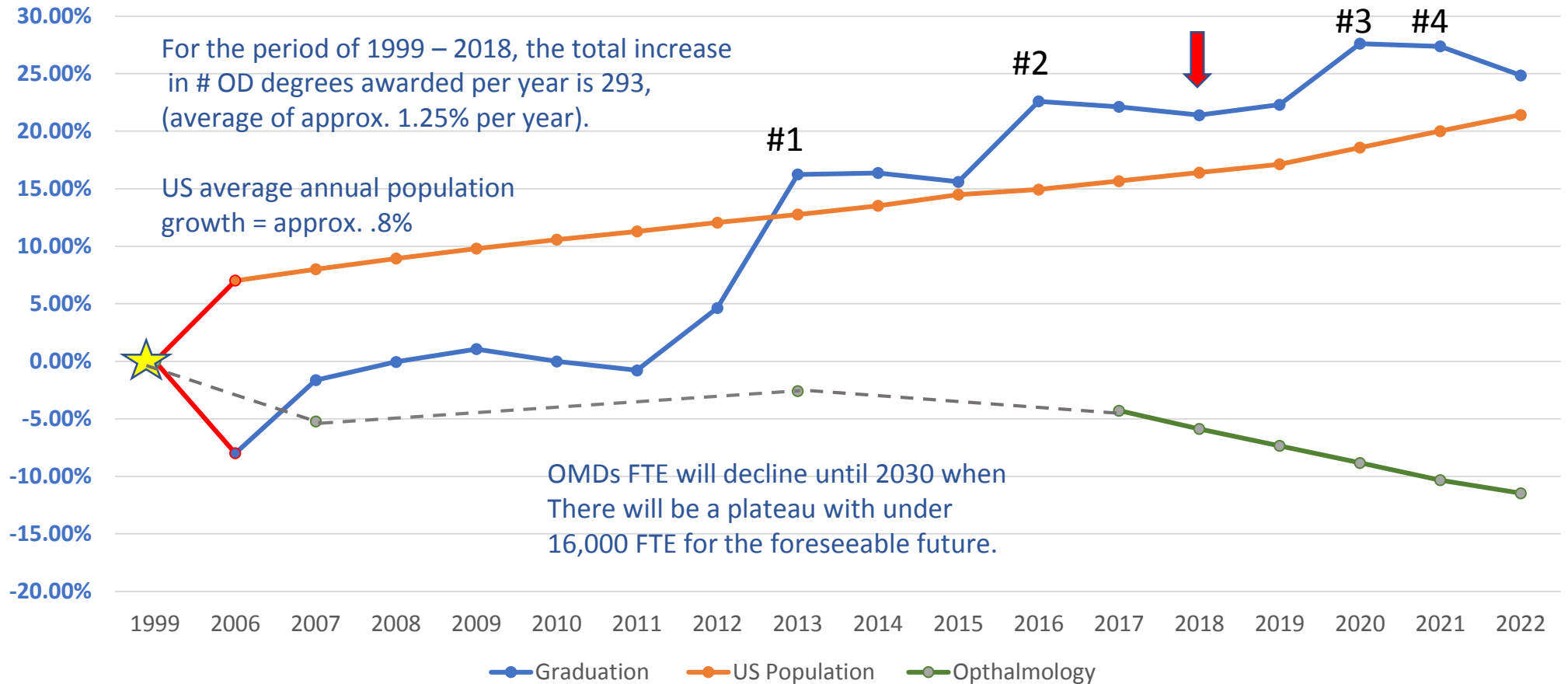




# The Eye Care Workforce: Graduation Rates & Projections

From 1999 – 2018:

- Annual incr. grads = 1.25%
- Annual incr. US pop. = 0.8%



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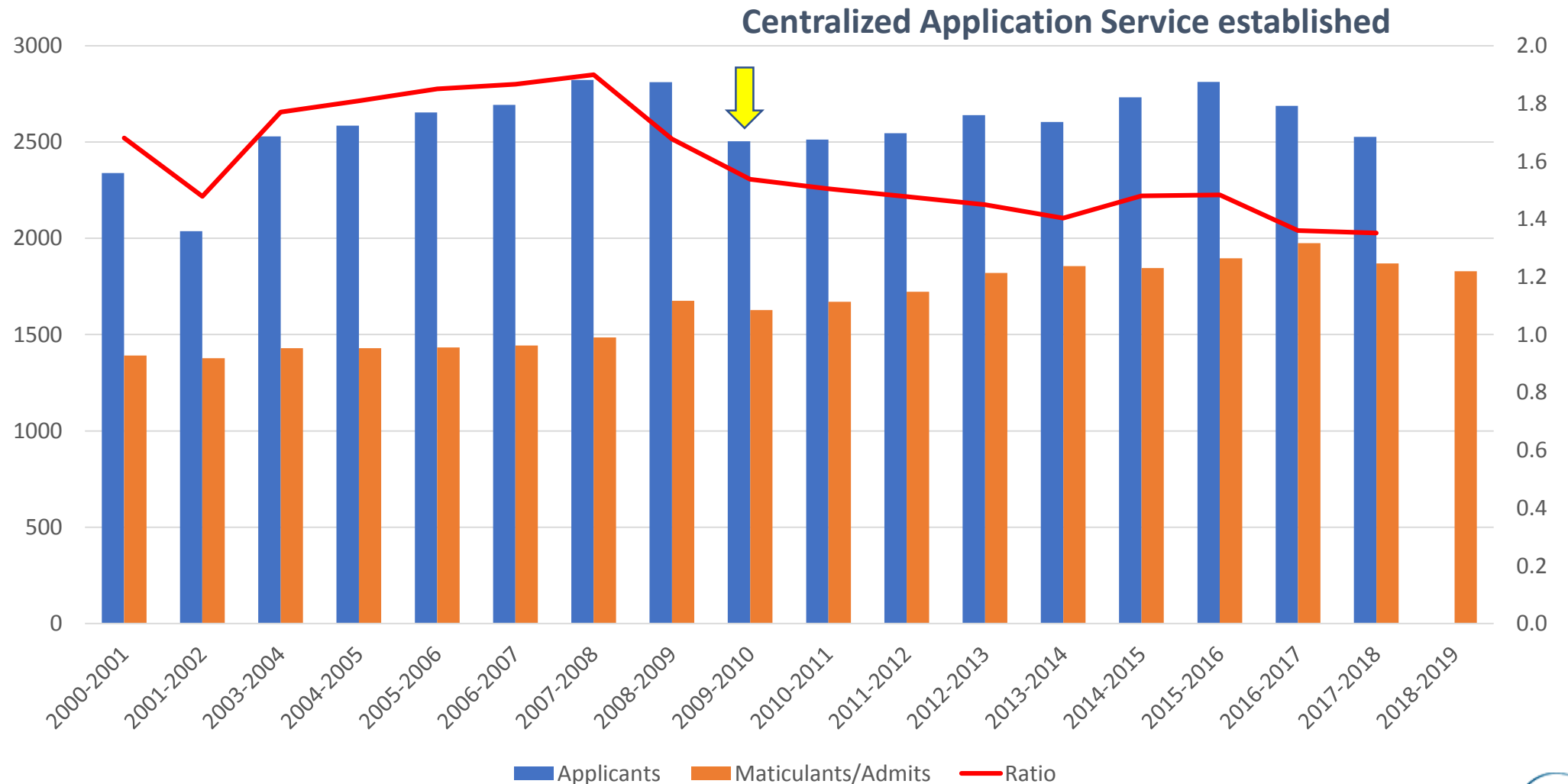
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# The Eye Care Workforce: Applicant Pool

Annual increase in number of  
matriculates over time may  
range from 1.7% to 2.2%



# Accreditation Standards: ACOE

- 1.3.1 Within six years of initial matriculation, at least 80% of entering students must be (1) licensed to practice optometry, or (2) pass all three parts of the NBEO or (3) pass the equivalent Canadian registration examination.

*Although a lagging indicator, if optometry programs take in unqualified applicants it will impact their accreditation status. Accreditation is a powerful market force: without accreditation, there is no program.*



# Optometric Education Today:

## The Competition for Students

### NATIONAL BOARD OF EXAMINERS IN OPTOMETRY

10/2017-9/2018 Institutional Yearly Performance Report

Schools	Number of Candidates	Part I ABS First Timer Pass Rate	Part II PAM First Timer Pass Rate	Part III CSE First Timer Pass Rate	Ultimate Pass Rate
Arizona College of Optometry at Midwestern University****	50	84.00%	94.00%	88.00%	96.00%
Illinois College of Optometry	149	85.23%	91.28%	84.56%	92.62%
Indiana University	72	77.78%	91.67%	84.72%	97.22%
Inter American University of Puerto Rico*	50	40.00%	48.00%	40.00%	76.00%
MCPHS University	52	55.77%	69.23%	53.85%	67.31%
Michigan College of Optometry at Ferris State*****	35	74.29%	91.43%	74.29%	94.29%
New England College of Optometry	118	77.97%	94.92%	74.58%	94.92%
Northeastern State University***	26	80.77%	96.15%	92.31%	96.15%
Nova Southeastern University*	95	62.11%	95.79%	77.89%	96.84%
Pacific University	80	83.75%	95.00%	76.25%	93.75%
Salus University	163	55.21%	85.89%	71.78%	85.28%
Southern California College of Optometry	99	62.63%	88.89%	73.74%	90.91%
Southern College of Optometry**	130	85.38%	97.69%	85.38%	100.00%
State University of New York	91	86.81%	94.51%	70.33%	97.80%
The Ohio State University	68	86.76%	97.06%	85.29%	97.06%
University of Alabama at Birmingham**	44	81.82%	95.45%	77.27%	97.73%
University of California/Berkeley	63	85.71%	96.83%	90.48%	98.41%
University of Houston	100	70.00%	92.00%	72.00%	94.00%
University of Missouri/St Louis*****	39	64.10%	89.74%	66.67%	84.62%
University of the Incarnate Word School of Optometry	60	68.33%	85.00%	85.00%	88.33%
Western University of Health Sciences College of Optometry	60	55.00%	76.67%	56.67%	81.67%
National	1644	72.93%	89.96%	75.97%	92.09%



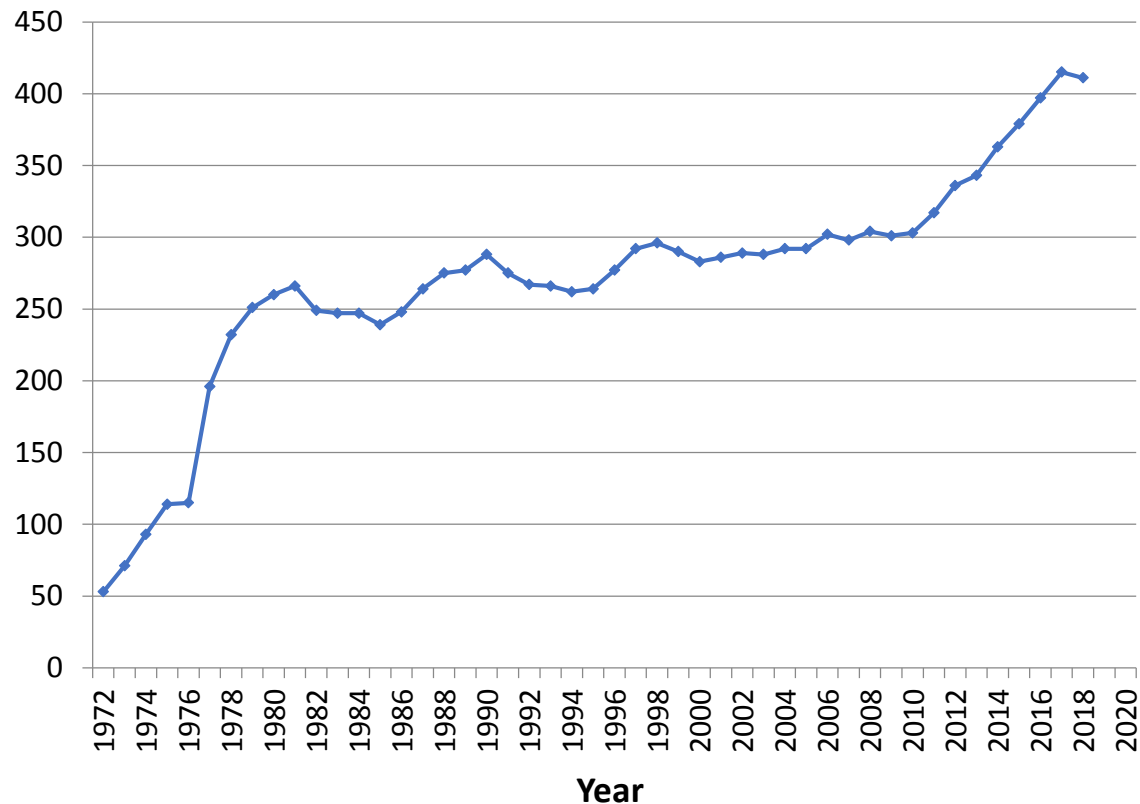
# Too Many? Too Few? Does it matter?

- The debate over the number of schools and/or optometrists is of limited value. Market forces and regulatory/compliance requirements are significant obstacles to any significant increase in graduates from the schools and college's of optometry.
- We should be more concerned about maintaining the vitality and the quality of our profession.
- We should be more concerned about understanding and preparing for the future of the health care delivery system and demonstrating leadership within the 4<sup>th</sup> Industrial Revolution.



