

A large, irregular blue ink splatter or watercolor blotch serves as the background for the text. The splatter has a textured, painterly appearance with various shades of blue and white, creating a dynamic and artistic feel.

# ***CREATIVE APPROACHES TO GROWING AUDIOLOGY PROGRAMS***

*Why and How to Expand*

**This CAPCSD presentation provided courtesy of Fuel Medical Group**

# Welcome from:

**Ann Clock Eddins, Ph.D., M.B.A.**

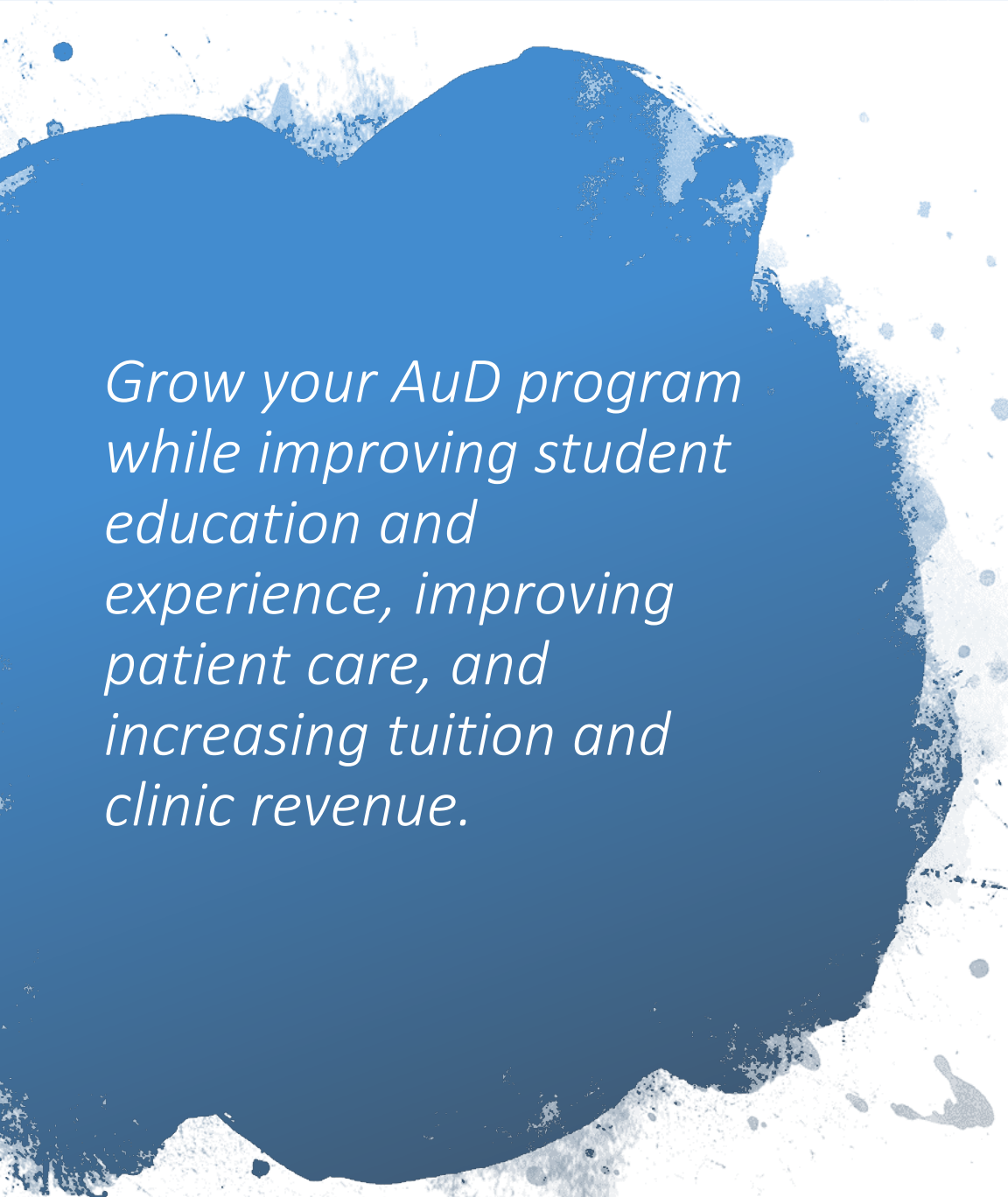


Ann Eddins, Ph.D., M.B.A. is associate Chair and Associate Professor in the Dept. of Communication Sciences & Disorders at the University of South Florida. She is co-director of the Auditory & Speech Sciences Laboratory, a core member of the Global Center for Hearing and Speech Research, and is funded on multiple grants from NIH, NSF, and Industry. She currently serves as President-Elect of CAPCSD.

**Don Nielsen, Ph.D., F-AAA**



Don Nielsen, Ph.D. has been Director, Audiology Clinic and Translational Research at Northwestern University and Professor and Chair of Speech and Hearing Department Washington University Saint Louis. He currently consults with Fuel Medical Group as University Audiology Advisor, on an NIH grant with Northwestern University and Mayo Clinic Florida, and as an adviser for Hearing Forward. He is a former President of the Association for Research in Otolaryngology.



*Grow your AuD program while improving student education and experience, improving patient care, and increasing tuition and clinic revenue.*

## • **Learning objectives**

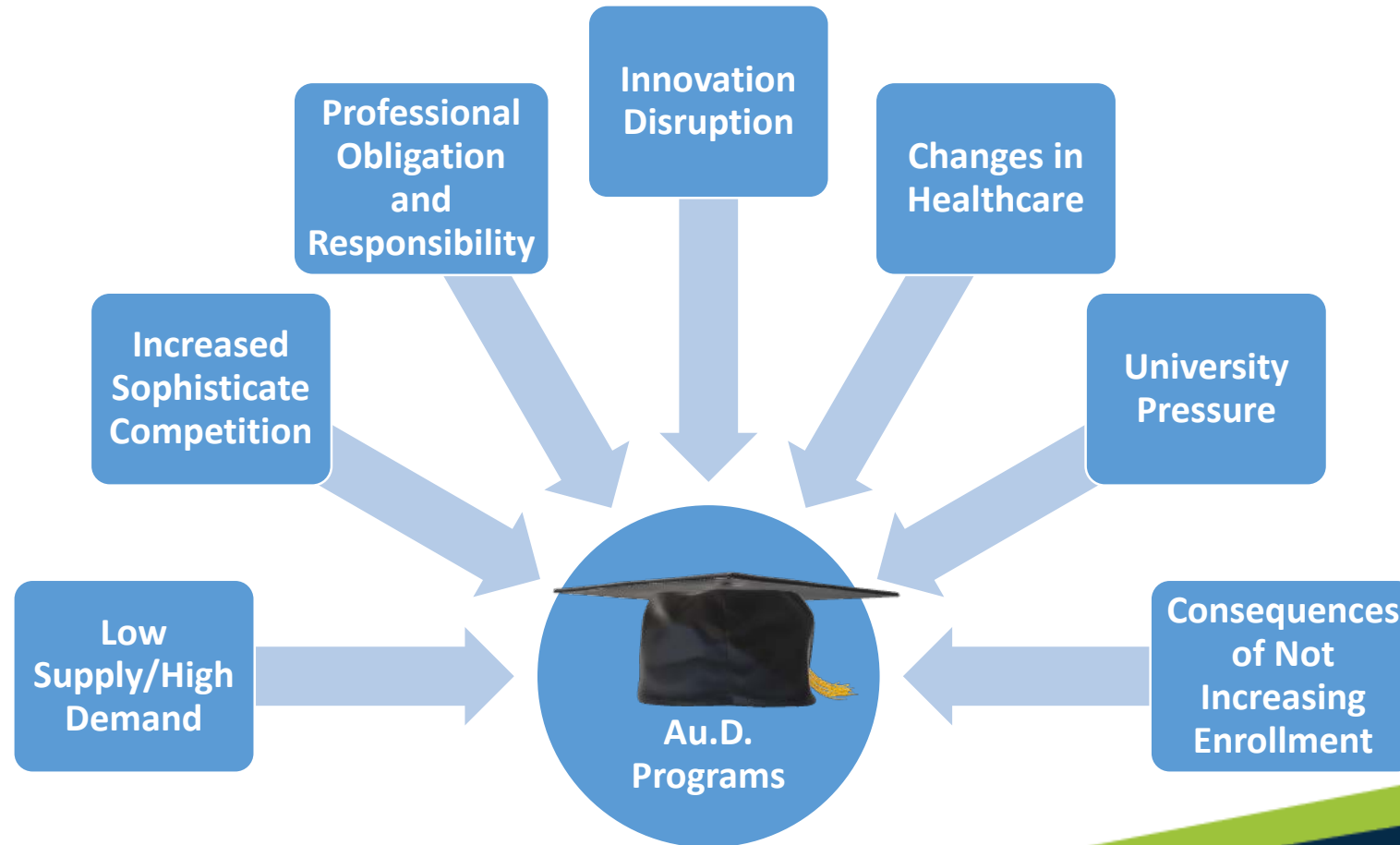
- Understand the forces for change and the need for growth
- Learn how to restructure your academic program and clinic to accommodate growth
- Know what to include in a growth plan to win university support



