George Haddad – Founder & CEO
ghaddad@liaisonedu.com

Objectives

- Discuss enrollment trends in higher education generally and in health professions specifically

- Review available technologies which help with personalized approaches to applicants' recruitment, advising, selection and maintenance of credentials

Enrollment and Higher Ed Trends

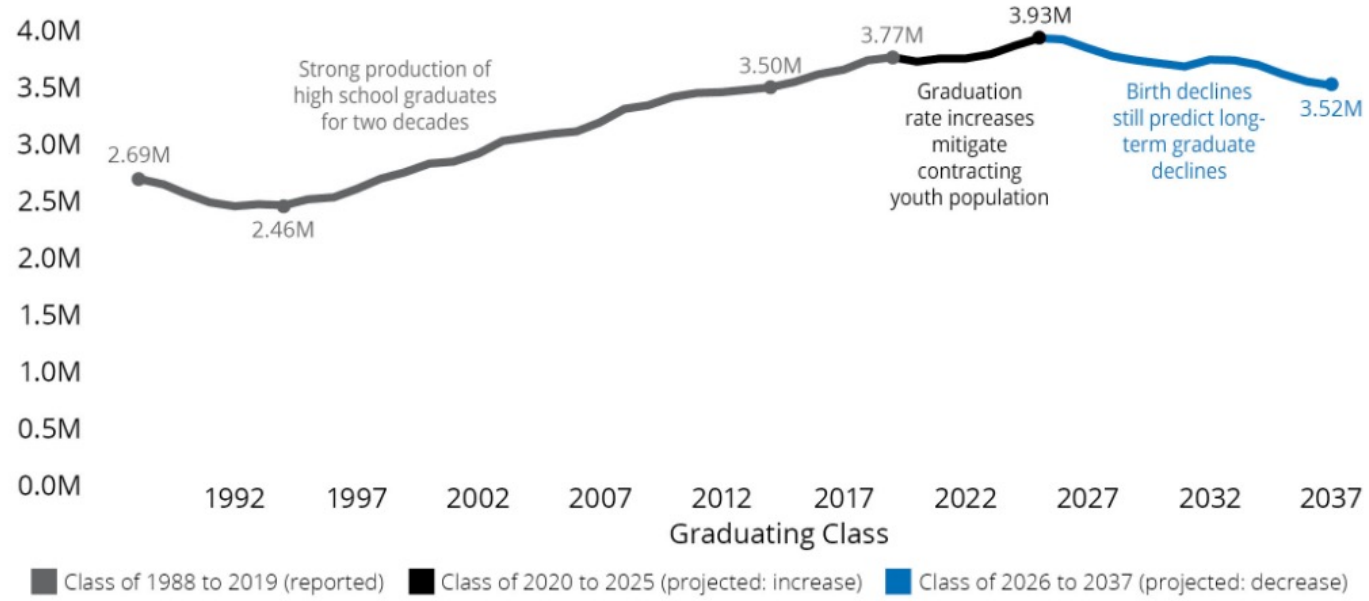
National Trends and Projections

LIAISON

Current National Projections

High School Graduates

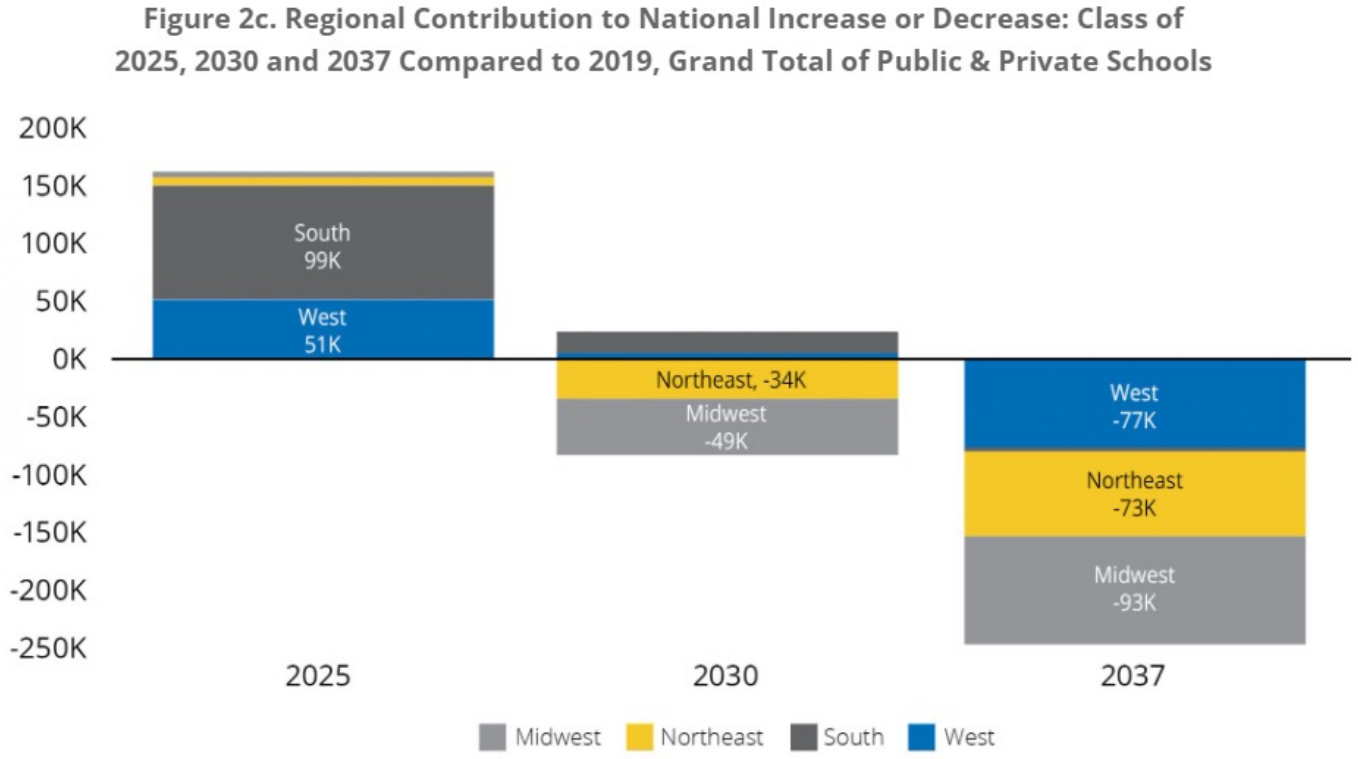