# SUNY's Contribution to the Eye Care Workforce

Enrollment (Professional and Graduate Programs)

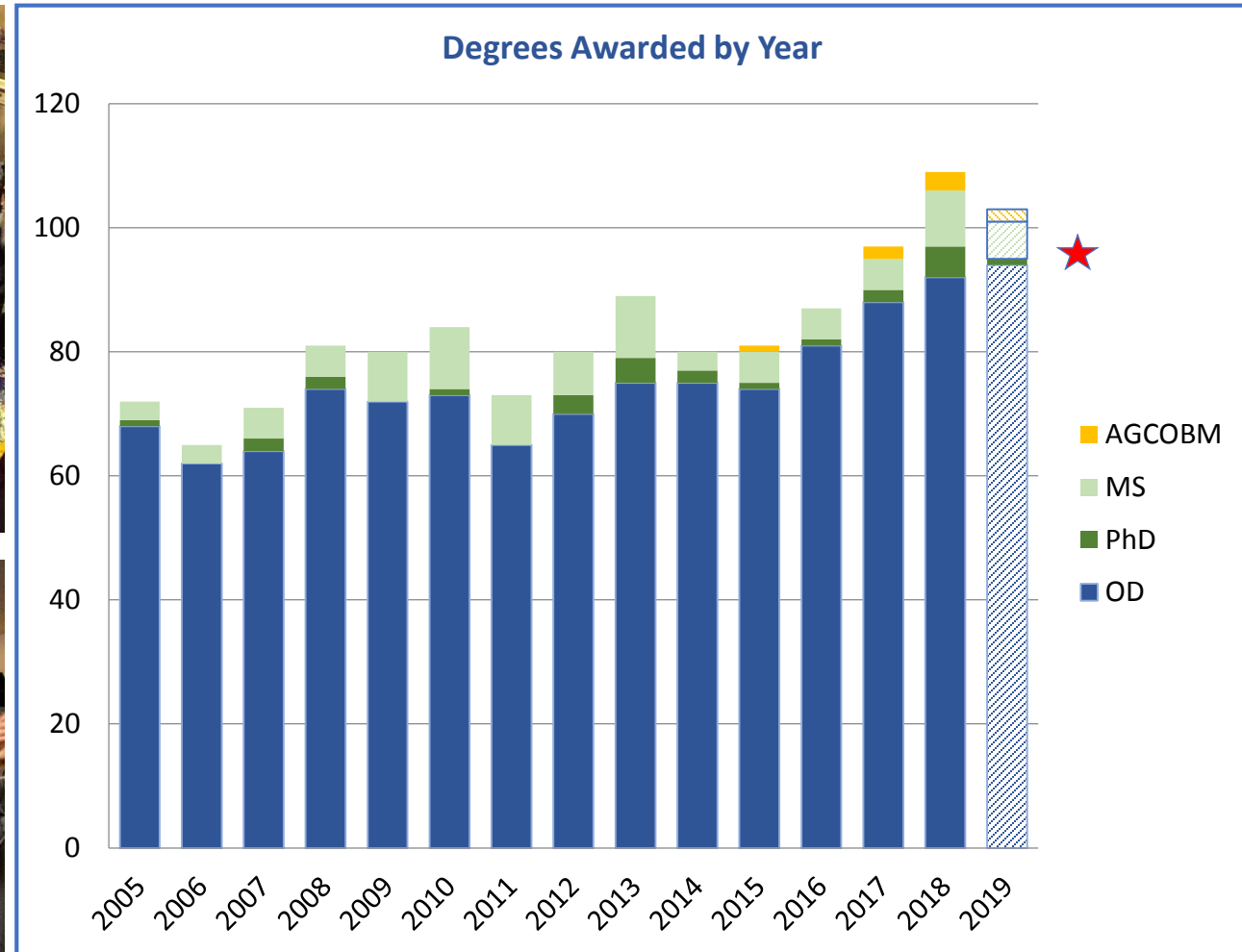


## Fast Facts: New York State

- 2,541 Active ODs in NYS (2018)
- 1,178 SUNY (Approx. 50%)
- 1/3 of all eye care – SUNY
- ODs leaving NY?
  - 2010 – 2,152
  - 2016 – 2,631 + 479
  - 2018 – 2,541 - 90
- Why the decrease?

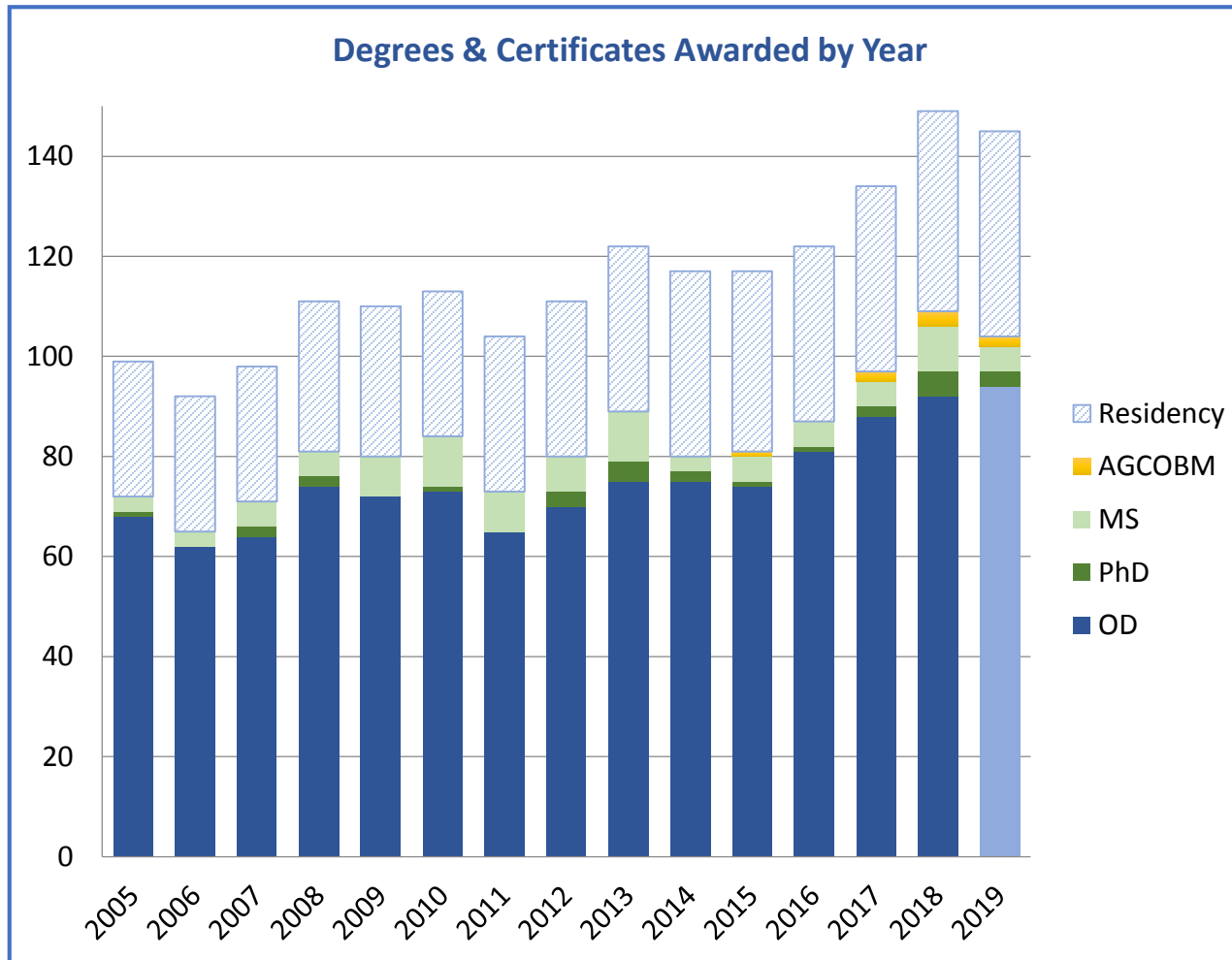


# Educational Outcomes; Degree & Certificates Granted



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The College awards over 140 degrees/certificates each year!

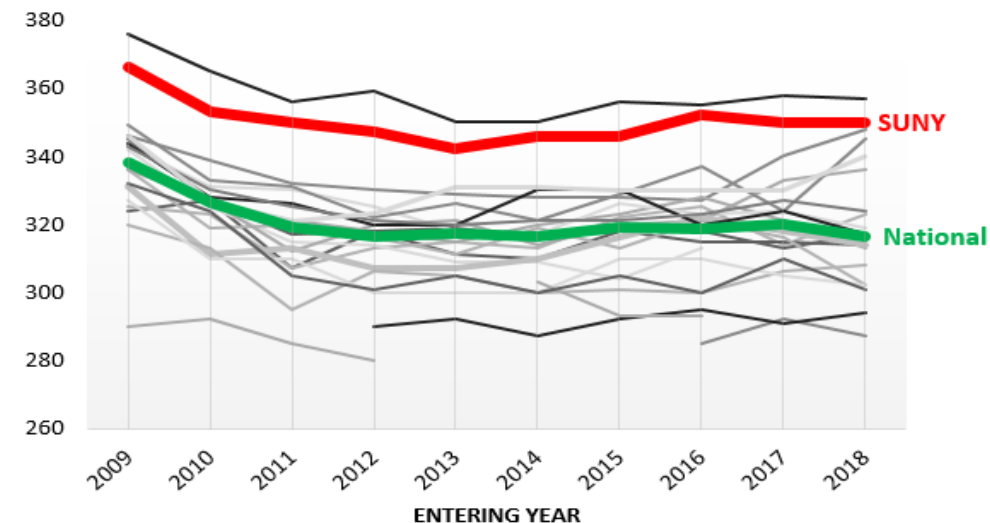




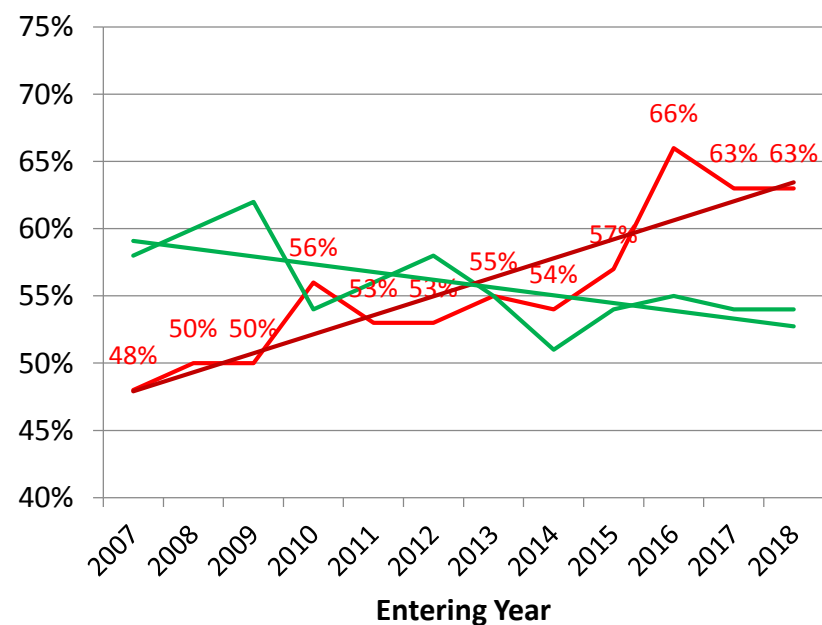
## Goal 8: Attract the brightest and most motivated students with demonstrated leadership potential



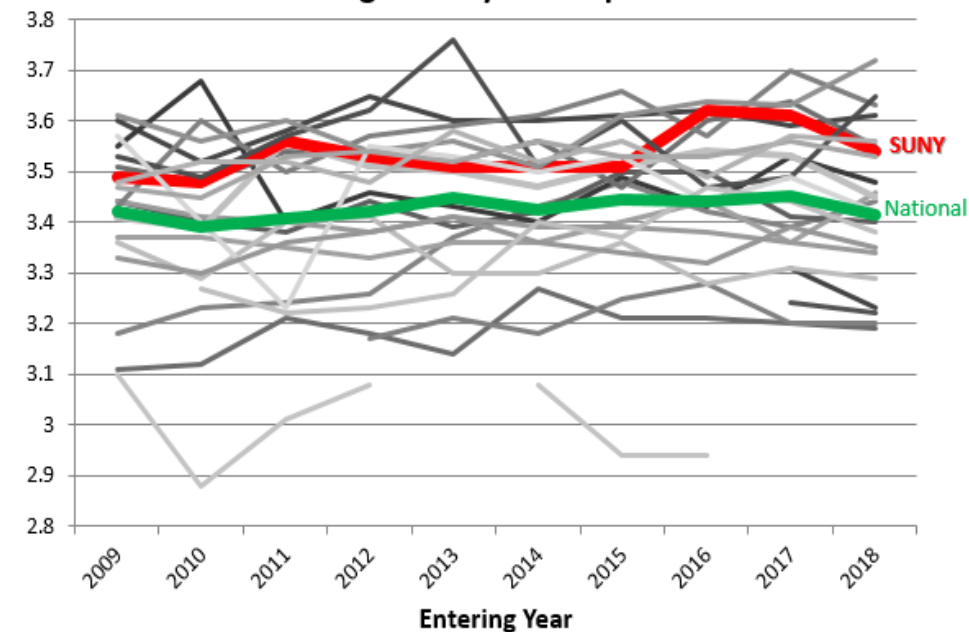
Entering OAT Total Science Scores by School Per Year\*



Yield

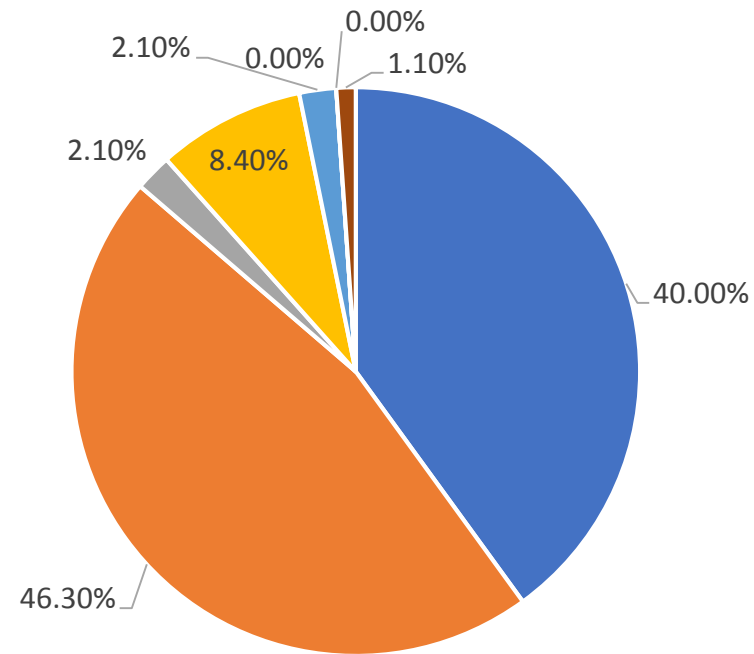


Entering GPAs by School per Year\*



# Goal 8 – Objective: “Enroll a highly qualified, diverse and engaged student body...”

## SUNY - Entering Class Fall 2018

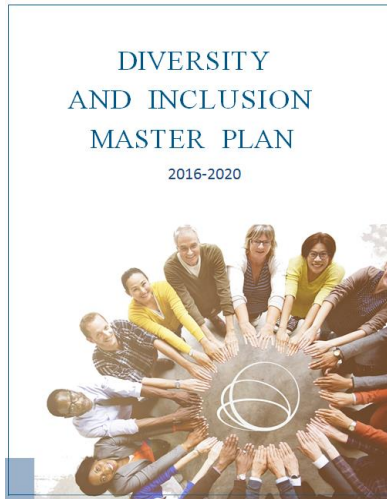


- White
- Asian
- Unknown
- Hispanic/Latino
- African American
- Am. Indian/Alaska Native
- Nat. Haw./Pac. Isl.
- Two or more races