*Understanding the forces for  
change and the need for  
growth*

# Forces for Change

*These forces demand increased growth and changes in AuD education.*



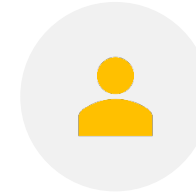
# Forces for Change



**Low Supply/High Demand** - The Grey Tsunami with no increase in number of audiologists



**Increased Sophisticated Competition** providing new hearing healthcare paths and new devices, with automation, self service, and non-audiology personnel filling the gap



**Professional Obligation and Responsibility** to meet the needs of growing number of people whose hearing is changing



**Changes in healthcare:** Consolidation, ACA, FDA requirements



**Innovation** providing new hearing healthcare models with new devices and new multiple delivery pathways that must be integrated into AuD training



**University Pressure** to increase student enrollment to increase revenue

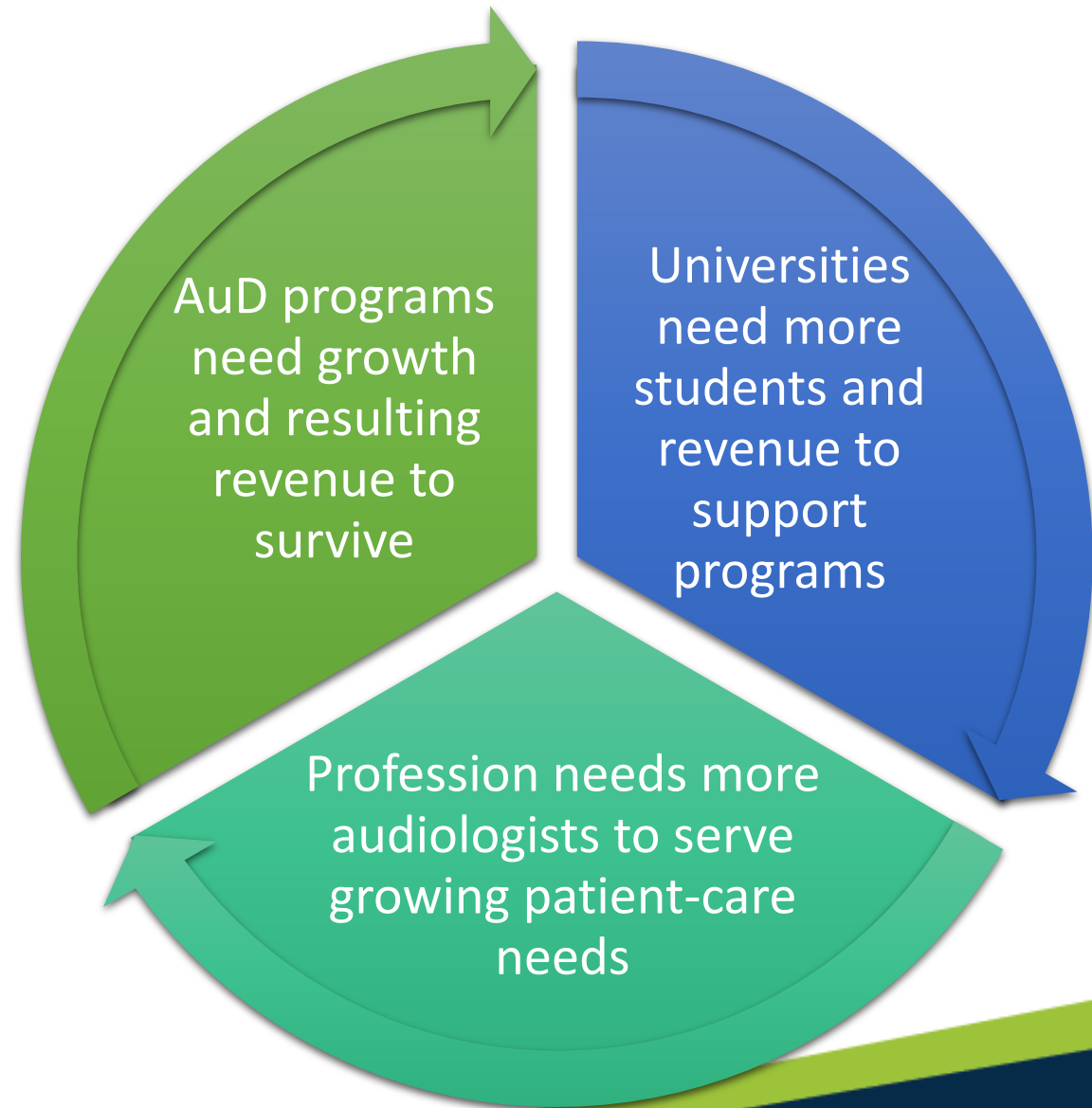


**Consequences of Not Increasing Enrollment:** Program closures (UW, WVU), replacement by AI and less-skilled, low-cost providers





# Need for growth and revenue



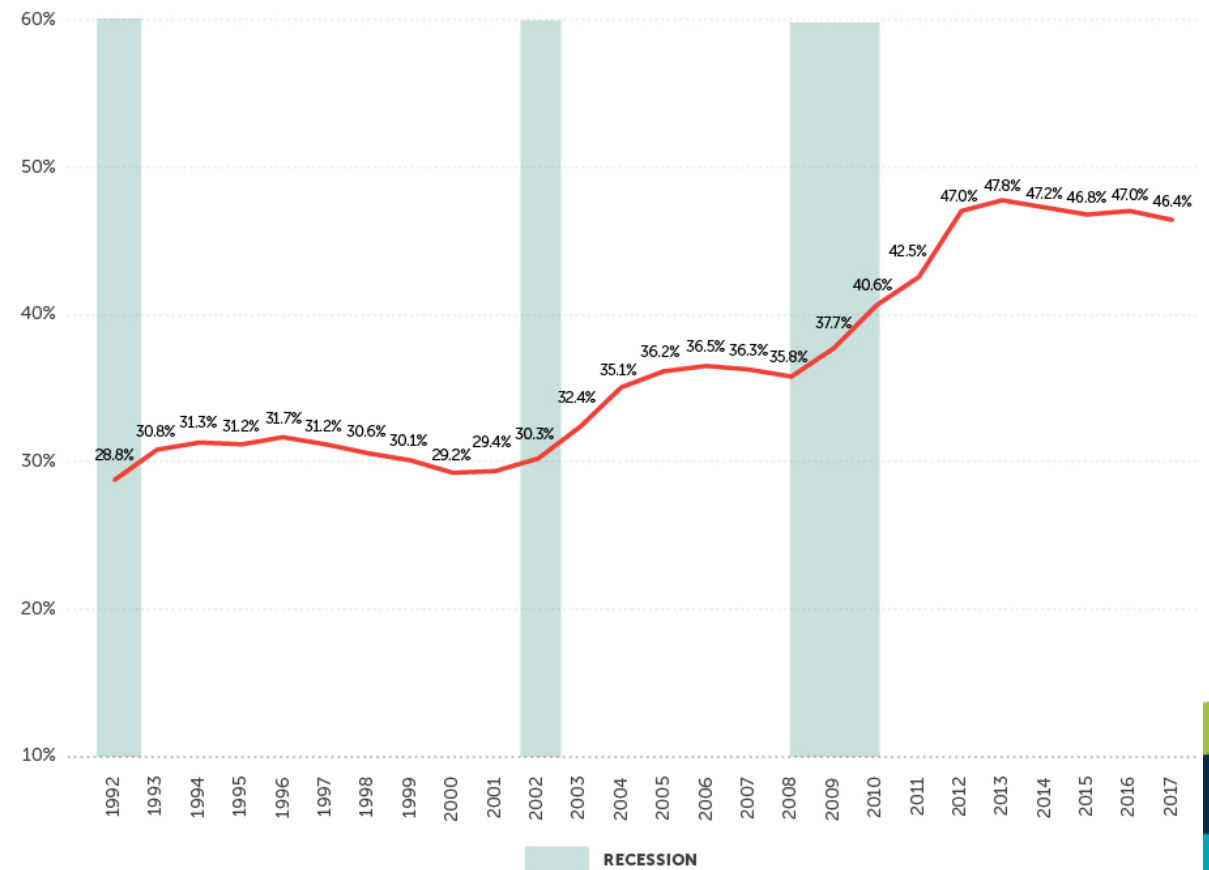
# Recessions Cause Increases in Tuition

After each recession, there has been a permanent increase in the percentage of higher education revenue covered by tuition and a lower percentage covered by state revenue appropriations.

## IS THERE ANOTHER RECESSION COMING SOON?

FIGURE 3

NET TUITION AS A PERCENT OF PUBLIC HIGHER EDUCATION TOTAL  
EDUCATIONAL REVENUE, U.S., FY 1992-2017



NOTES: Net tuition revenue used for capital debt service is included in net tuition revenue, but excluded from total educational revenue in calculating the above figures.