Figure 1. Slowing Growth in Number of U.S. High School Graduates, then Decline (U.S. Total High School Graduates)



Source: Western Interstate Commission for Higher Education, Knocking at the College Door, 10th edition, 2020. See Technical Appendix for detailed sources of data through the Class of 2019; WICHE projections, Class of 2020 through 2037. (View states or regions)

Current National Projections

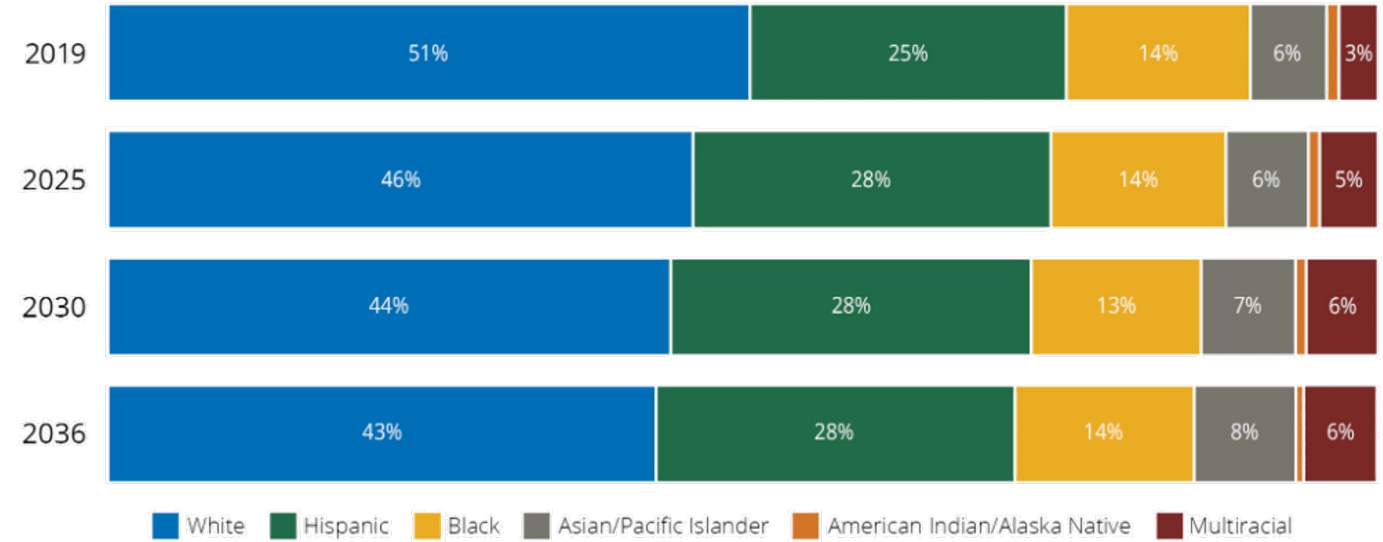
High School Graduates, Regional Comparison