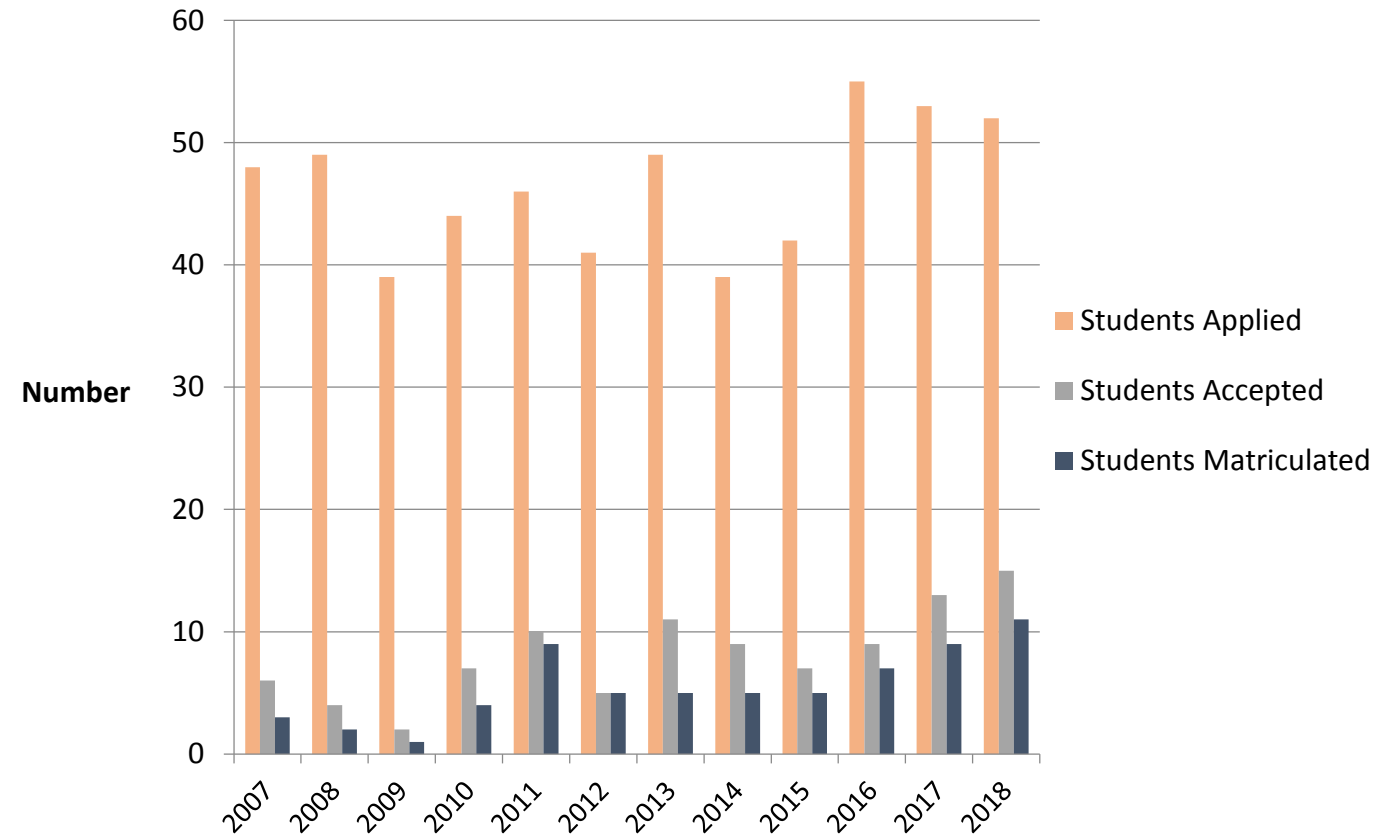


# Under-Represented Minority Students

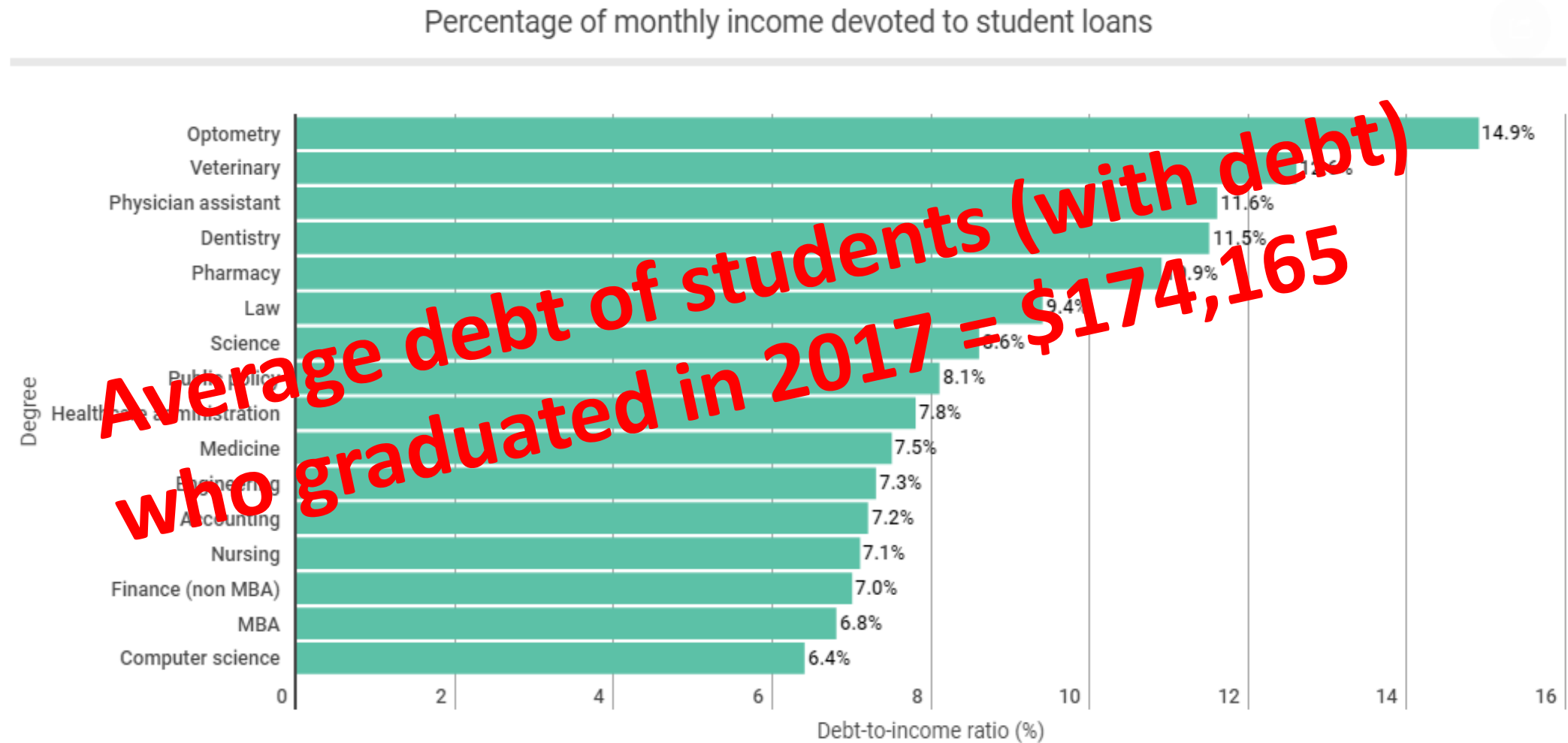


Awarded 3 grants (\$120,000) for diversity through SUNY Performance Improvement Fund

Under-Represented Minority Students: Applied, Accepted and Matriculated

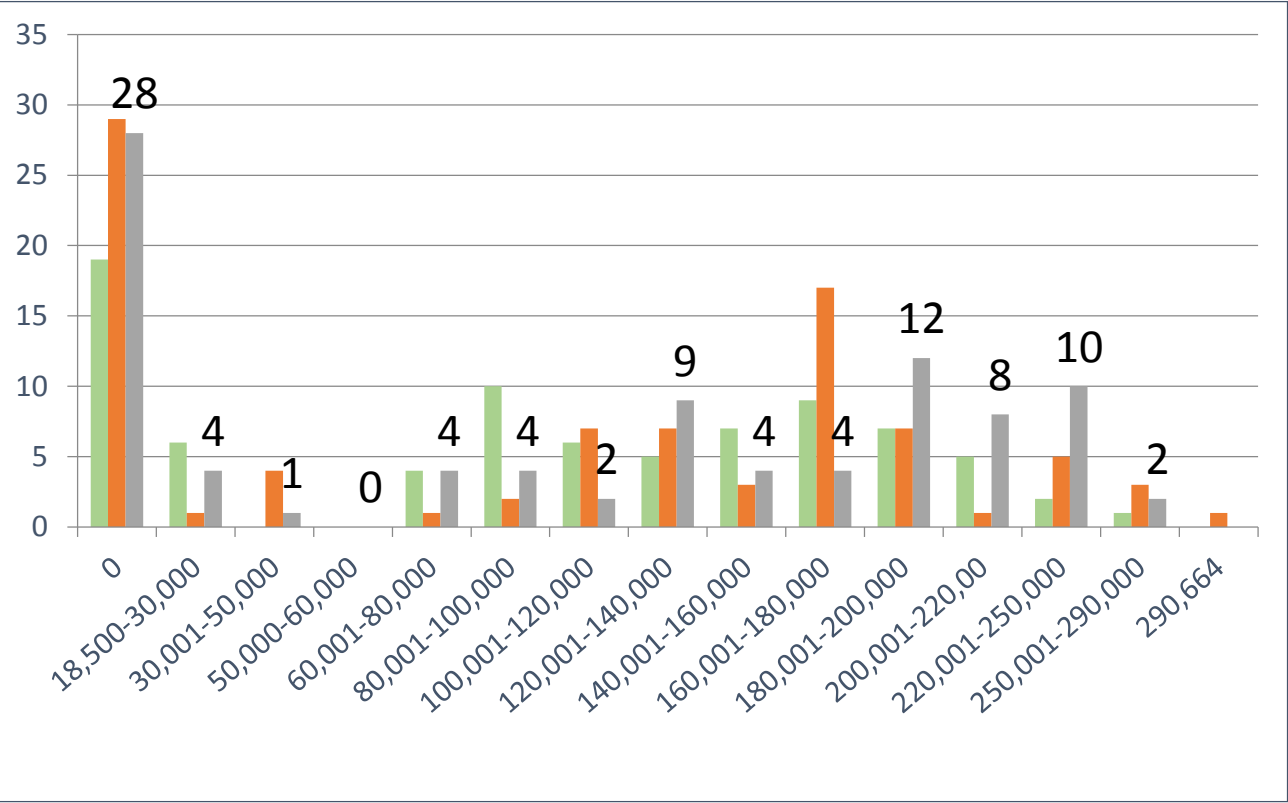


# Optometric Education: Return on Investment





# Goal 8 – Objective: “Ensure the affordability of the Doctor of Optometry degree program”



**2017/18 = \$ 1,054,685**

- OCNYS: \$ 342,250
- State/SUNY: \$ 305,700
- Military: \$ 84,000
- Grad. Waivers: \$ 322,735

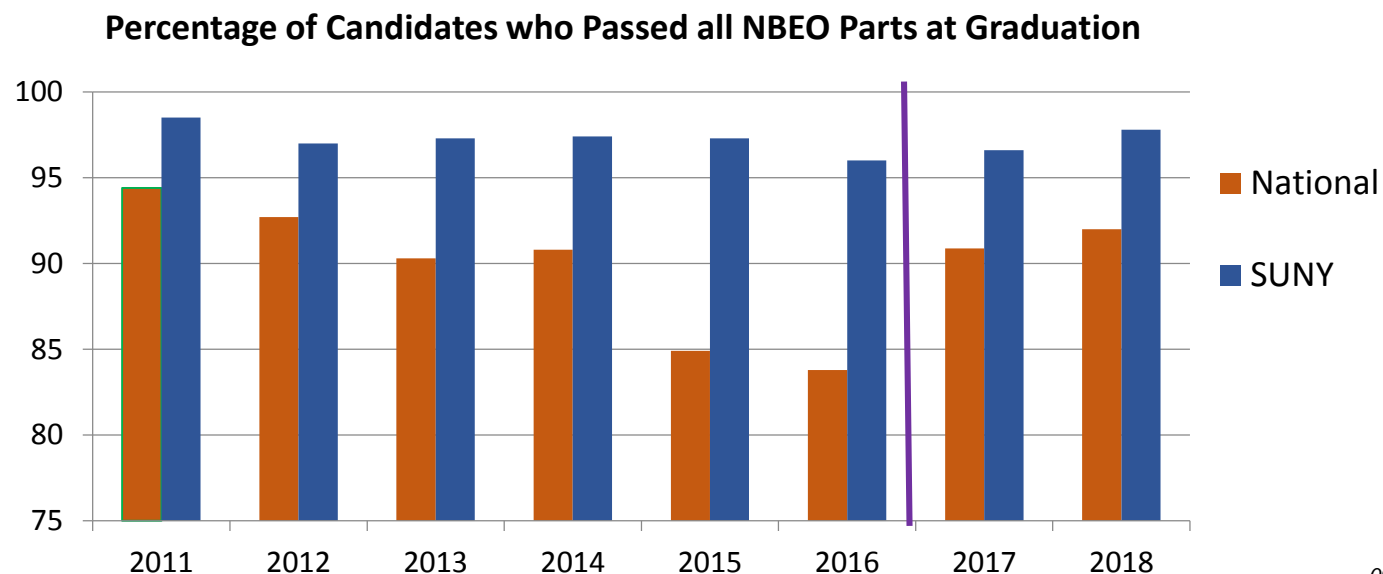
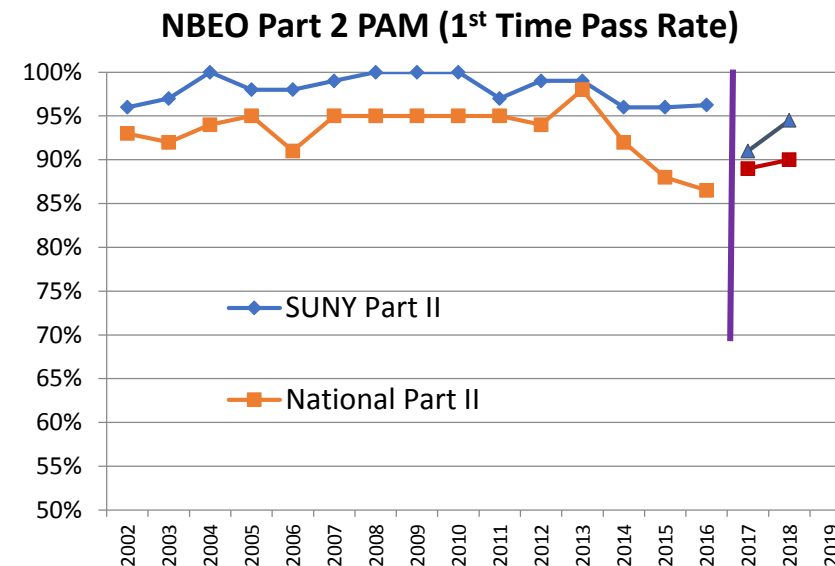
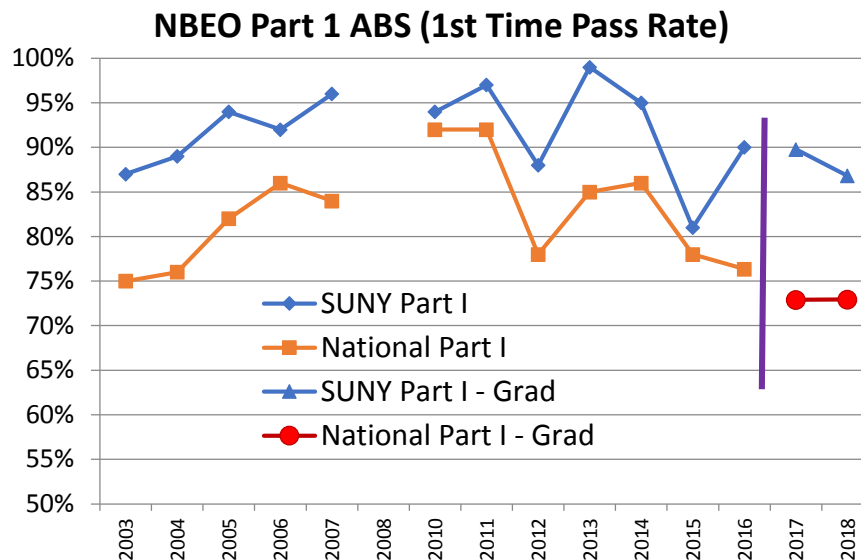
**Total Tuition Collected  
\$ 13,043,735**