SOURCE: State Higher Education Executive Officers



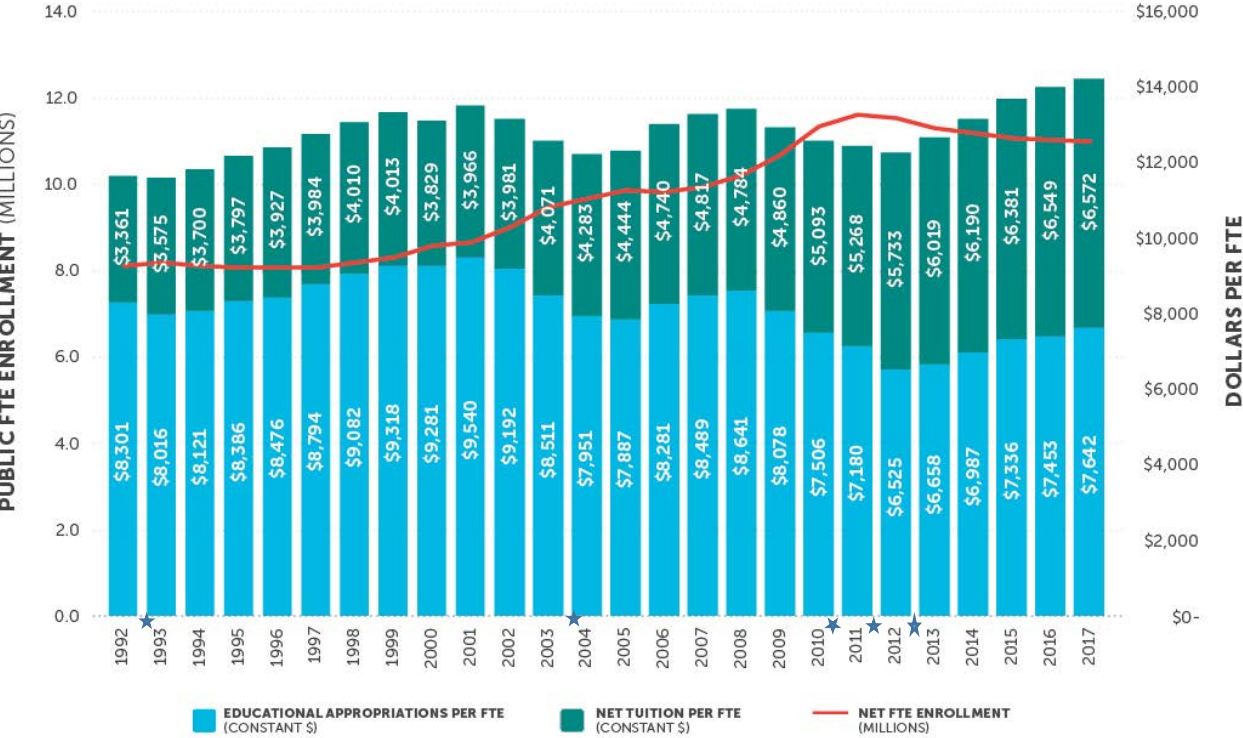
STUDENT ENROLLMENT increases during the 2008 recession and remains high. **Red line**

STATE APPROPRIATIONS for higher education per FTE decrease in 2008 and remain low. **Blue bars**

TUITION PER FTE covers an increasing amount of appropriations for higher education after 2008 and remains high. **Green bars**

# UNIVERSITIES ARE MORE DEPENDENT ON TUITION REVENUES TO SURVIVE

FIGURE 1  
PUBLIC FTE ENROLLMENT AND EDUCATIONAL APPROPRIATIONS PER FTE, U.S., FY 1992-2017



NOTES: 1. Net tuition revenue used for capital debt service included in the above figures.  
2. Constant 2017 dollars adjusted by SHEEO Higher Education Cost Adjustment (HECA).  
SOURCE: State Higher Education Executive Officers

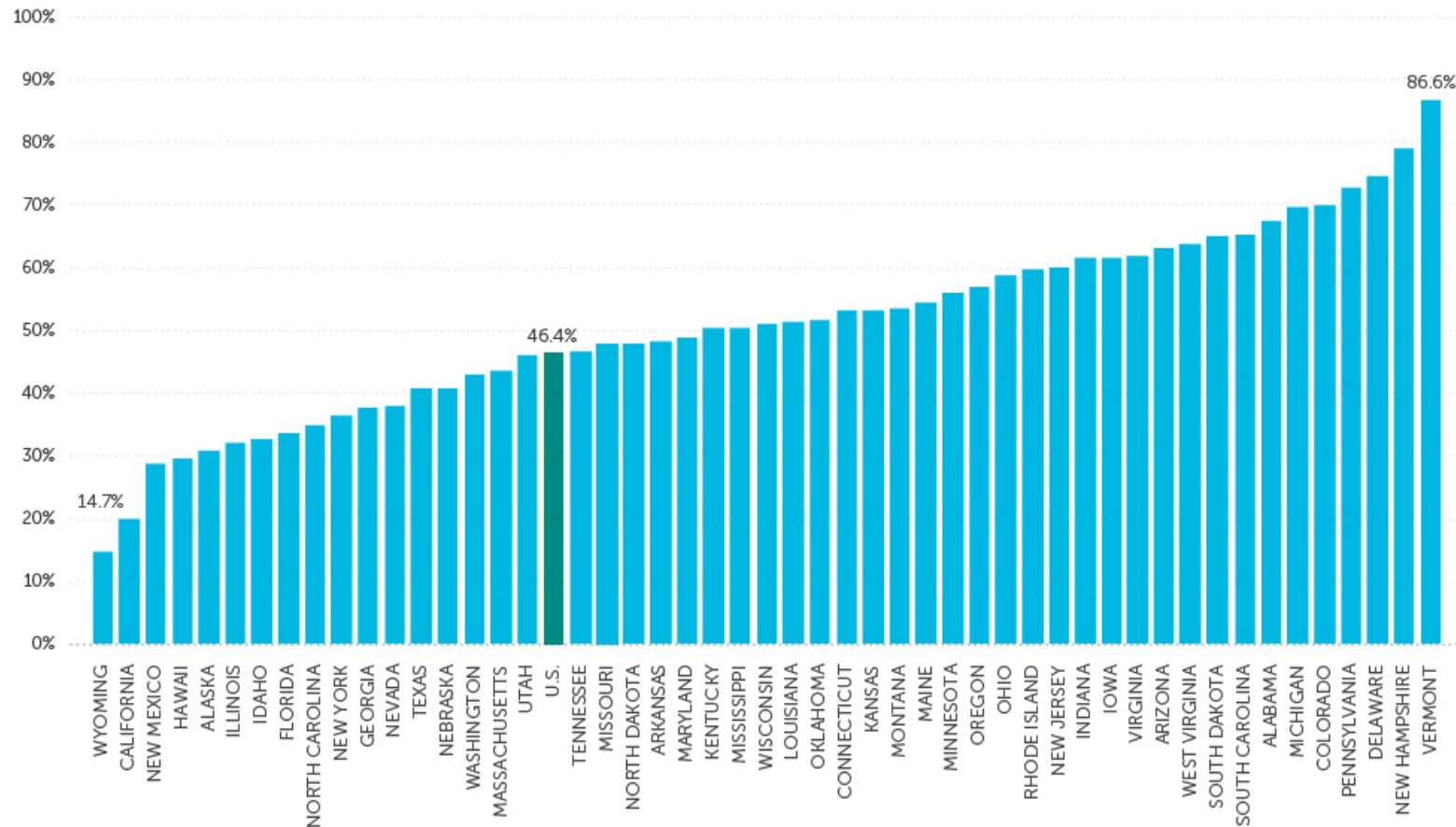
## TREND SHOWING INCREASED DEPENDENCE ON TUITION

Year	State Rev.	Tuition	% Tuition
1992	\$8,302	\$3,361	40%
2001	\$9,540	\$3,966	42%
2008	\$8,641	\$4,748	55%
2013	\$6,658	\$6,019	92%
2014	\$6,987	\$6,190	86%
2015	\$7,336	\$6,381	87%
2016	\$7,453	\$6,549	88%
2017	\$7,642	\$6572	85%

# PUBLIC EDUCATION MORE DEPENDENT ON TUITION

- Thirty-three states are above the national average student share of 46.4%.
- Twenty-eight states are above a 50% student share.
- This means that for the first time, public higher education is more dependent on **tuition revenue** than educational appropriations in over half of all states.

FIGURE 6  
NET TUITION AS A PERCENT OF TOTAL EDUCATIONAL REVENUE, FY 2017



NOTES: 1. Net tuition revenue is calculated by taking the gross amount of tuition and fees, less state and institutional financial aid, tuition waivers or discounts, and medical student tuition and fees. Net tuition revenue used for capital debt service is included in the net tuition revenue figures above.