Current National Projections

High School Graduates by Race/Ethnicity

Figure 3. U.S. Public High School Graduates, by Race/Ethnicity, Class of 2019 (reported) and Classes of 2025, 2030 and 2036 (projected)

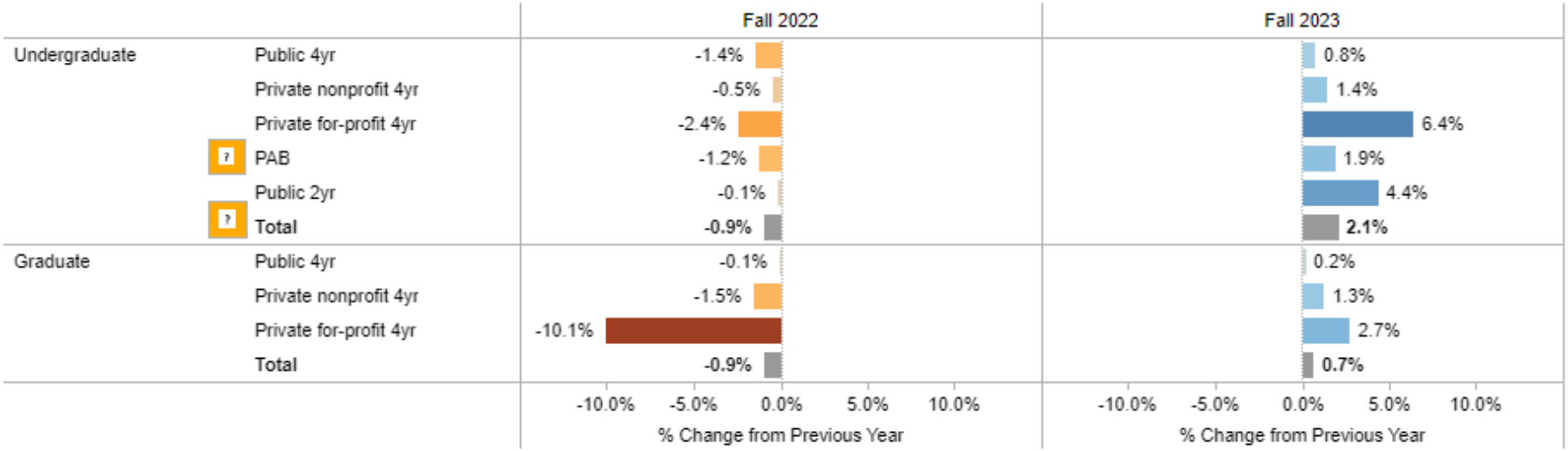


Source: Western Interstate Commission for Higher Education, Knocking at the College Door, 10th edition, 2020. WICHE projections and analysis. Notes: American Indian/Alaska Native from U.S. Public or Bureau of Indian Education schools average 1 percent of the total. Native Hawaiian/Other Pacific Islander graduates as a separate category average 0.35 percent of the total.