**Support = 8% Relief**

	Class of 2016	Class of 2017	Class of 2018
Borrowed Amount:	\$8,309,586	\$9,261,918	\$10,267,077
Average Debt All Students:	\$ 102,588	\$ 105,250	\$ 111,598
Average Debt All Students w/ Debt:	\$ 134,026	\$ 156,982	\$ 160,423



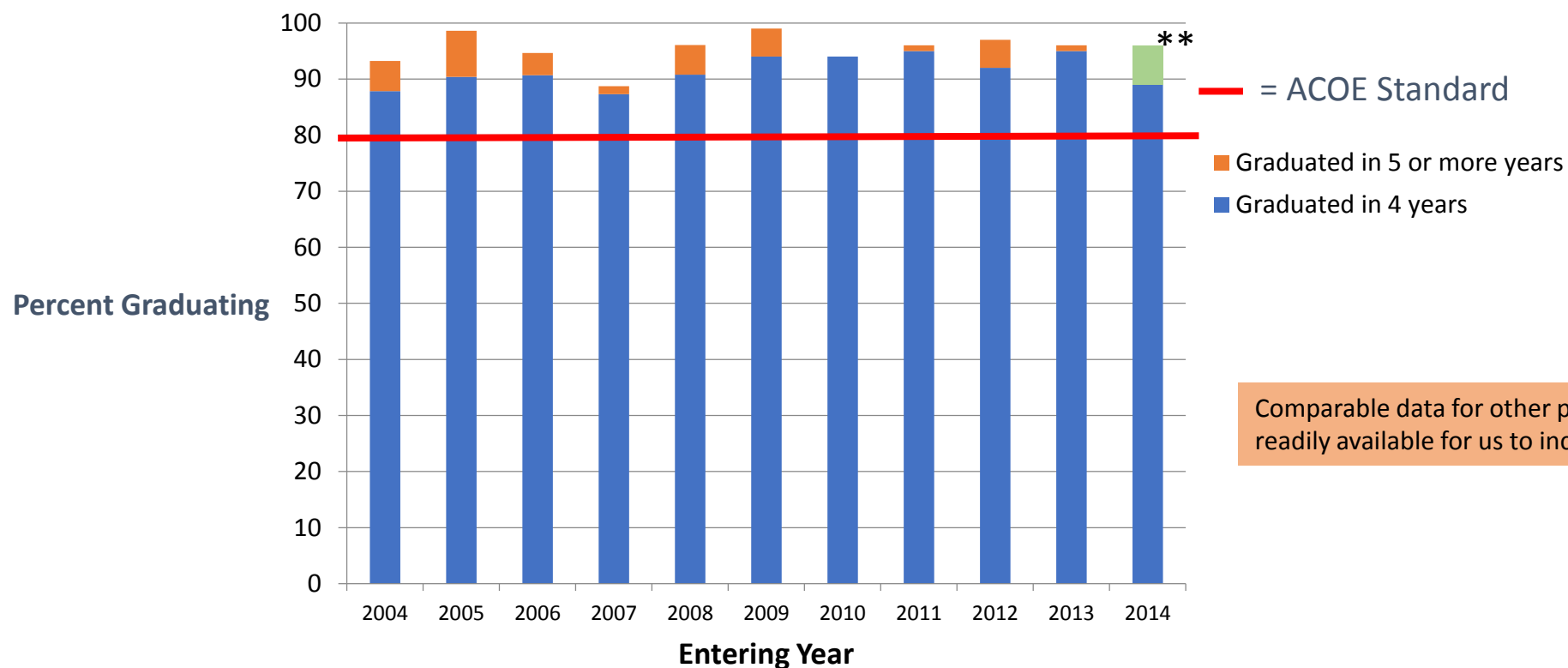
# Educational Outcomes: Class of 2018



**2017 New Format**  
**Graduates who**  
**have taken all 3**  
**parts of the exams**



# ACOE: Percent of Entering Students who Graduate



Percent of Entering Students who:	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Graduated in 4 years*	88	90	91	87	91	94	94	95	92	95	89
Graduated in 5 or more years	5	8	4	1	5	5	0	1	5	1	-
Graduated at any time	93	99	95	89	96	99	94	96	97	97	89
Left for Academic Reasons	3	0	3	6	1	0	5	1	1	2	3
Left for Personal Reasons	4	1	3	6	3	1	1	3	2	1	1
Still Enrolled	0	0	0	0	0	0	0	0	0	0	7

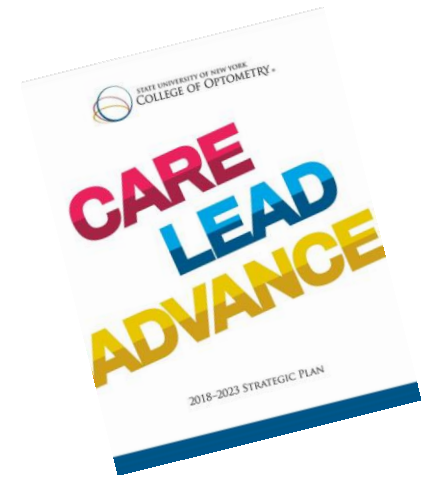
\*Includes students who graduated in the summer following their fourth year.

\*\* Still enrolled



# Anticipating the (near) future?

- The Eye Care Workforce
- A Diverse and Highly Qualified Applicant Pool
- **Evidence-Based Practice** and the **Translational Research Pipeline**
- **State Law and Licensure requirements? The future of Assessment**
  - **Critical Thinking & Clinical Decision Making**
  - **Scope Expansion/Enhancement**
  - **Communications Skills**
    - **Patient**
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- **Post Graduate Education, Residency & Subspecialization**
- Integration into the Health Care System
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# Goals 1, 2 & 3: Individualized Education

- The T-Shaped Worker
  - Breadth
  - Depth
- Value-added opportunities
  - Flex Program
  - Electives
  - Clinical Rotations
  - Concentrations & Micro-credentials
  - OD +
- Graduate Research Education
- Residency Education
- Subspecialization

**Generalist**

**Specialist**





# TASK FORCE ON SUB-SPECIALIZATION



## OD Degree

- Common Core Competencies
- Attributes of Graduating Students
- Value added opportunities



## RESIDENCY PROGRAMS

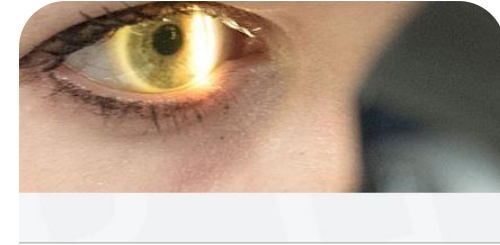


Completing a  
gained from  
career oppor  
post-residen  
Residency M

Directories  
Optometry B

## Residency

- Common Advanced Competencies
- Site Specific/Selected
- Integrated as learning Objectives



Bec  
Academy

According  
revenue fo

## Diplomate

- Validation of Mastery
- Common Advanced Competencies
- All Competencies Assessed



# The Future of Optometric Practice: Evidence-Based

Past	Now/Future
Subjective Data Coll.	Objective Data Coll.
Data Collection Skills	<b>Data Analysis/ Treatment</b>
Clinical Pearls	<b>Evidence-Based Practice</b>
In-Person	+ Virtual
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The Evidence Hierarchy, Questions about Treatment

Image courtesy of: SUNY Downstate Medical Center. Medical Research Library of Brooklyn. Evidence Based Medicine Course.

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# Goal 3: “Grow the graduate and research programs to increase institutional impact....”

## By the numbers:

- Faculty currently involved in research: 28 (18 graduate program faculty)  
Total: 76 faculty (37% involvement)
- Current graduate students
  - MS: 15
  - PhD: 14
  - Postdocs: 7
- Current number of active grants
  - Federal: 8 NEI (not counting T35 and federal flow throughs)
  - Industry: 7
- Average annual grant revenue: \$3.17 M (last 5 years)
  - Basic and translational: \$2.03 M
  - Clinical research: \$1.14 M
- Average annual peer-reviewed publications (last 4 years): 40.5
- Number of new patents (last 2 years): 3



Source: David Troilo, PHD



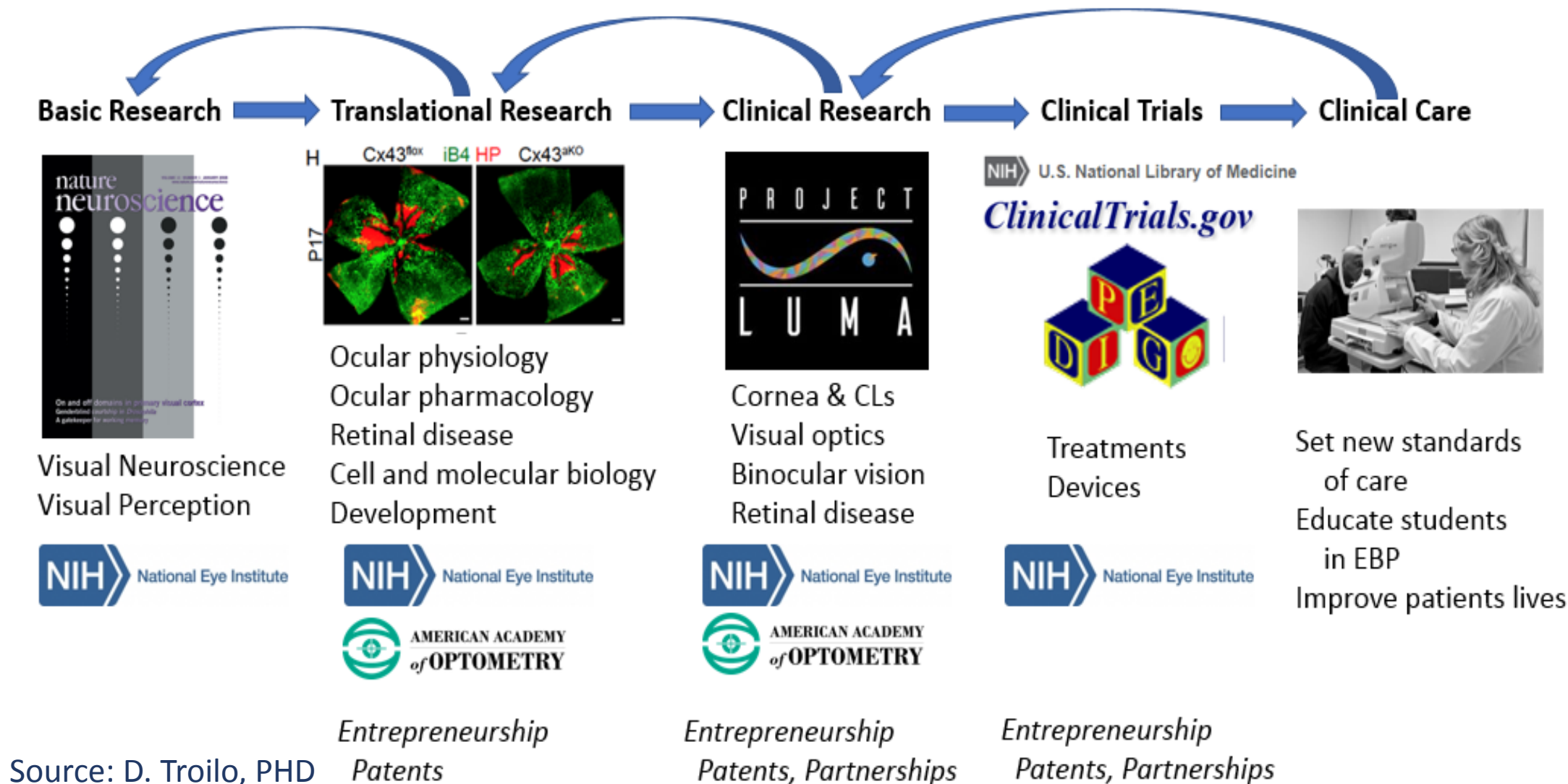
# Clinical Vision Research Center (CVRC)

- Founded in 2013
  - 46 extramurally sponsored projects
- Supports sponsored clinical research
  - Director (Kristen Fry, OD)
  - 3 coordinators, 7 ODs, 1 MD
- 4 research exam lanes, 4 special testing rooms
- Training: Research ethics (CITI), GCP
- Languages: English, Spanish, Mandarin