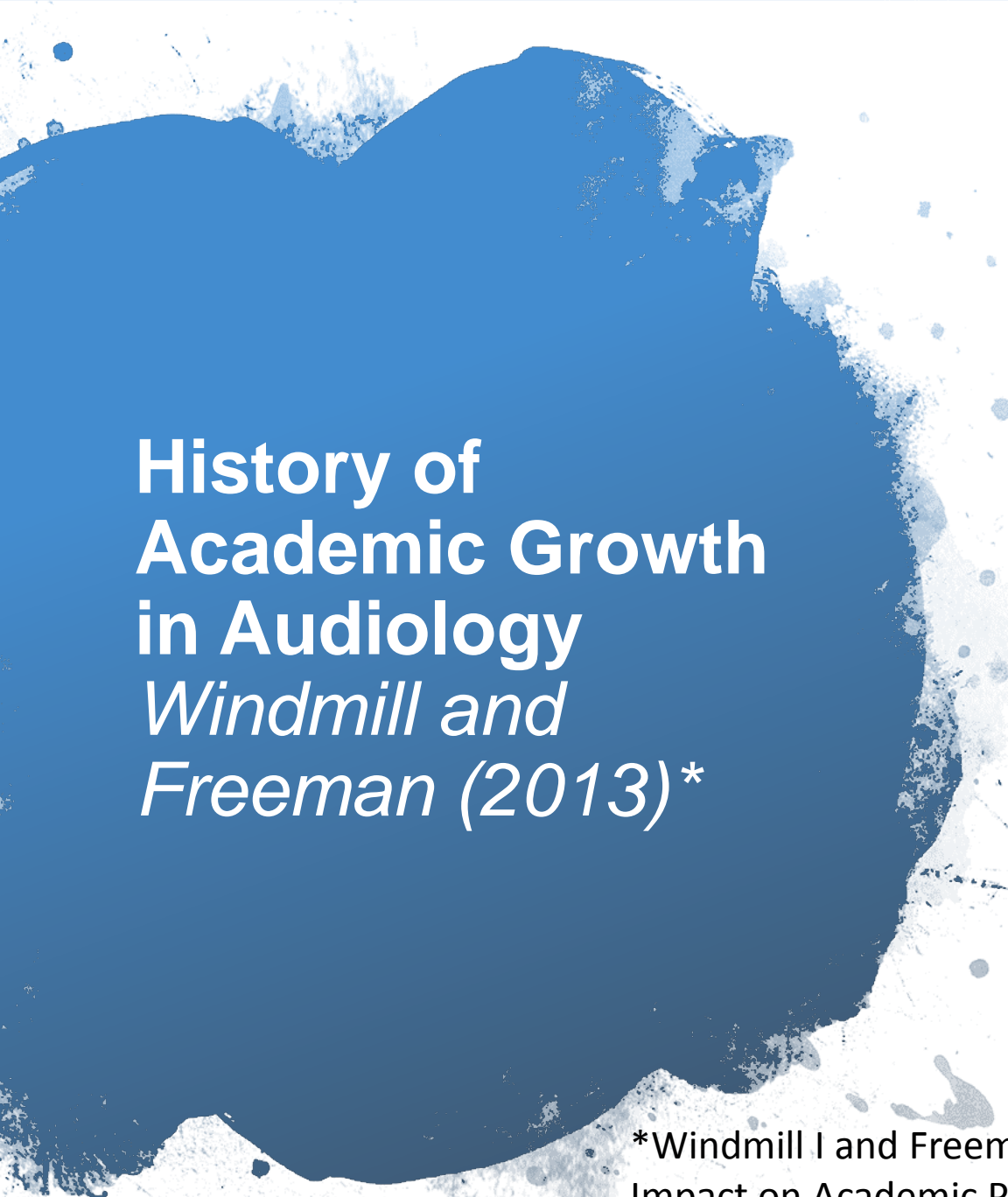
2. Adjustment factors to arrive at constant dollar figures include Cost of Living Index (COLI), Enrollment Mix Index (EMI), and Higher Education Cost Adjustment (HECA). The Cost of Living Index (COLI) is not a measure of inflation over time.

SOURCE: State Higher Education Executive Officers



# *Academic Growth*

Where we are, and how we got here.

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## History of Academic Growth in Audiology *Windmill and Freeman (2013)\**

- Over the past 30 years, the number of academic programs in audiology has been cut in half
- **1982/83 N=142 Masters**
- **2001 N=100 Masters**; plus a handful of AuD programs;
- **Today~75 AuD programs.** Little or no growth since 2005.

\*Windmill I and Freeman B. (2013) Demand for Audiology Services: 30-Yr Projections and Impact on Academic Programs. *Audiology J Am Acad Audiol* 24:407-416.



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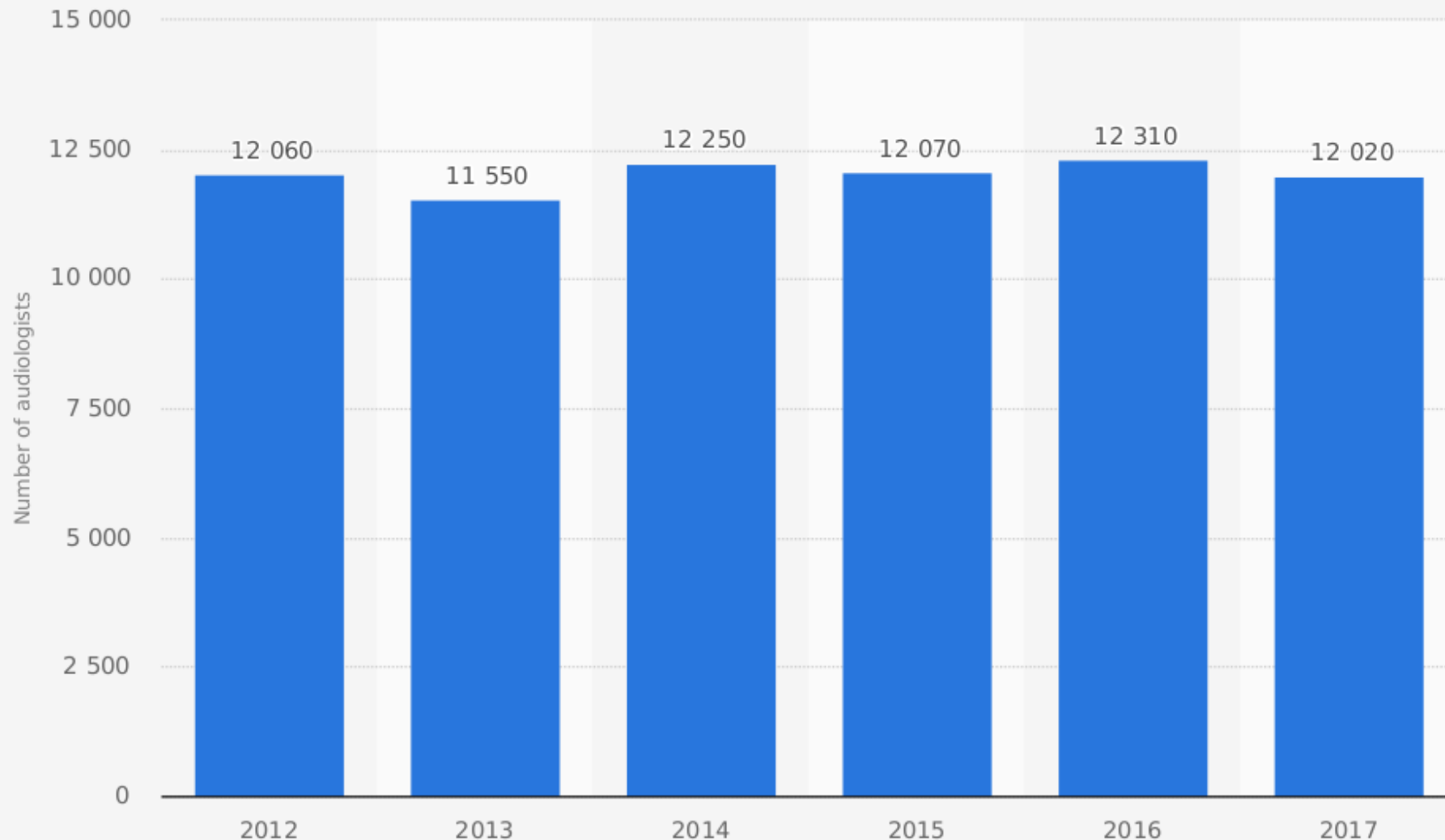
# Where we are today