Enrollment Trends

Overall Enrollment by Sector

Figure 1.2 Enrollment Changes by Award Level and Sector



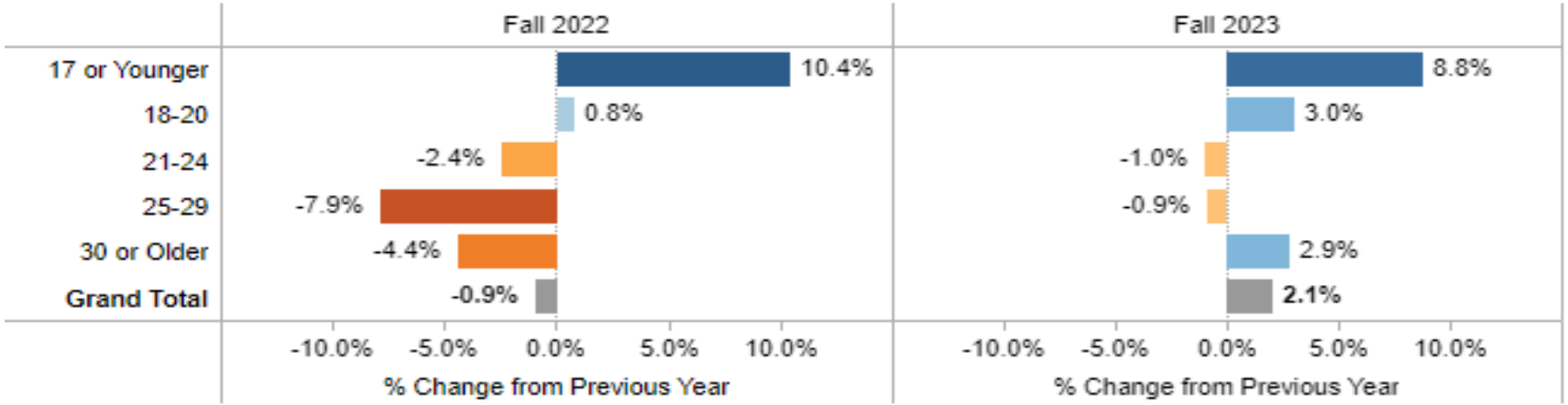
- Overall growth for both undergraduate and graduate enrollment across all sectors for Fall 2023
- Two-year growth of 1.2% for undergraduates and down 0.2% for graduates

Stay Informed | National Student Clearinghouse Research Center (nscresearchcenter.org)

Enrollment Trends

Student Demographics

Figure 2.2 Undergraduate Enrollment Changes by Age



- Significant growth in the 17 and younger age group as a result of larger dual degree programs being pushed at state legislatures and increase in certificate- based programs.
- Larger declines in the 25-29 work force going for their undergraduate degrees likely attributable to strong labor market and job opportunities over the past several years. That is slowing in the Fall 2023 class vs. 2022.

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Enrollment Trends - *Student Demographics by Race/Ethnicity*

Figure 2.3 Undergraduate Enrollment Changes at All Institutions by Race/Ethnicity (Estimates)

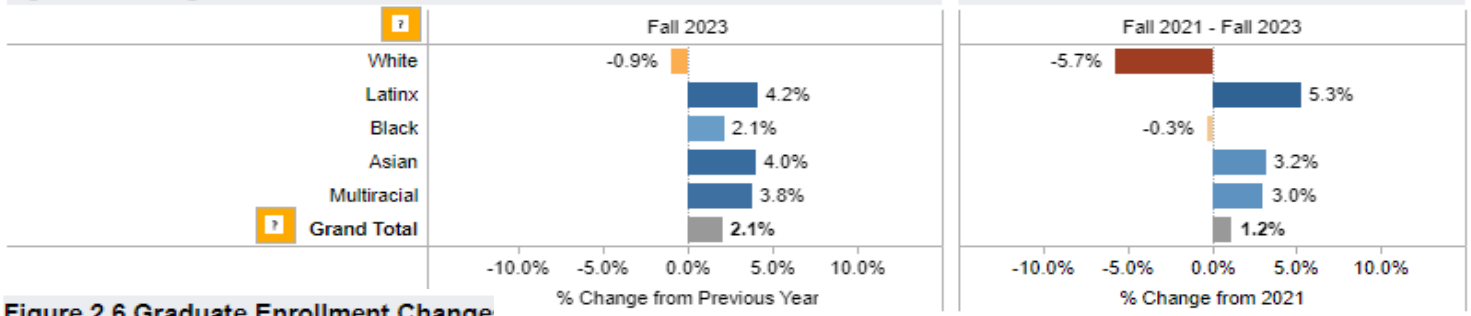
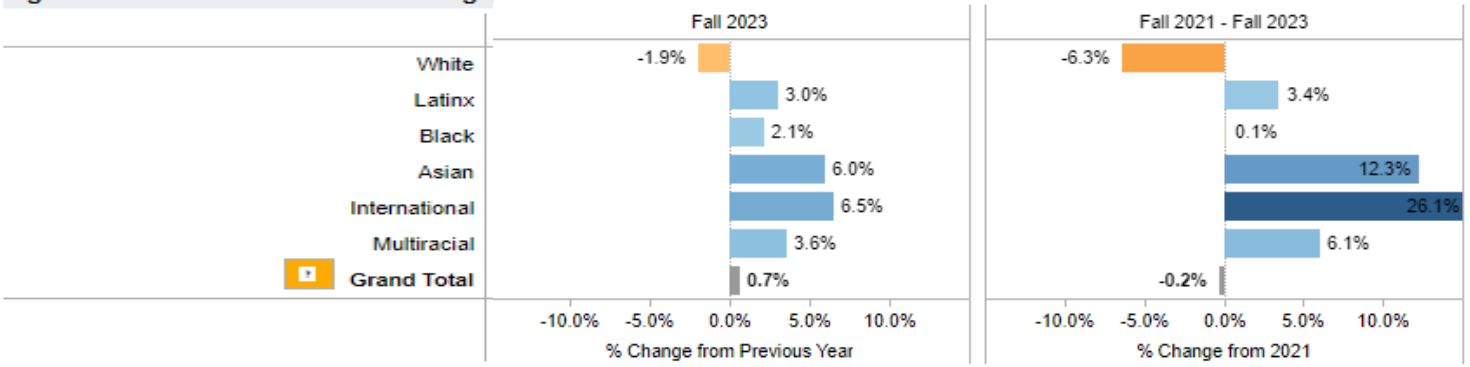