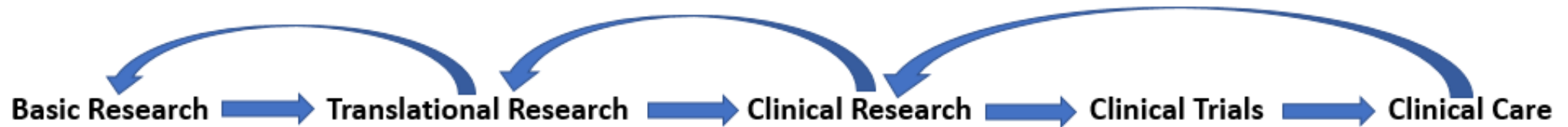


# Goal #3: “Grow the graduate and research programs...” - The Translational Research Pipeline





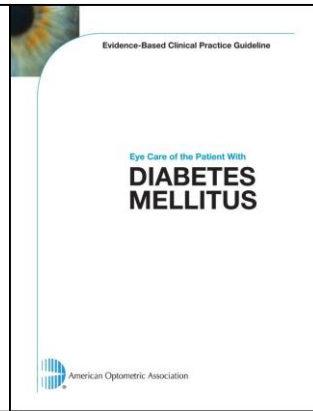
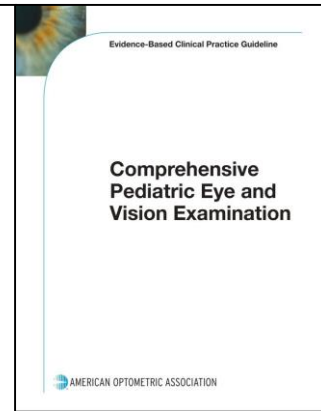
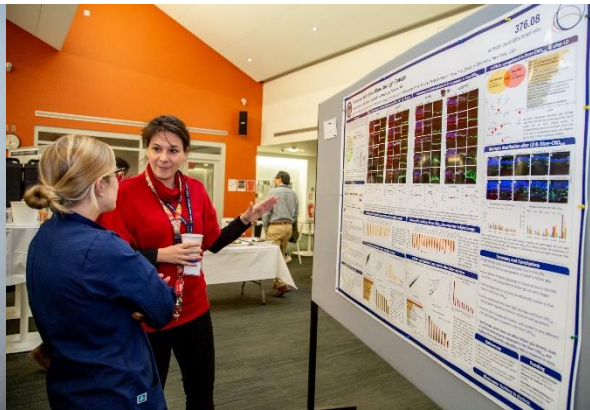
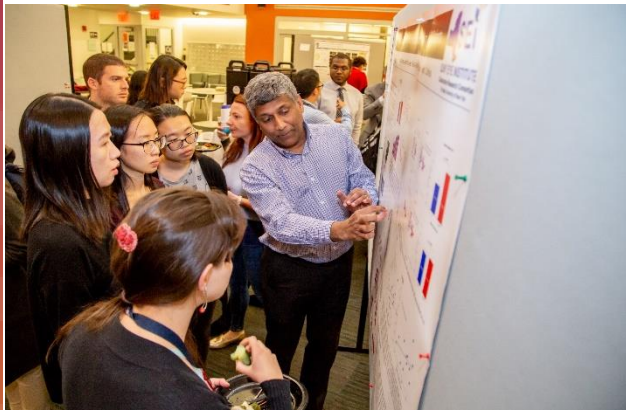
# The Translational Research Pipeline



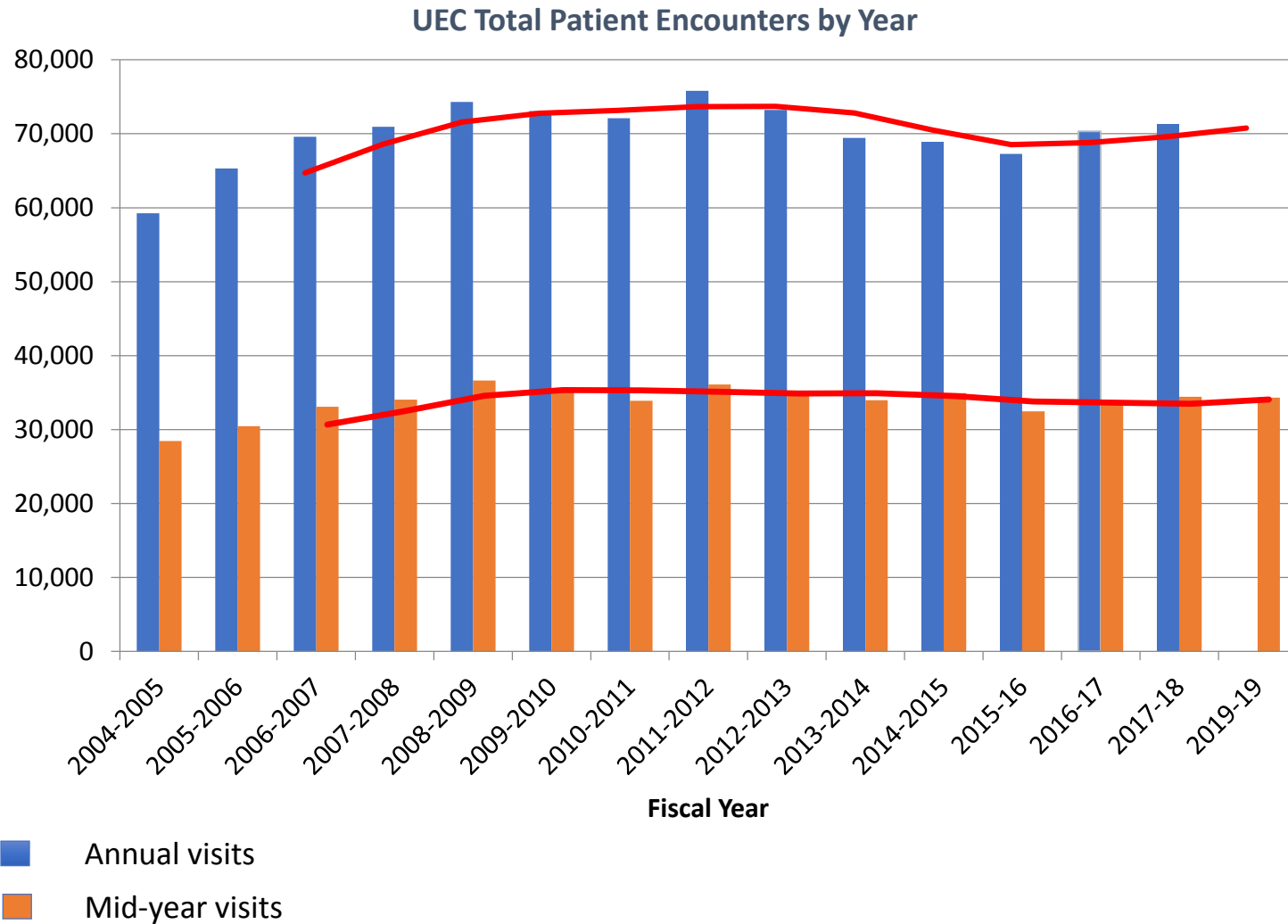
Alonso – cortical neurosci  
McPeck – oculomotor neurosci  
Sedgwick – perception  
Zaidi – perception

Benavente – exp myopia  
Bloomfield – retinal cell bio  
Kruger – visual optics  
Nguyen – corneal cell biology  
Pola – oculomotor modeling  
Srinivas – ocular physiology  
Viswanathan – glaucoma  
Wohl – retinal cell bio

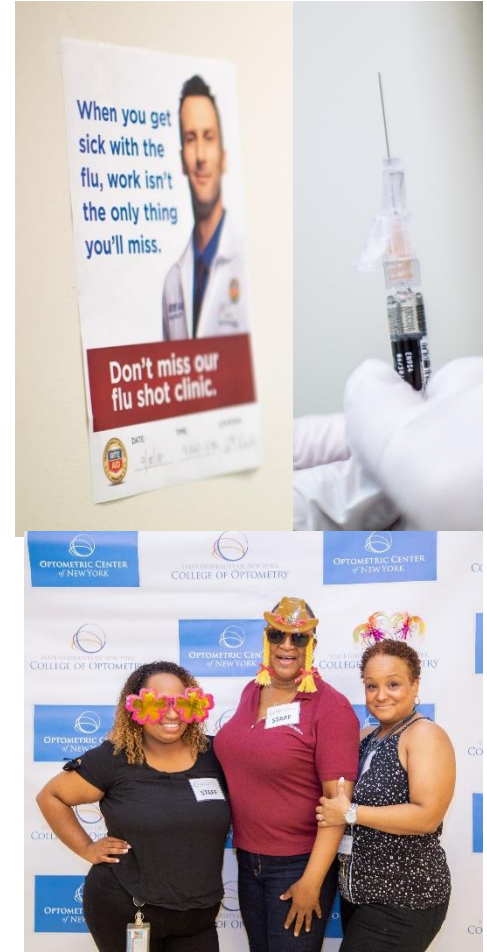
Ciuffreda – TBI, clinical trials  
Dul – instrumentation, clinical trials  
Fry – clinical trials  
Iacono – clinical trials  
Keh – contact lenses, clinical trials  
Portello – visual optics  
Rosenfield – visual optics  
Schulman – pediatrics, clinical trials  
Vricella – pediatrics, clinical trials  
Zhu – myopia control, clinical trials



# Goal 4: “*Deliver unparalleled care to our University Eye Center patients*”

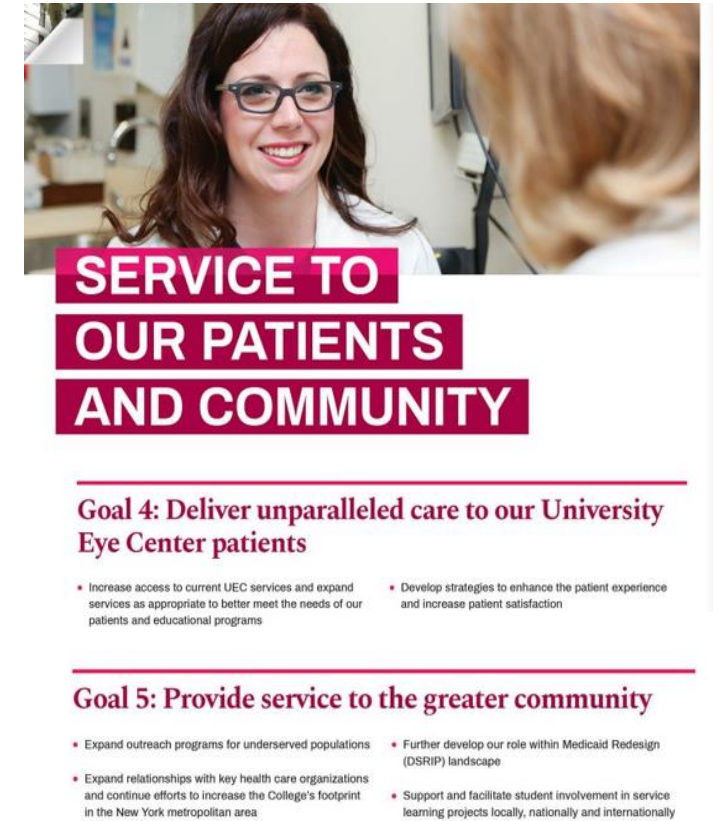


\* 3 year rolling average used to establish trend line



# Goal 5: “Provide service to the greater community”

- Sites:
  - University Eye Center (1)
  - UEC Community Outreach (62)
  - Satellite Clinics (10)
  - Affiliated Clinical Sites – Externship (57)
  - Affiliated Clinical Sites – Residency (19)
  - Affiliated Clinical Sites – Other (7)
- Patient Care Services Delivered by:
  - Students (394)
  - Residents (41)
  - Faculty (72)
  - Affiliated Faculty (138)
- Venues of Delivery
  - Community Health Centers
  - Hospitals
  - Military
  - Private Practice (OD & OD/MD)
  - Specialty
  - International

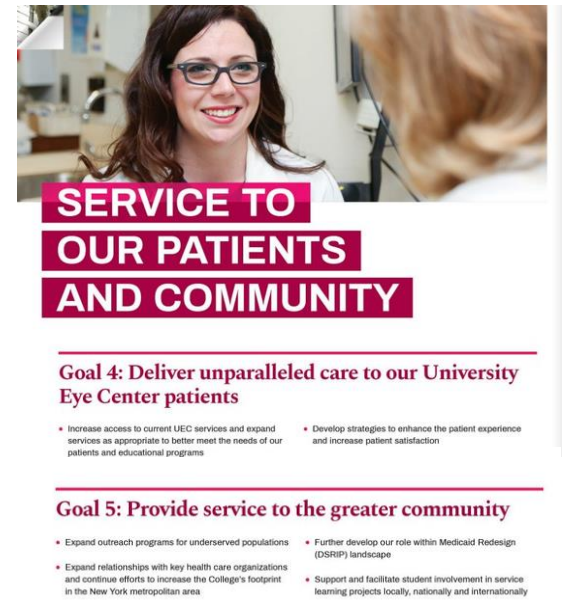


**645** = The number of Faculty, Residents and students providing eye care.



# Institutional Impact: Care Provided 2017/18

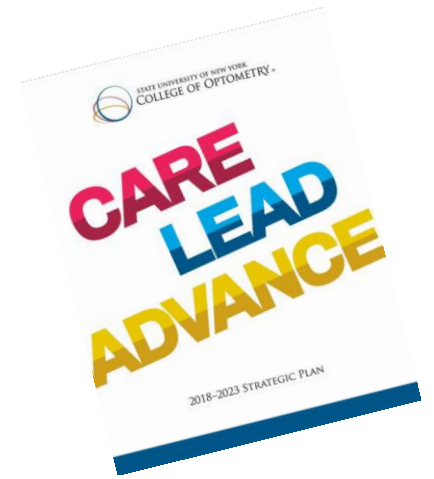
- University Eye Center = 71,269
- OD Externs (Outside the UEC) = 104,418 (117,622)
- Resident (Outside of the UEC) = 41,783 ( 55,590)
- UEC Screenings = 4,052
- Non-UEC Faculty Direct Care = ?
- Total Patient Visits Supported ? ~ 250,000 (Est)
- Serving New York City (Estimate) = >150,000 (Est)
- Serving New York State (Estimate) = >175,000 (Est)