*2017 CSD Education Survey*

*2016-2017 Academic Year*

The number of audiologists in the US has remained constant from 2012 to 2017

Number of audiologists in the United States from 2012 to 2017



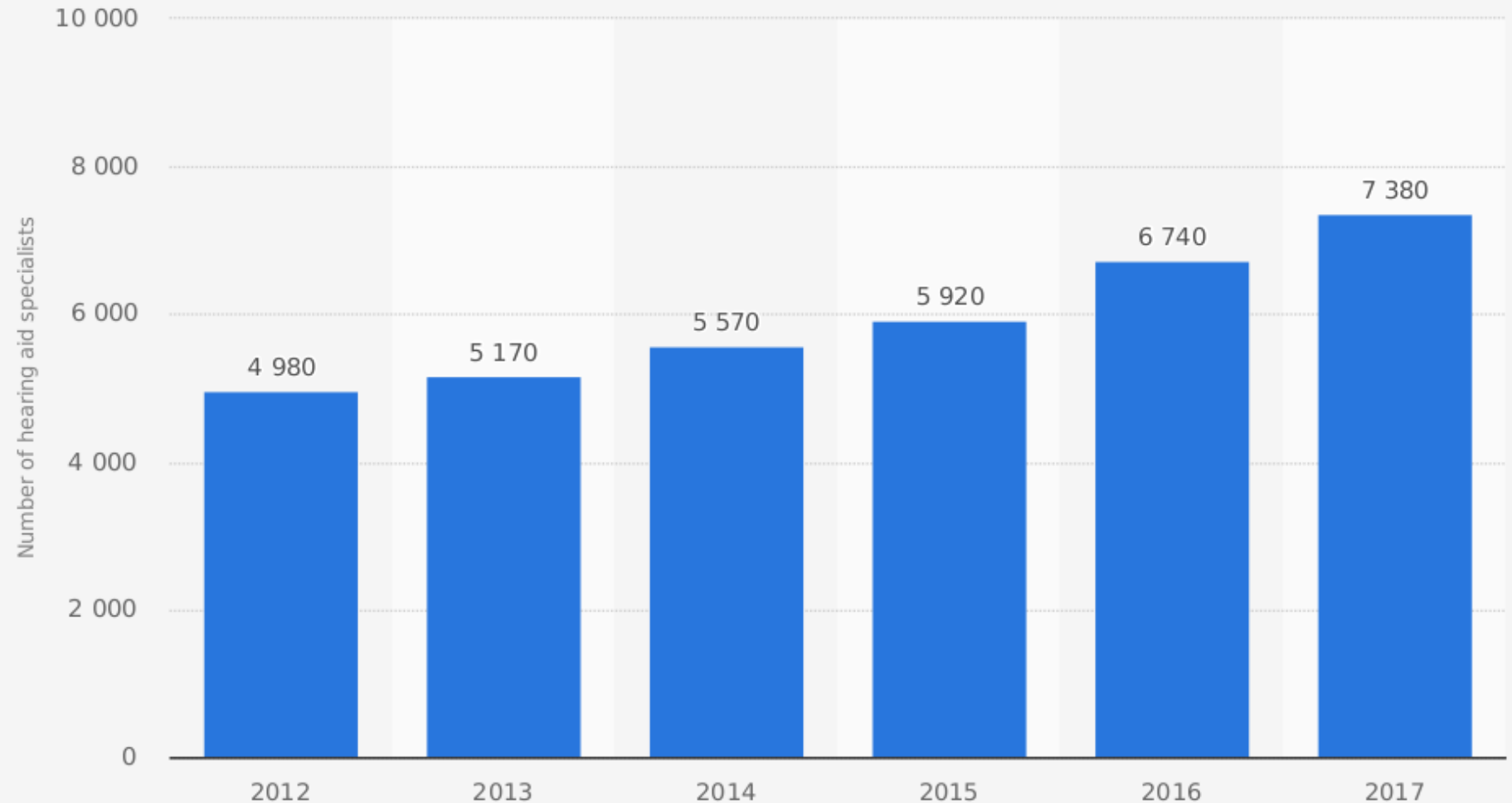
Source  
Bureau of Labor Statistics  
© Statista 2018

Additional Information:  
United States



The number of hearing aid specialists has increased by 48% between 2012 and 2017

## Number of hearing aid specialists in the United States from 2012 to 2017



Source  
Bureau of Labor Statistics  
© Statista 2018

Additional Information:  
United States

# How many Audiologists do we need?

$$12,310 \times 21\% = 14,895$$

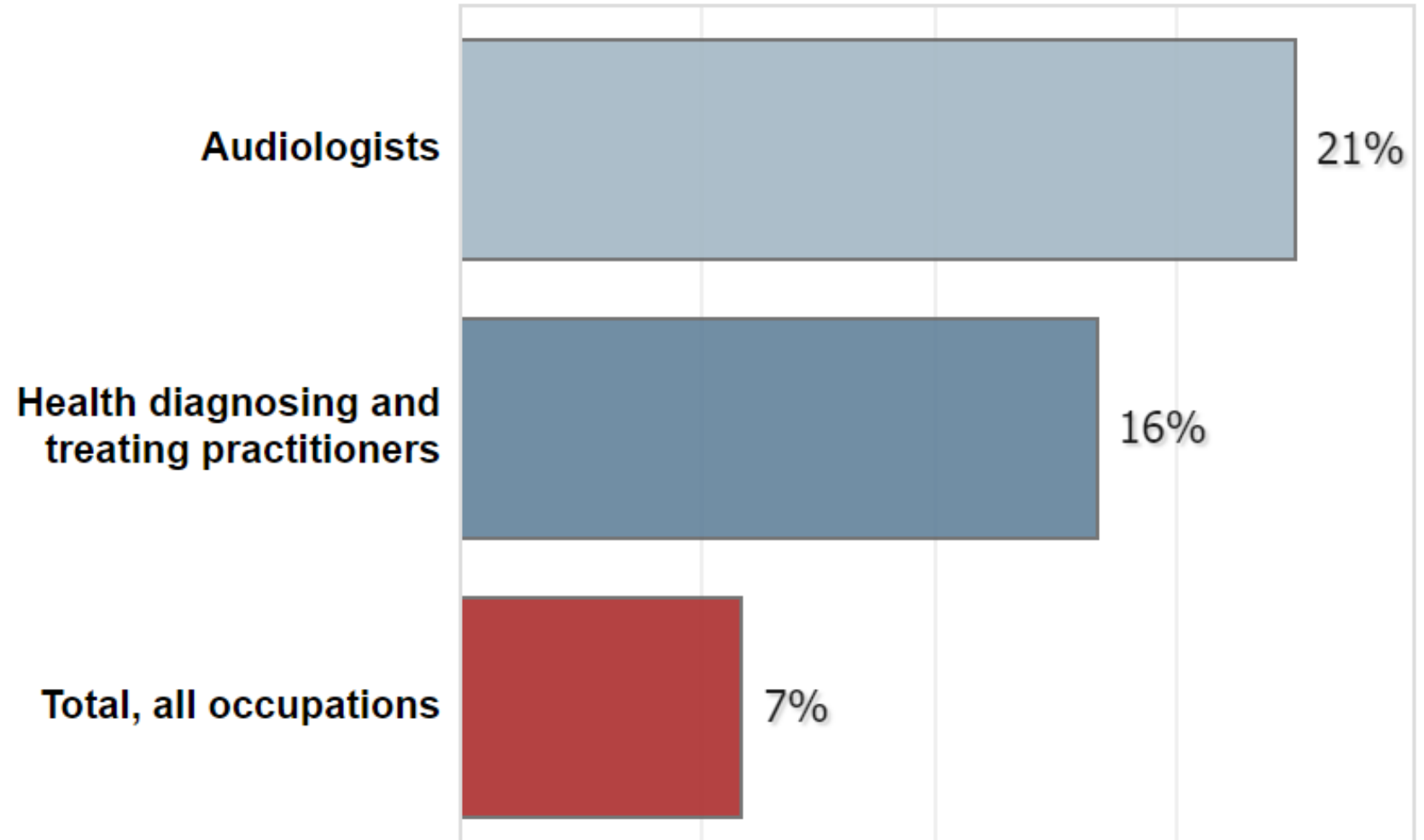
~2600 more

$$2600 / 10 = 260/\text{yr}$$

$$260 / 75 = \sim 3+/\text{program}/\text{yr}$$

## Audiologists

Percent change in employment, projected 2016-26



Note: All Occupations includes all occupations in the U.S. Economy.