Figure 2.6 Graduate Enrollment Change



- Continued loss of White students in undergraduate and graduate programs nationally following a several year trend.
- Increase for Fall 2023 in every other racial category across the board, demonstrating the growing diversity on campuses.
- Large shift on non-white students in Fall 2023 undergraduate enrollments from the Fall 2022 class.

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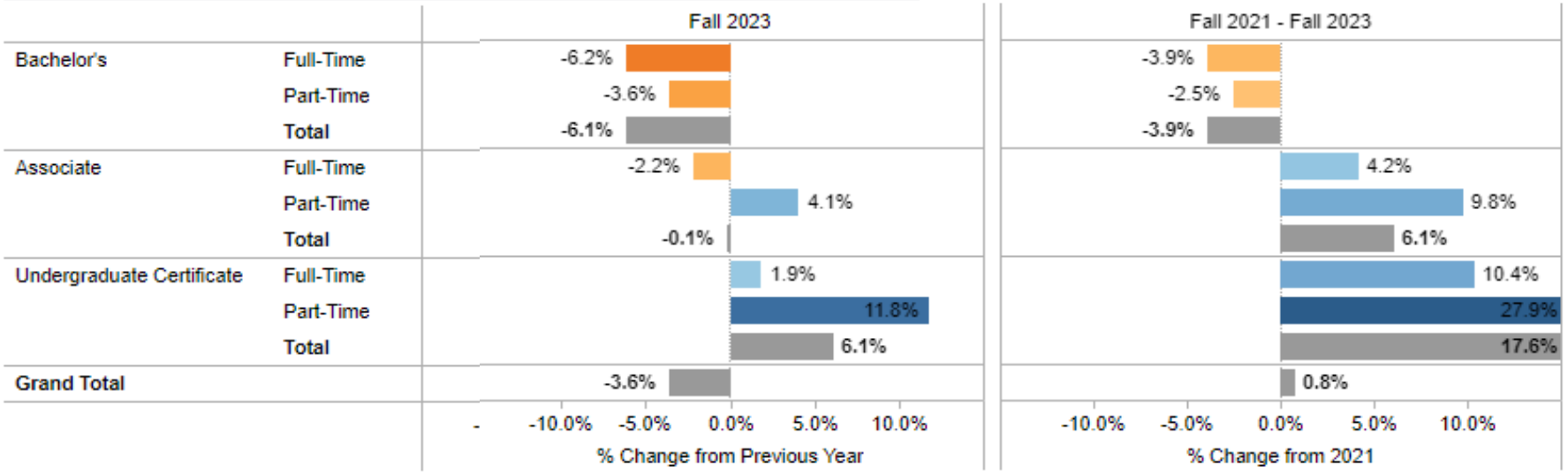
Enrollment Trends - *New Freshmen Enrollments by Credential*

Figure 3.3 Freshman Enrollment Changes by Credential and Enrollment Intensity



- We see a large drop in Bachelor seeking students. This will have a long tail as these students progress throughout the next 4 years and will have a major impact on many institutions.
- Also, significant growth in certificate programs again creating a two-year trend of 17% growth, and heavily slated on the part-time programs.
- By disaggregating the data in this way, it shows a very concerning trend for traditional higher education institutions.