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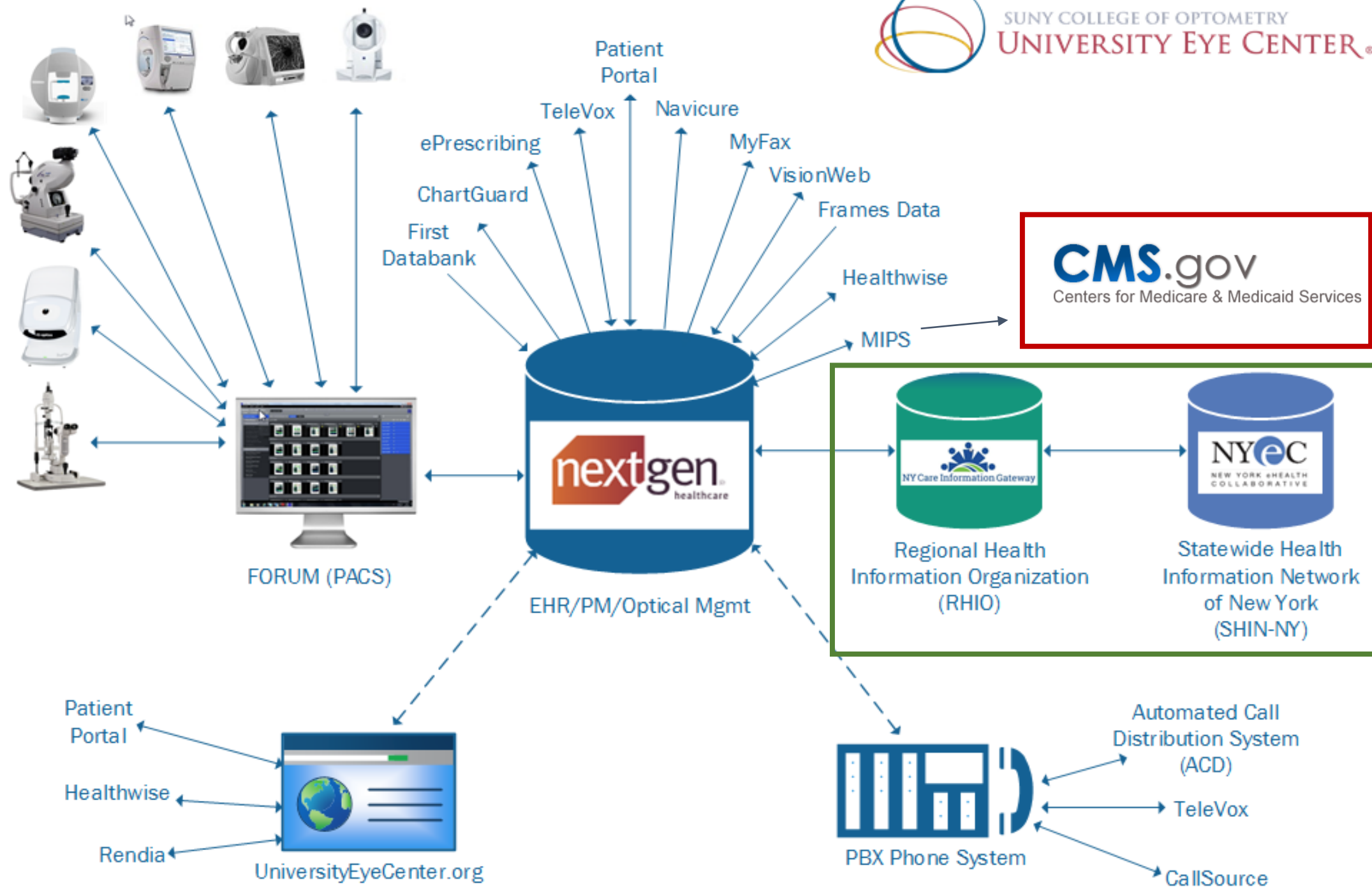
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**The National Board of Examiners in Optometry (NBEO) Announces Work Will Begin to Revise the Content of the Part III Clinical Skills Examination**

After several years of research, review and discussion with the Association of Regulatory Boards of Optometry (ARBO), including feedback from ARBO's National Board Examination Review Committee (NBERC), and the Association of Schools and Colleges of Optometry (ASCO), the National Board of Examiners in Optometry will begin work to revise the Part III Clinical Skills Examination (CSE). Initial planning meetings have begun to develop the timeline to examination implementation and will provide further information as it becomes available.

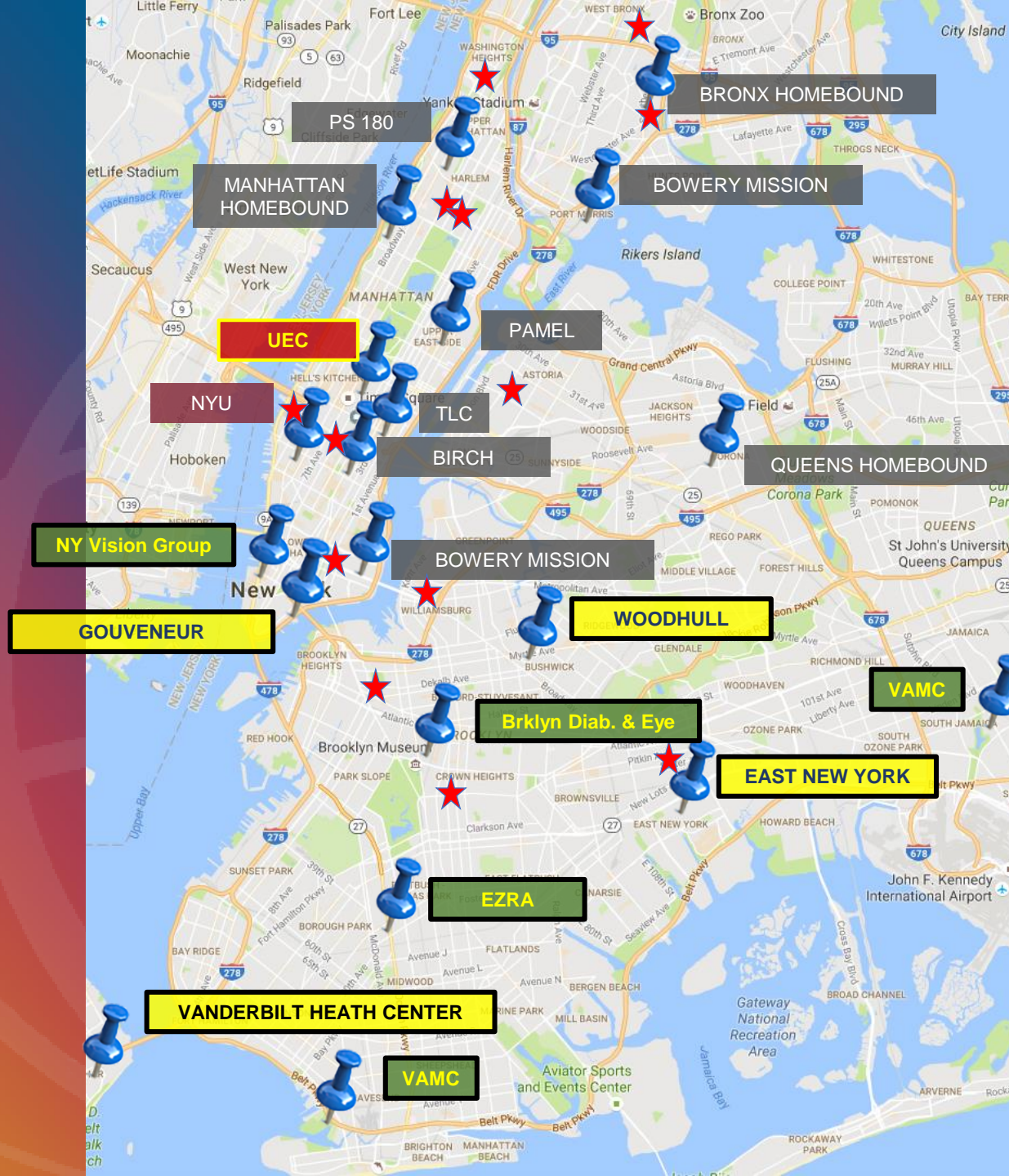






# SUNY Optometry Eye Care System

University Eye Center  
Satellites Clinics  
Clinical Teach Affiliates

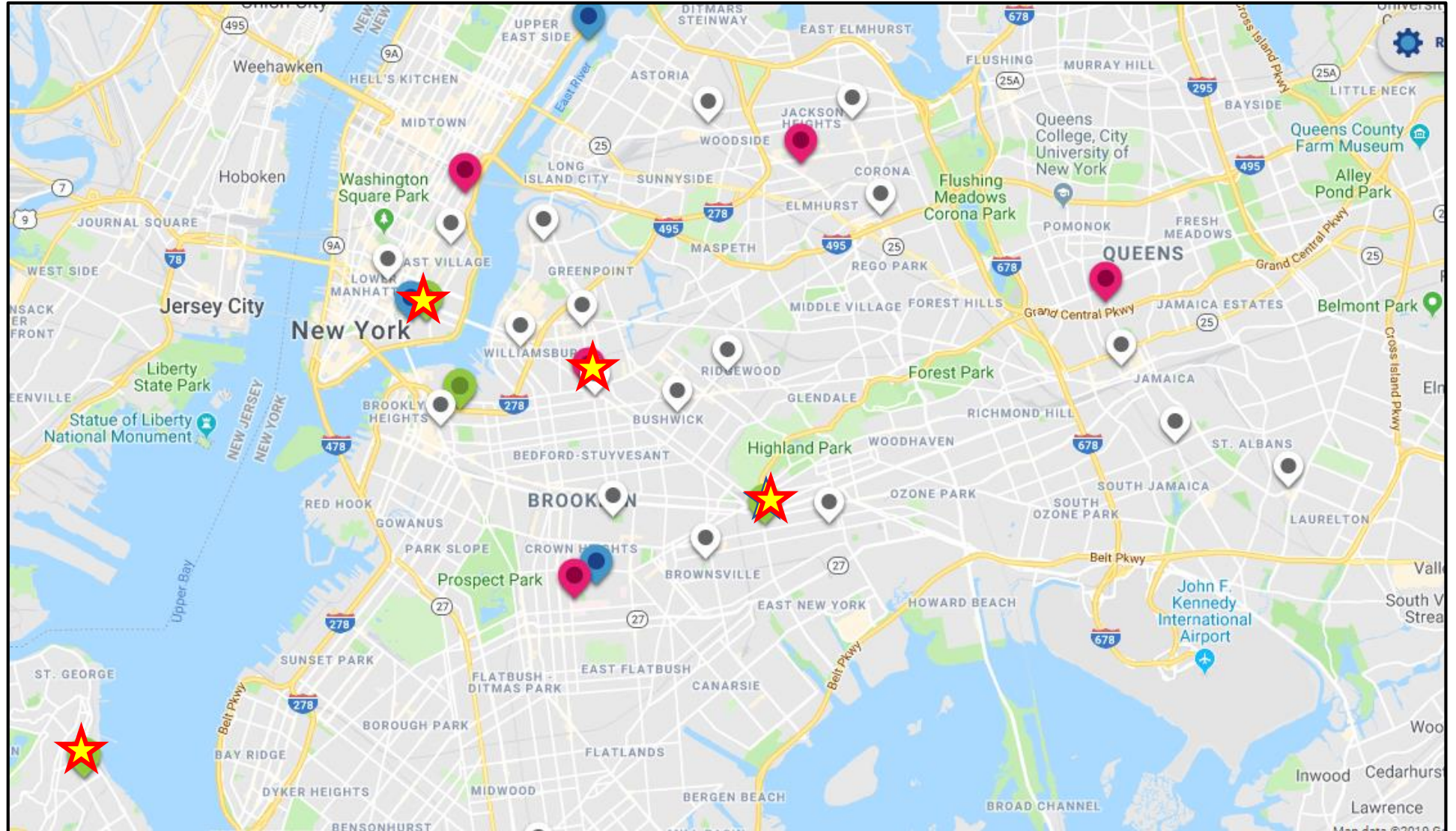


★ = Community Health Network





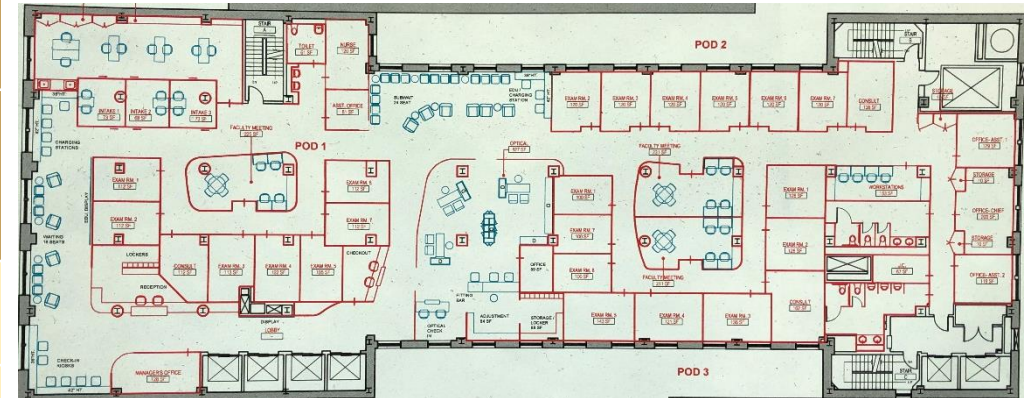
# 2019 - NYC HHC: Expanding our Partnership





# The Future of Optometric Education

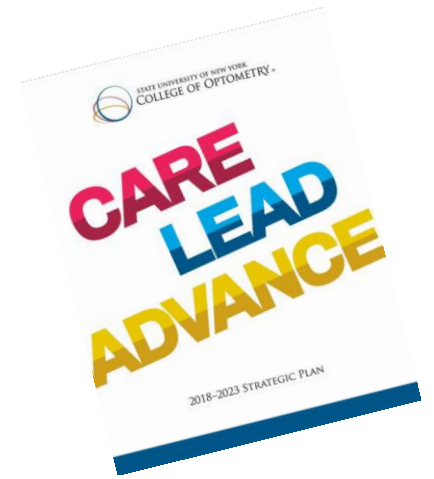
Past	Now/Future
Subjective Data Coll.	Objective Data Coll.
Data Collection Skills	Data Analysis/ Treatment
Clinical Pearls	Evidence-Based Practice
In-Person	+ Virtual
General Practice	+ Sub-Specialization
Mode of Practice	Patient Outcomes
Small Business	Large System
Non-Connected	Connected
Independent	Integrated





# Anticipating the (near) future?

- The Eye Care Workforce
- A Diverse and Highly Qualified Applicant Pool
- Evidence-Based Practice and the Translational Research Pipeline
- State Law and Licensure requirements? The future of Assessment
  - Critical Thinking & Clinical Decision Making
  - Scope Expansion/Enhancement
  - Communications Skills
    - Patient
    - Health Informatics
- Post Graduate Education, Residency & Subspecialization
- Integration into the Health Care System
- **The economics of public higher education in NYS**