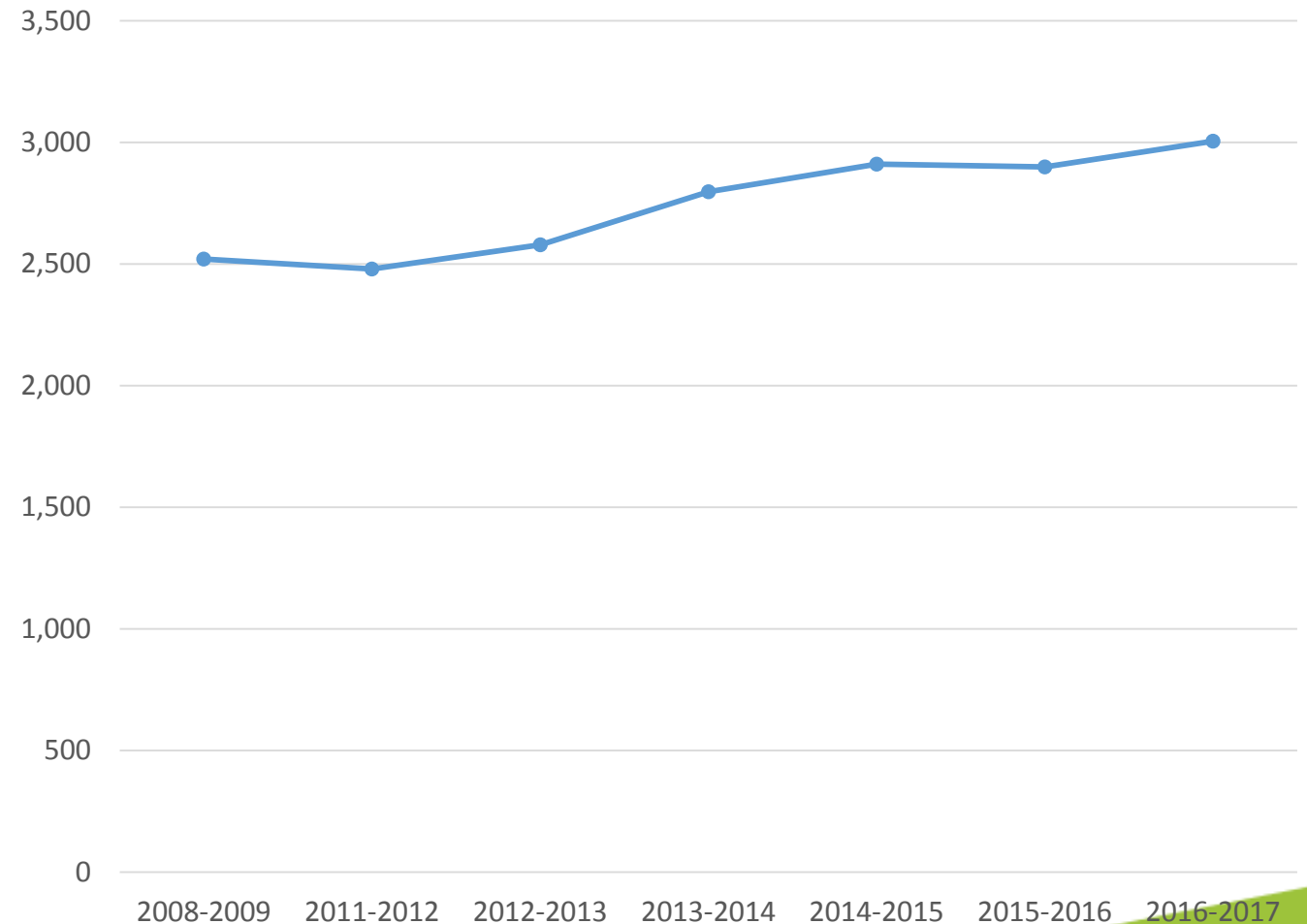
Source: U.S. Bureau of Labor Statistics, Employment Projections program

## AuD Total Enrollment

Growth in AuD enrollment has been gradual - Less than one new student per program per year.

2016-17  
797 1<sup>st</sup> year students enrolled

Total Enrollment in AuD Programs\*



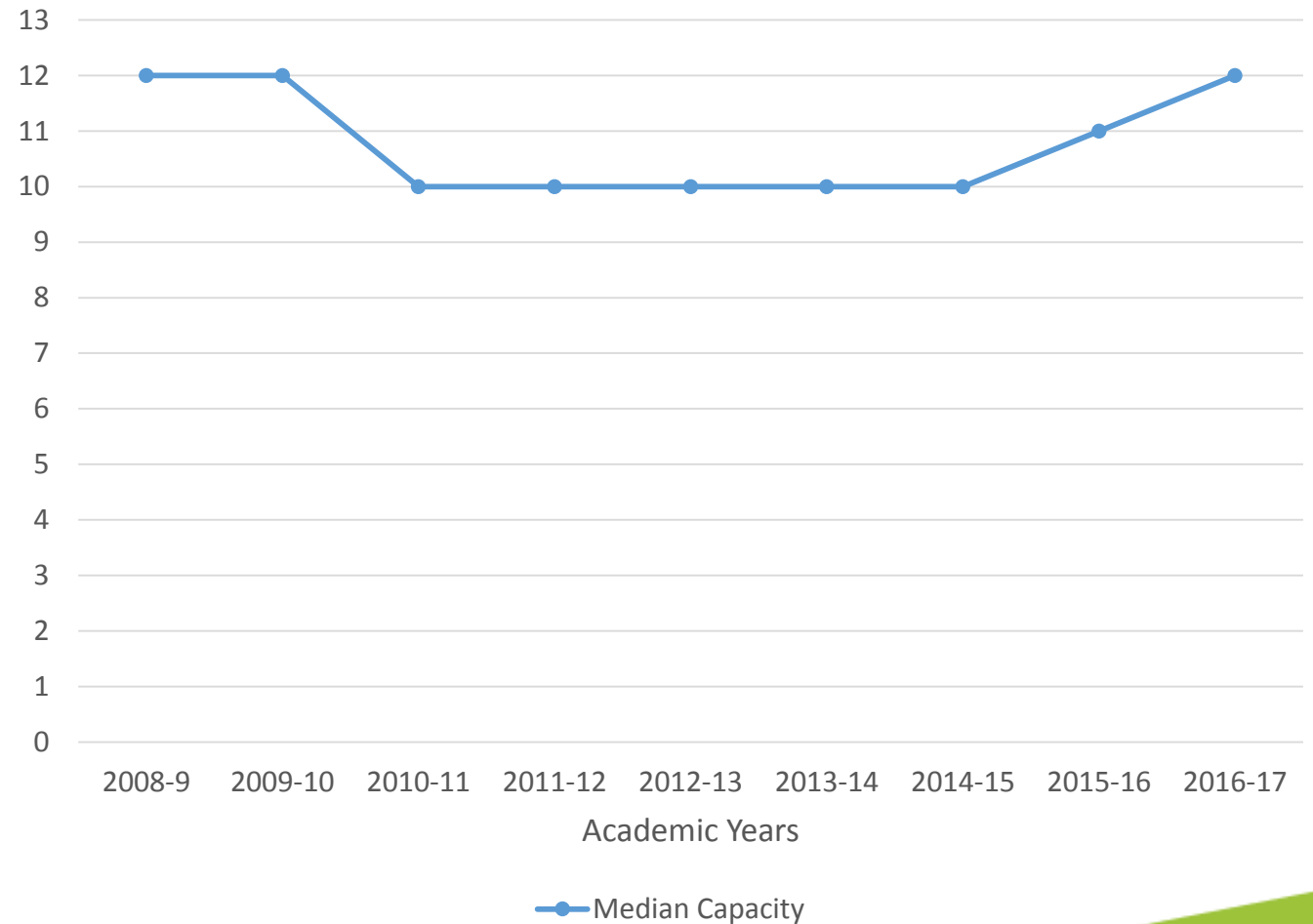
\*2017 CSD Education Survey

## AuD Program Capacity

Reported median capacity remains fairly constant @ 10-12 students ~825 Total

2016-17 Average Capacity = 13

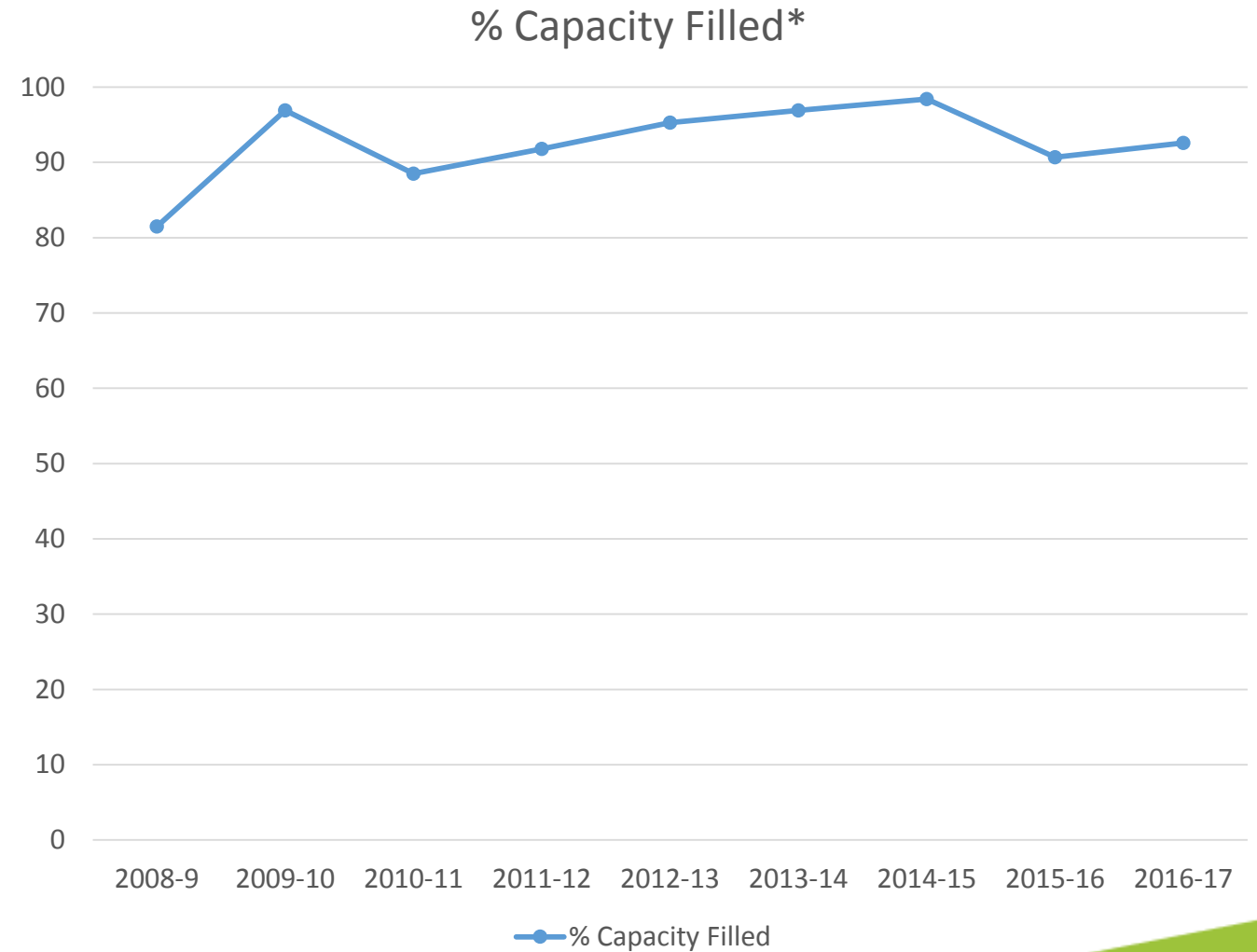
Median Capacity for Admissions to AuD Programs\*