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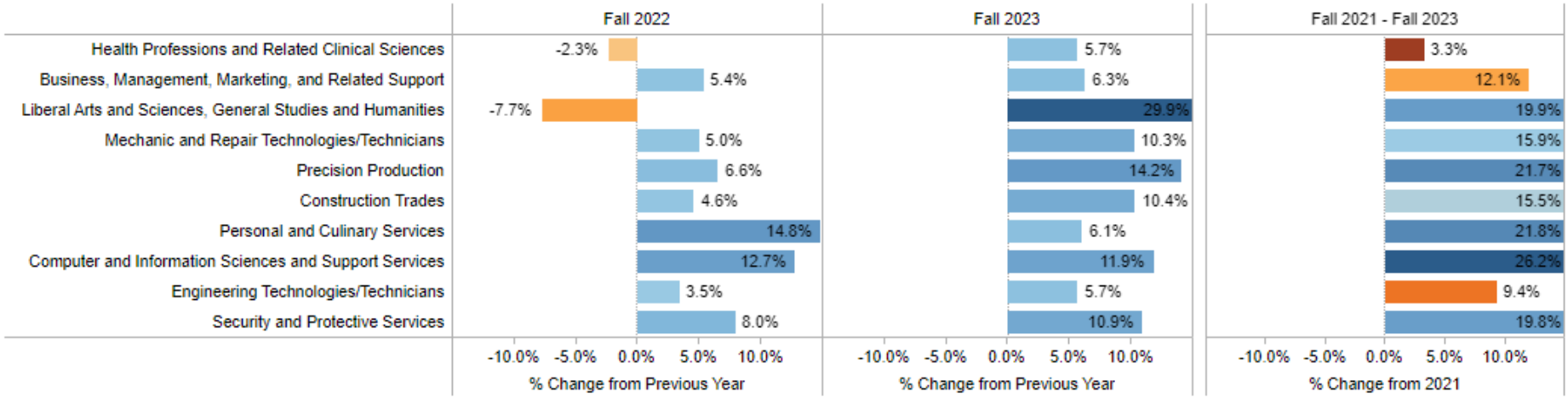
Enrollment Trends

Enrollment Changes by Certificate Program

Figure 4.1 Enrollment Changes in Top Ten Majors in Undergraduate Certificate Programs



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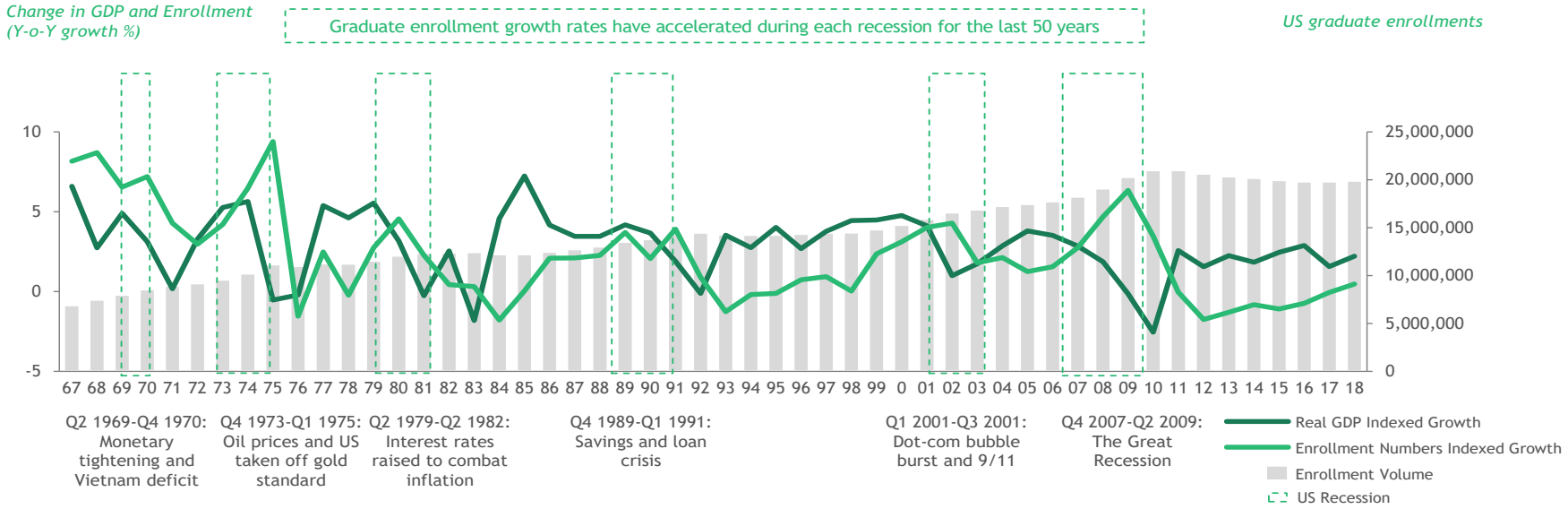
Enrollment Trends