## **NEWS** Part III Revisions 18 June, 2018

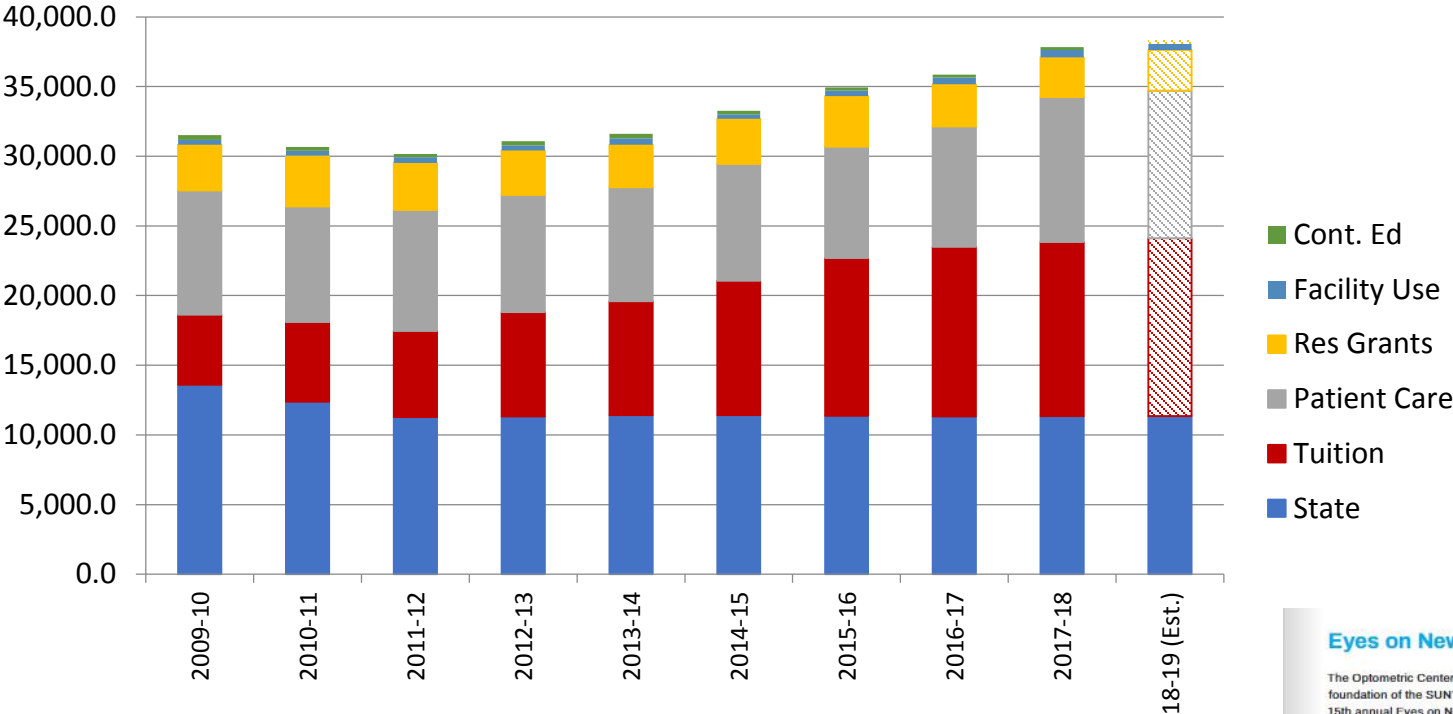
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# All Revenues by Year (in \$,000)

2018/19 Est = \$38,283.2



Revenues (in \$,000)									
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
State	13,590.9	12,379.8	11,291.3	11,324.9	11,415.3	11,420.7	11,382.9	11,340.4	11,340.4
Tuition	5,049.0	5,728.3	6,162.4	7,500.8	8,184.2	9,638.2	11,306.3	11,777.6	12,504.9
UEC and Satellites									
	8,902.7	8,294.9	8,679.9	8,406.0	8,169.5	8,397.7	8,003.5	8,618.8	10,400.8
Res Grants	3,289.2	3,631.5	3,381.3	3,173.9	3,058.8	3,222.9	3,625.0	3,046.4	2,857.2
Facility Use	339.7	352.8	414.7	370.7	454.5	332.1	385.0	481.7	528.1
Cont. Ed	336.4	277.6	219.7	306.9	319.4	259.4	241.7	204.5	217.3
TOTAL	31,507.9	30,664.9	30,149.3	31,083.2	31,601.7	33,271.0	34,944.3	35,469.4	37,848.7

## Eyes on New York Gala

The Optometric Center of New York (OCNY), the affiliated foundation of the SUNY College of Optometry, hosted its 15th annual Eyes on New York Gala on March 16 at The Plaza in New York City. Kenneth Lombart and Richard Lombart, co-founders of Lombart Instrument, were honored for more than 40 years of innovation and entrepreneurship in the ophthalmic industry. Ann Warwick, SUNY Optometry's immediate past vice president for institutional advancement and executive director of OCNY, was recognized for 35 years of service to the College. Haag-Streit USA's Steve Juenger served as the gala's corporate chair.



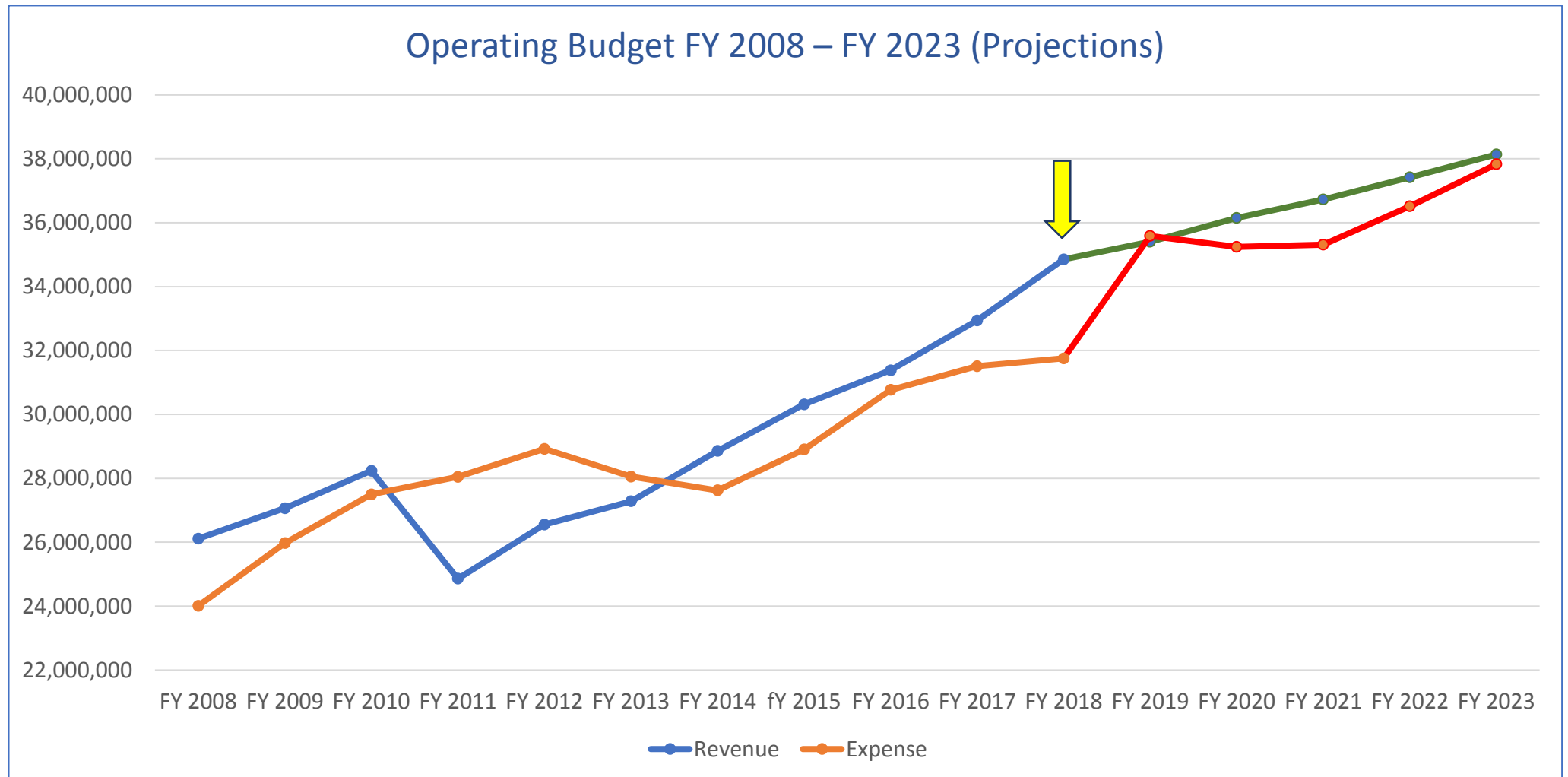
President David A. Heath, OCNY Board President Barbara Saltzman and Campus Special Events Coordinator Ann Warwick

**\$2,500,000** Raised for the new Center for Pediatric Eye Care

Tuition increases are projected at 2.0% for the next several years.



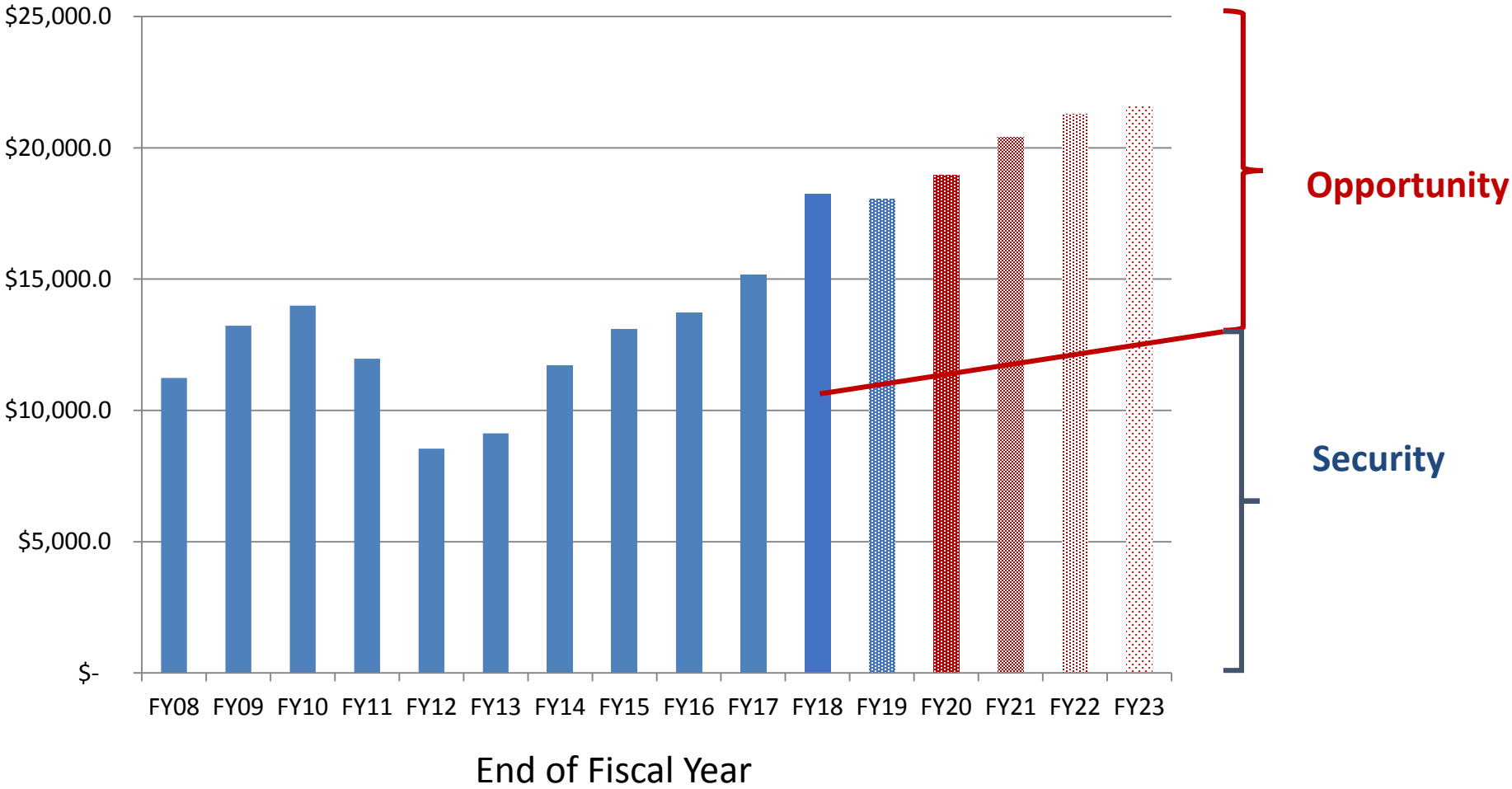
# Goal 9: Provide the financial foundation...