\*2017 CSD Education Survey

## AuD Program Capacity Filled

Program capacity  
must be  
increased to  
accommodate  
needed growth in  
number of  
Audiologists

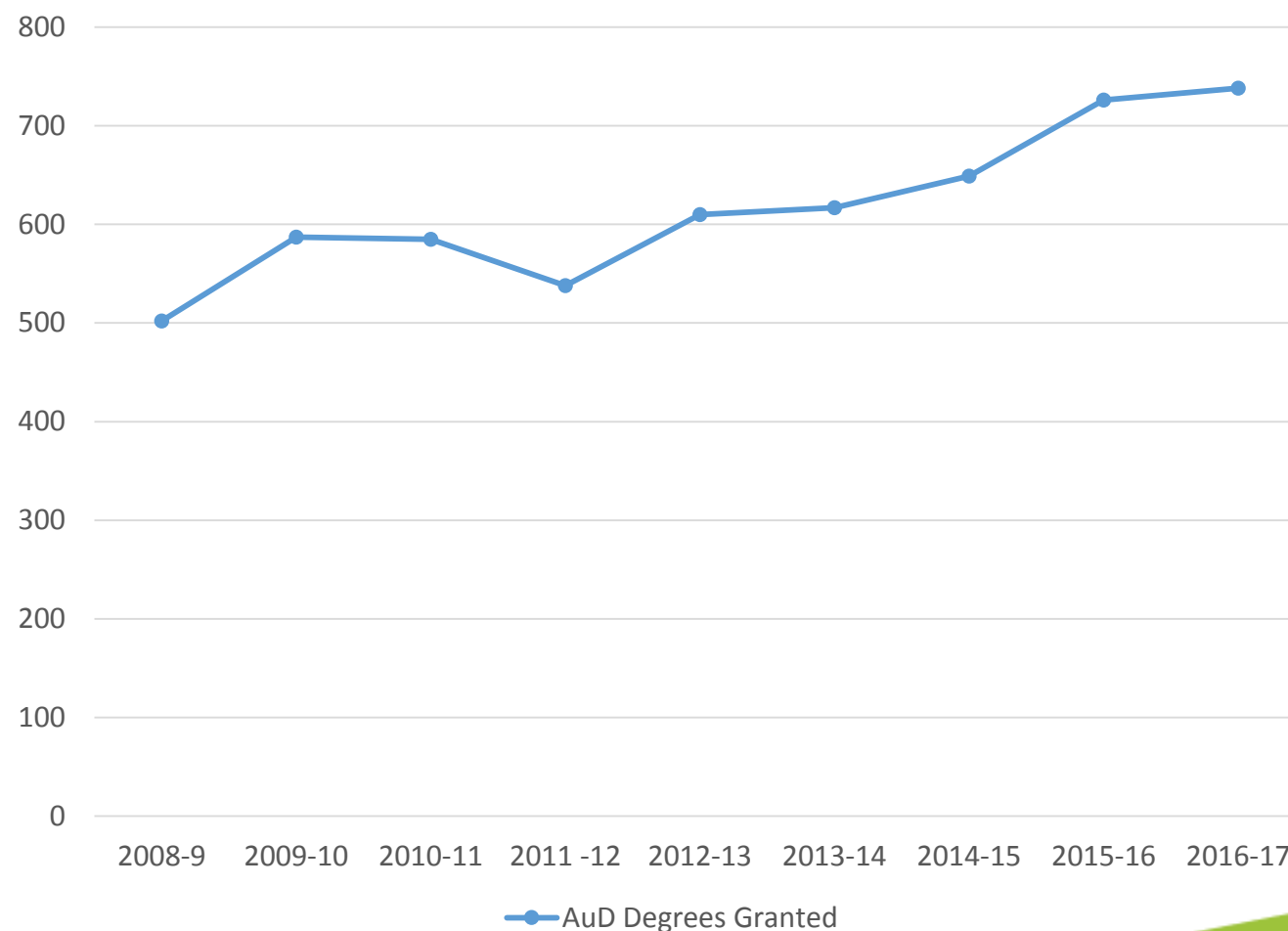


\*2017 CSD Education Survey

## AuD Degrees Granted

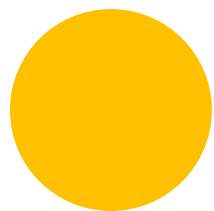
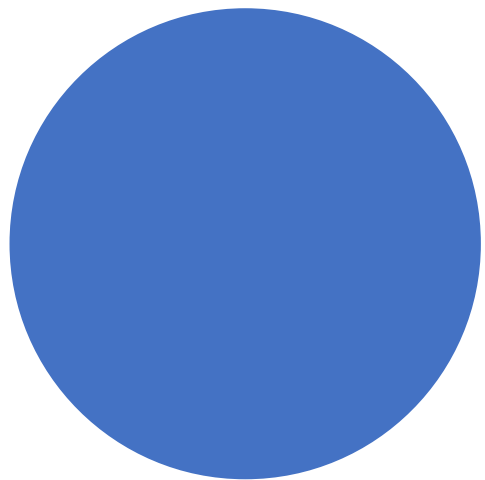
- # AuD degrees granted has increased by only 236 in the past nine years.
- Degrees granted 738/825 AuD degrees, or 89% of our current capacity.
- Cannot increase the number of audiologists without increasing capacity.

Number of AuD Degrees Granted\*



\*2017 CSD Education Survey





*What do we do to increase  
program capacity and the  
future supply of  
audiologists?*

## RECOMMENDATIONS FROM WINDMILL JAAA 2013\*



Certifications, regulations, and licensure laws should be revised to eliminate requirements that directly impact on academic programs or students prior to graduation.



The profession should undertake the effort designed to change Medicare regulations to allow alternative supervision models.



Academic programs need freedom to be creative in their approaches to teaching and financing programs.



A concerted and coordinated effort needs to be undertaken to increase the number of people interested in audiology as a career.

\*Windmill I. (2013) Academic Programs, Class Sizes, and Obstacles to Growth in Audiology *J Am Acad Audiol* 24:417-424

## RECOMMENDATIONS FROM WINDMILL JAAA 2013\*

### Being done by cooperating professional organizations



Certifications, regulations, and licensure laws should be revised to eliminate requirements that directly impact on academic programs or students prior to graduation.



The profession should undertake the effort designed to change Medicare regulations to allow alternative supervision models.

### Today's discussion



Academic programs need freedom to be creative in their approaches to teaching and financing programs.



A concerted and coordinated effort needs to be undertaken to increase the number of people interested in audiology as a career.