Fall 2023 Summary and Future Implications

- The “Demographic Cliff” is still a significant inflection point in traditional higher education. It does not seem to be as severe as previously shown in pure headcount numbers, but student program choice regarding modality of education, degree being sought, their race and ethnicities are all showing large changes this Fall.

- Overall enrollments are up this year in both undergraduate and graduate programs, but that is a result of a stronger Fall 2022 class of 4.6% growth in freshmen students. Fall 2023 has a loss of 3.6%, that will slow the growth and have a longer-term loss for overall enrollments over the next 4 years.

Following a period of unprecedented economic expansion, enrollment volumes are expected to benefit further in the event of a downturn



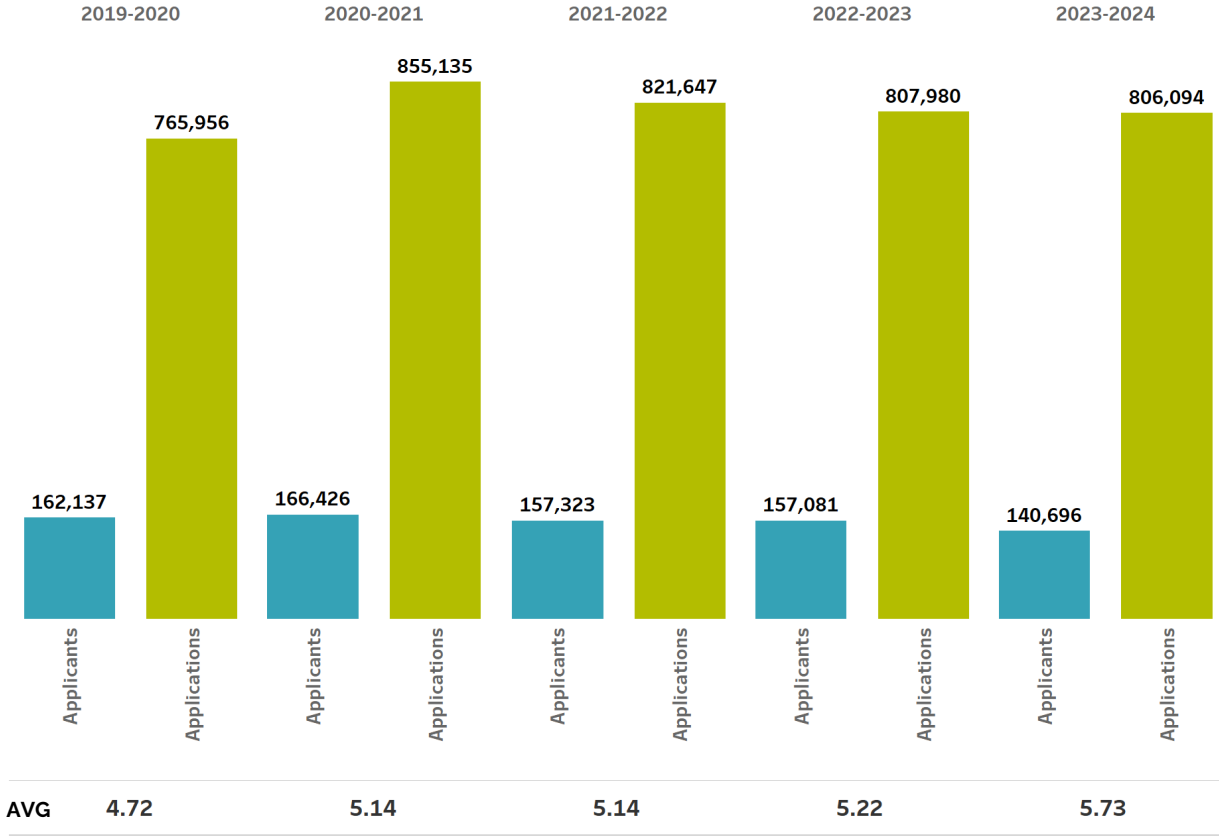
Sources: U.S. Department of Education (2018), National Center for Education Statistics, Biennial Survey of Education in the United States (1993); Higher Education General Information Survey (HEGIS) (2018); Federal Reserve Bank of St Louis (2018); Integrated Postsecondary Education Data System (IPEDS) (2018); BCG analysis