**Note: Does not include Research Foundation Revenues & Expenses**



# Goal 8: Financial Foundation - Fund Balances

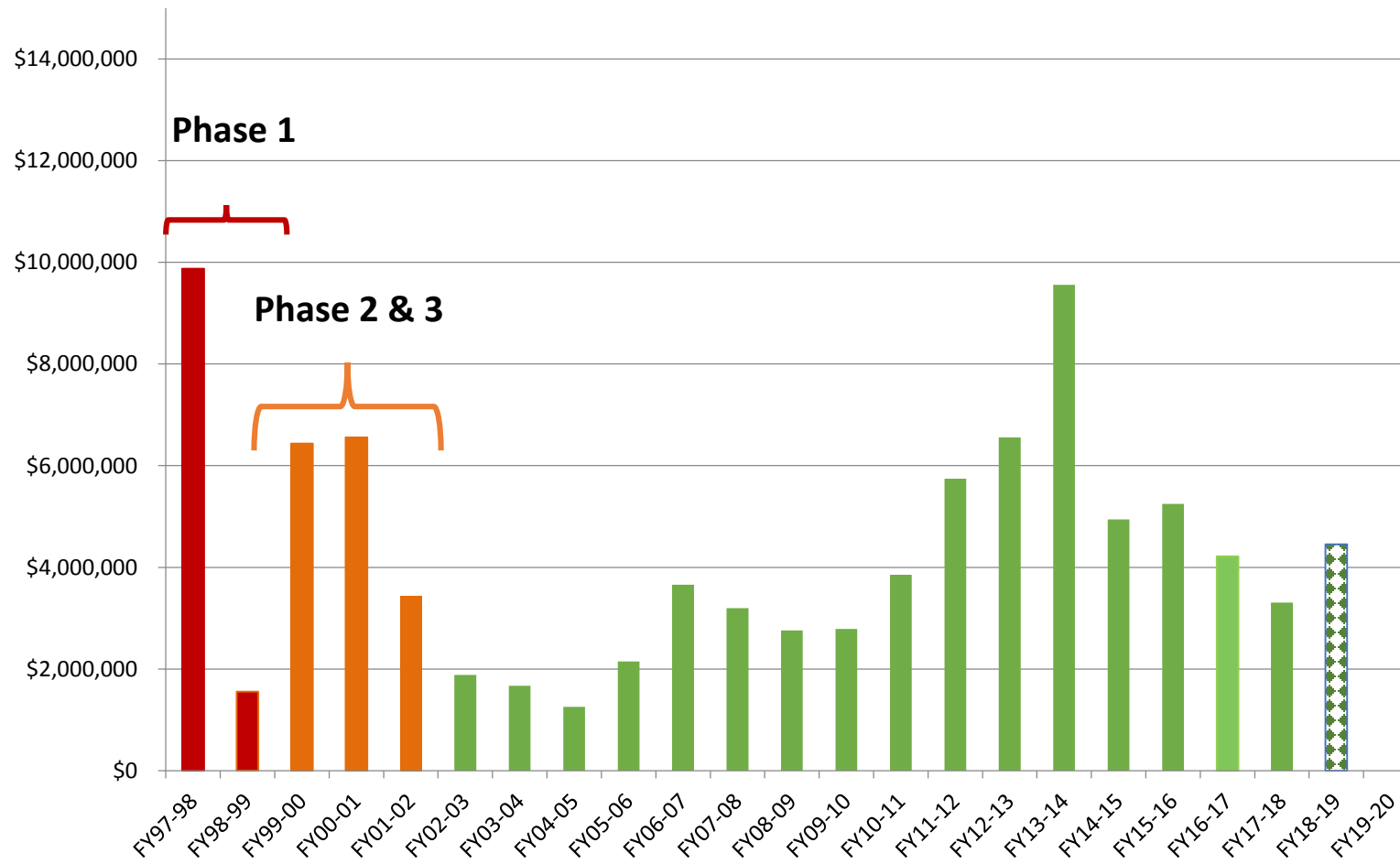


\*Fund Balance is cash balance in IFR, SUTRA and Stabilization (if any) as of the June 30 of each year.



# Capital Projects 1997 - 2020: Cash Disbursements by FY

Average of more than \$5.0M per  
year for the past 10 years

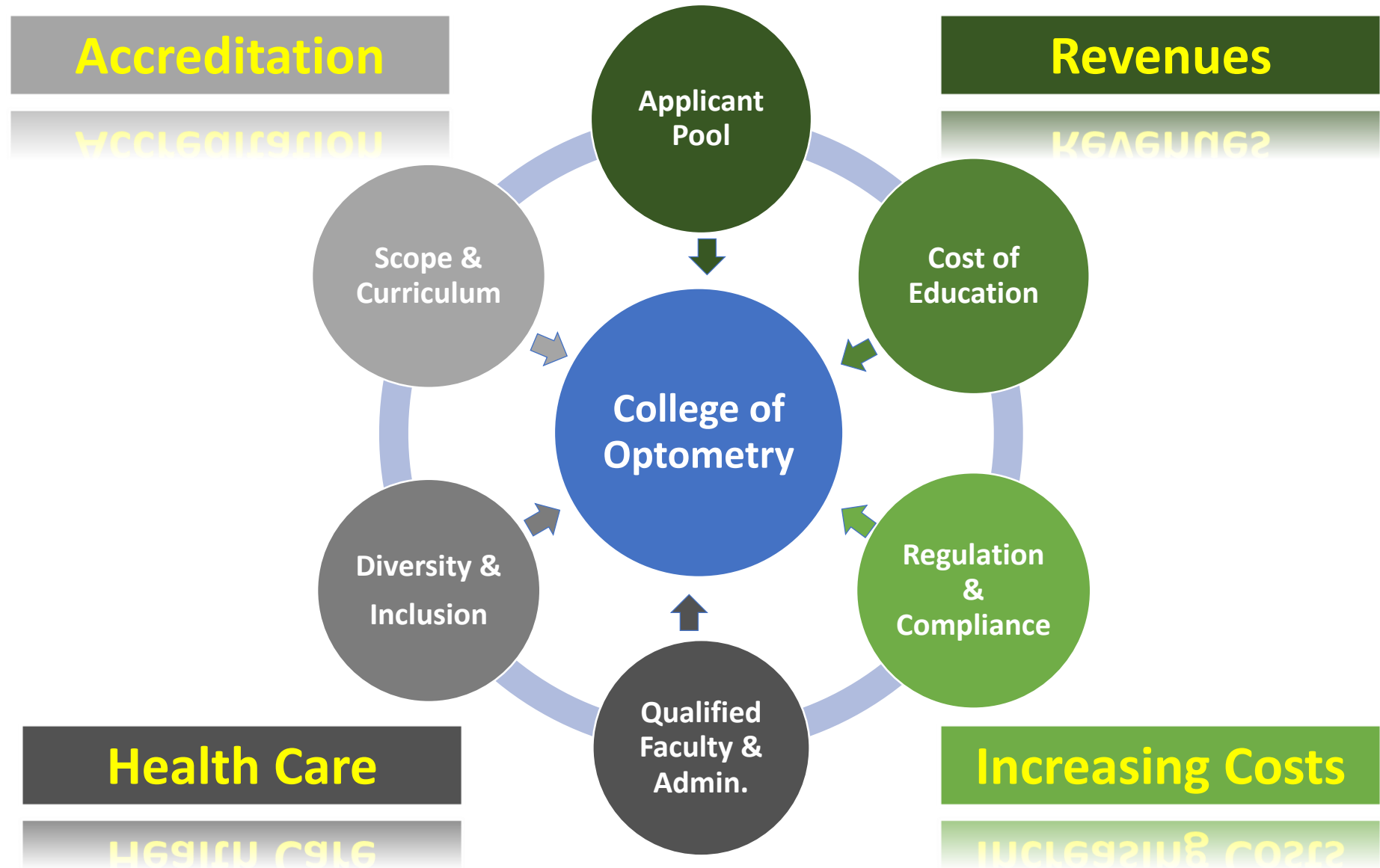


- Mechanical
- 10<sup>th</sup> Fl. Pediatric
- LL Teaching Labs
- 7<sup>th</sup> Fl. Primary Care
- 16<sup>th</sup> Fl. Research
- Transition Projects





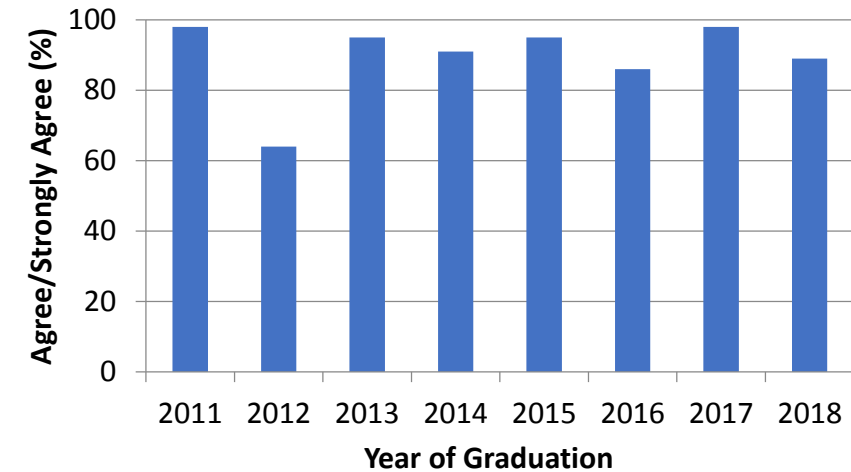
# Current Challenges for Optometric Education



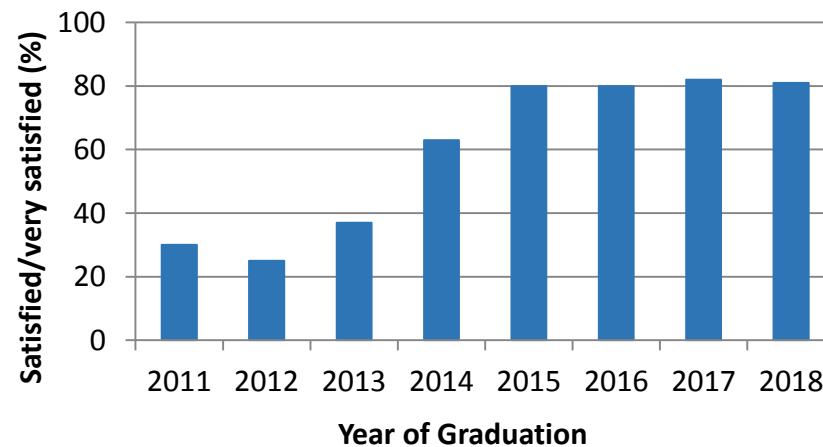
# Goal 1: The Student-Centered Experience: Satisfaction



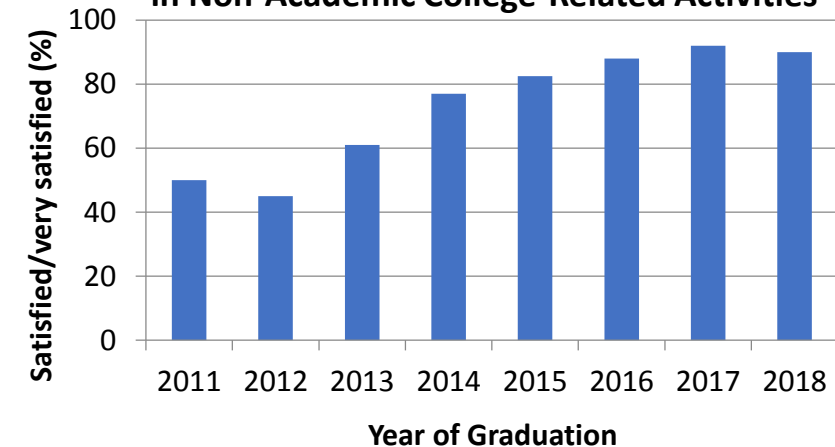
**Overall, I am satisfied with the quality of the optometric education I received at SUNY**



**Satisfaction with career planning services**

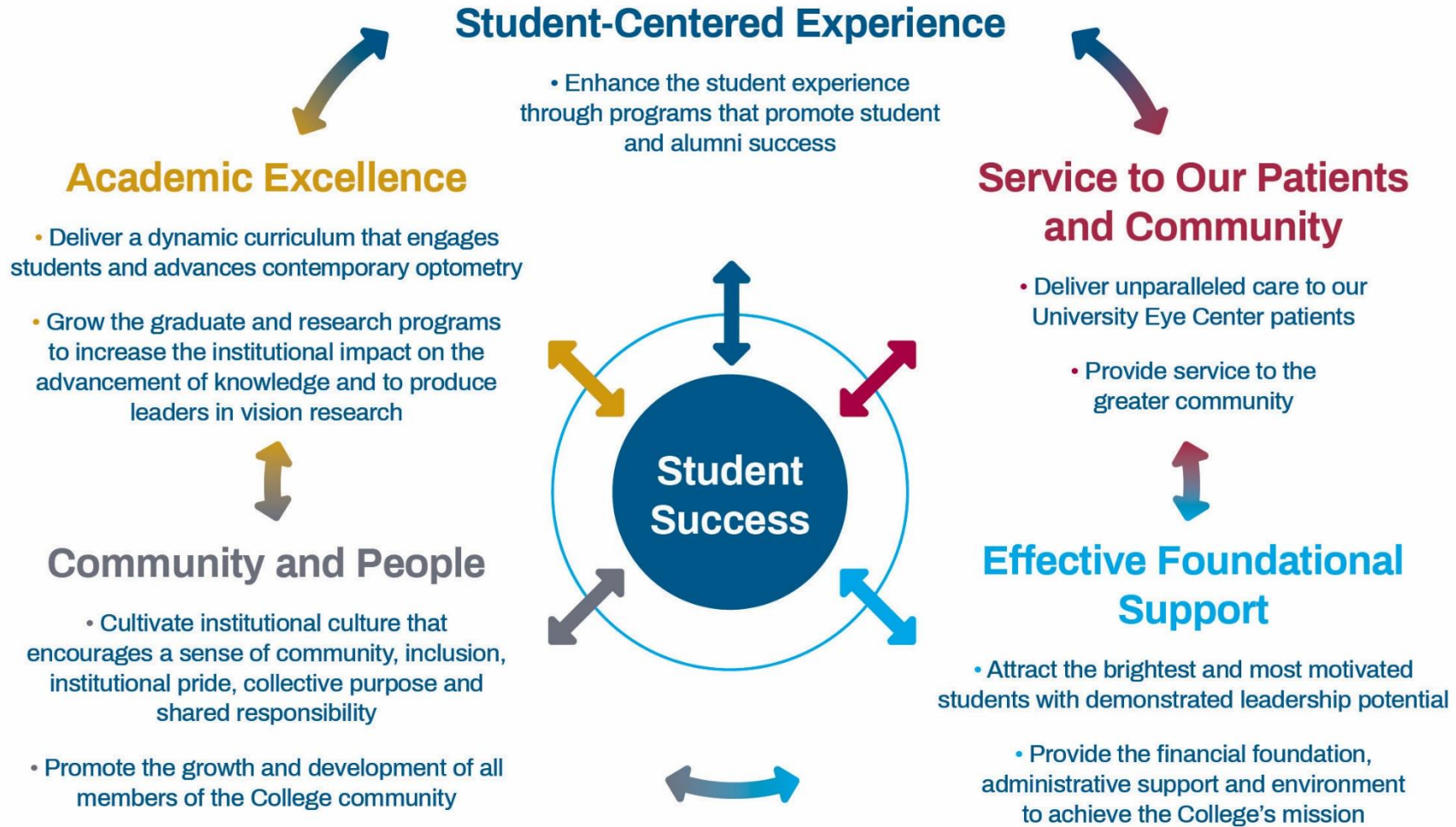


**Satisfaction with Opportunity to Participate in Non-Academic College-Related Activities**



# 2018-2023 Strategic Plan: Care • Lead • Advance

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STATE UNIVERSITY OF NEW YORK  
COLLEGE OF OPTOMETRY®

# **50 Years!**

## **1971 - 2021**