\*Windmill I. (2013) Academic Programs, Class Sizes, and Obstacles to Growth in Audiology *J Am Acad Audiol* 24:417-424

# *Issues Having Moderate and Major Impact on AuD Enrollment*

1. Insufficient student funding 39%
2. Insufficient clinical placements 33%
3. Demands on faculty time 22%
4. Insufficient number of faculty 16%

## **Factors Impacting AuD Enrollment**

*2017 CSD Education Survey, responses N=69/75*

## Moderate and Major Impact:

1. Insufficient student funding  
39%
2. Insufficient clinical  
placements 32%

## Possible Solutions:

- Change to three-year program to reduce cost to students and increase number of graduates.
- Change your thinking. Accept that professional degree programs rarely fund students.
- Drastically increase the use of simulators\* and student-patient interactions in non-clinic environments (senior centers, HLAA), improve placement strategies and resources, incorporate tele-audiology

# **Factors Impacting AuD Enrollment**

## *2017 CSD Education Survey, responses N=69/75*

\*see New CAPCSD eBook: [Best Practices in Healthcare Simulations](#)

## Moderate and Major Impact:

3. Demands on faculty time 22%

4. Insufficient number of faculty  
16%

## Possible Solutions:

- Align department priorities to new strategy of significantly increasing enrollment
- Work smarter, introduce learner-centered teaching and student team-learning

**Factors Impacting AuD Enrollment**  
*2017 CSD Education Survey, responses N=69/75*

\*see New CAPCSD eBook: [Best Practices in Healthcare Simulations](#)





# *How to grow your Academic Program*

Academic programs  
need the freedom to be  
creative in their  
approaches to teaching  
and financing programs

# How to Grow your Academic Program



## Think Creatively!

- Eliminate thoughts of modifying the traditional approach to AuD education
- What would you do if you were starting a new program designed for a class twice you current size?
  - Communicate with Administration
    - Increasing class size is an investment with a positive return
    - Increasing tuition income from growth is a strategic necessity
  - Redo Department strategic plan & Pedagogical Approach
    - make AuD class size growth a department priority and plan accordingly
    - Rethink class scheduling: 2-week blocks, night classes, 50-50 class split
    - Switch to learner-centered teaching (LCT) and team learning (TL)
- Use undergraduate CSD program to stimulate interest in AuD and train for Audiology Assistant

# Approaches to Teaching and Learning



1. *Teach:* To show or explain something;

***Teacher-Center Instruction:***

like this presentation



2. *Teach:* To cause to know something;

***Learner-Centered Teaching (LCT):***

Students take responsibility for their own learning



**Team learning (TL):**  
TL assumes that learning goals should be teacher-directed and used to guide individual and group learning activities.

# Team Learning Process



## Faculty

Decides on common learning goals and objectives



## Individual Preparation

Pre-class individual student study to master objectives



## Individual Testing

Multiple choice  
Assures readiness



## Group Preparation

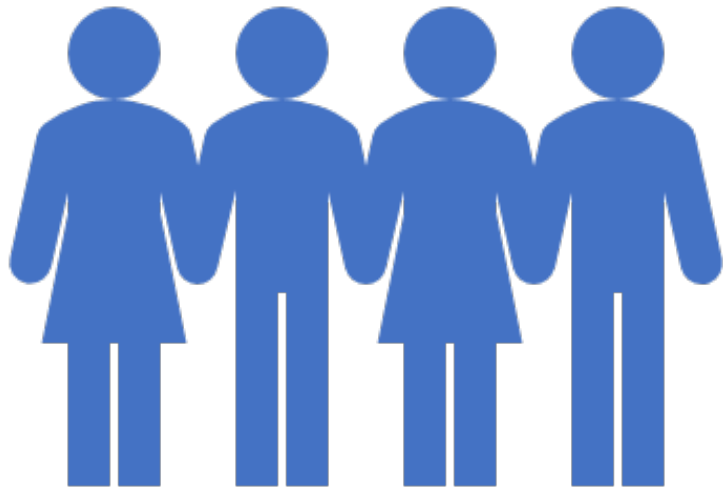
Work as team to arrive at consensus answer



## Group Testing

Groups report & defend consensus answers to entire class,  
Teacher consolidates learning

# ADVANTAGES OF TEAM LEARNING



- Because of the readiness assurance process, *Team Learning* is "content-grounded"
- Because of the in-class assignments, testing, and discussions, *Team Learning* emphasizes problem-solving and mastery of concepts
- *Team Learning* stimulates total-class discussion: everyone participates, everyone learns
- All teachers are responsible for teams to reach the same goals and objectives so teaching differences are minimized
- Because students assume responsibility for learning *Team Learning* requires less faculty teaching and more guiding. Teaching differences are minimized

# ADVANTAGES OF COMBINING LCT AND TL



TEACHER DIRECTED,  
GUIDED, AND MONITORED  
FOR PROGRESS



REQUIRES LESS FACULTY TIME  
BECAUSE STUDENTS ARE  
RESPONSIBLE FOR LEARNING  
AND TEACH EACH OTHER



READINESS TEST  
INCREASES LEARNING  
SPEED



BUILDS TEAMWORK  
CULTURE AND SKILLS



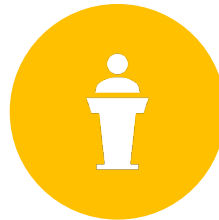
DEMONSTRATES THE IMPORTANCE  
OF PROBLEM SOLVING AND  
DEVELOPS CRITICAL THINKING  
SKILLS



STIMULATES TOTAL-CLASS  
DISCUSSION



READINESS TESTING  
ASSURES CONTENT  
GROUNDED APPROACH




TEACHING DIFFERENCES  
MINIMIZED



# INCREASING THE NUMBER OF STUDENTS INTERESTED IN AUDIOLOGY AS A CAREER

Strengthen	Strengthen undergraduate programs in audiology
Increase	Increase enrollment in audiology undergraduate programs
Design	<p>Design undergraduate programs with two goals</p> <ul style="list-style-type: none"><li>• Gaining a knowledgebase, critical thinking skills, and experience to win acceptance and succeed in an AuD program.</li><li>• Gain the knowledgebase, critical thinking skills, and experience to win certification as an Audiology Assistant</li></ul>
Appeal	These two goals will appeal to students and to the administration.
Train	Train future academicians: Use the undergraduate audiology program as an environment for AuD students to learn and practice teaching.



# *Restructure Your Clinic to Accommodate Growth*

Increase in patient flow  
yields more patient  
experience opportunities  
for students and  
revenue growth

# DISCOVER

## *WHAT RESOURCES DO YOU HAVE AND HOW ARE YOU USING THEM?*

### Evaluate personnel – how many, what are their responsibilities?

- Detailed schedule of supervisor time allocation, supervision metrics, patient visit metrics
- Do they provide services without student participation? Additional reimbursable time?

### Evaluate clinic - space, allocation, capacity, and utilization

- How are you using space? Are your test booths and fitting rooms always full?
- Is patient scheduling optimized?
  - Vary appointment times by patient complexity and student skill level
  - Stagger appointments to maximize room utilization

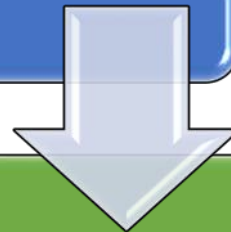
## Establish Value

Identify your clinic's key strengths and benefits and share them with the local community

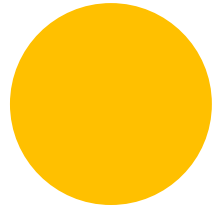
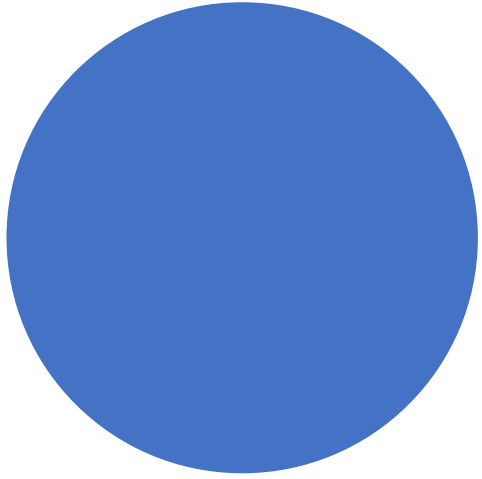
<b>Demonstrate</b>	That marketing is a necessary investment
<b>Update and modernize</b>	Your website
<b>Develop and use</b>	Patient education materials
<b>Systematize</b>	Family and Friend referral methodology
<b>Establish</b>	Strong professional referrals from PCPs and others
<b>Create</b>	An astonishing guarantee unique to your clinic
<b>Use</b>	Carefully chosen retail marketing strategies
<b>Participate in</b>	Grassroots outreach events that help your clinic to be known in the community
<b>Mine</b>	Your database for tested and not treated and 4+ patients

# Exceed

Exceed patient expectations at every opportunity by providing exceptional service and evidence-based state-of-the-science treatment options that are second to none.



Routinely measure satisfaction and other outcomes to monitor success and identify need for improvements. Involve AuD students in this process.




*Develop a growth plan to win  
university support*


Constructing the  
case for receiving  
support from the  
university

# CREATE THE GROWTH PLAN


**Purpose:** Get administration's attention, arouse curiosity, and move to action



**Background:** Describe the problem, how program and clinic growth will help solve it, and why they are worth solving. Briefly explain the growth process and the business opportunity – supply & demand.



**Financial Overview:** Include enrollment, graduation, and revenue projections; investment needed, breakeven point, and expected ROI.



**Summary:** Highlight advantages to the university, community, department, and the profession.

# ***Thank you!***

## ***Questions and Discussion??***



Additional questions, suggestions, and request?

Visit Fuel Medical's CAPCSD booth or contact [dnielsen@fuelmedical.com](mailto:dnielsen@fuelmedical.com)