57

Health Professions

2019-20 to 2023-24

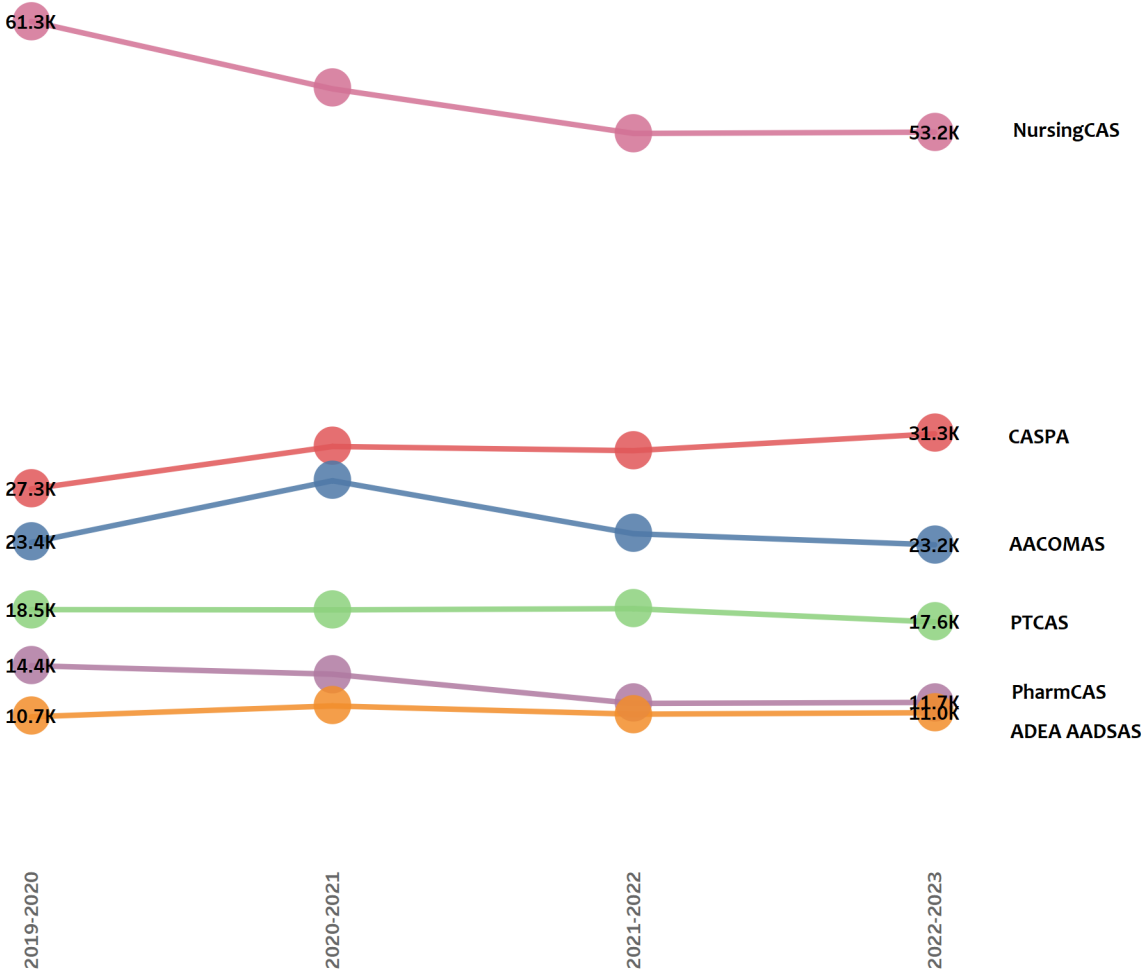
- The volume of Applicants and Applications in 2023-24 is expected to surpass the previous cycle



Applicants Trends per CAS

Health Professions Trends

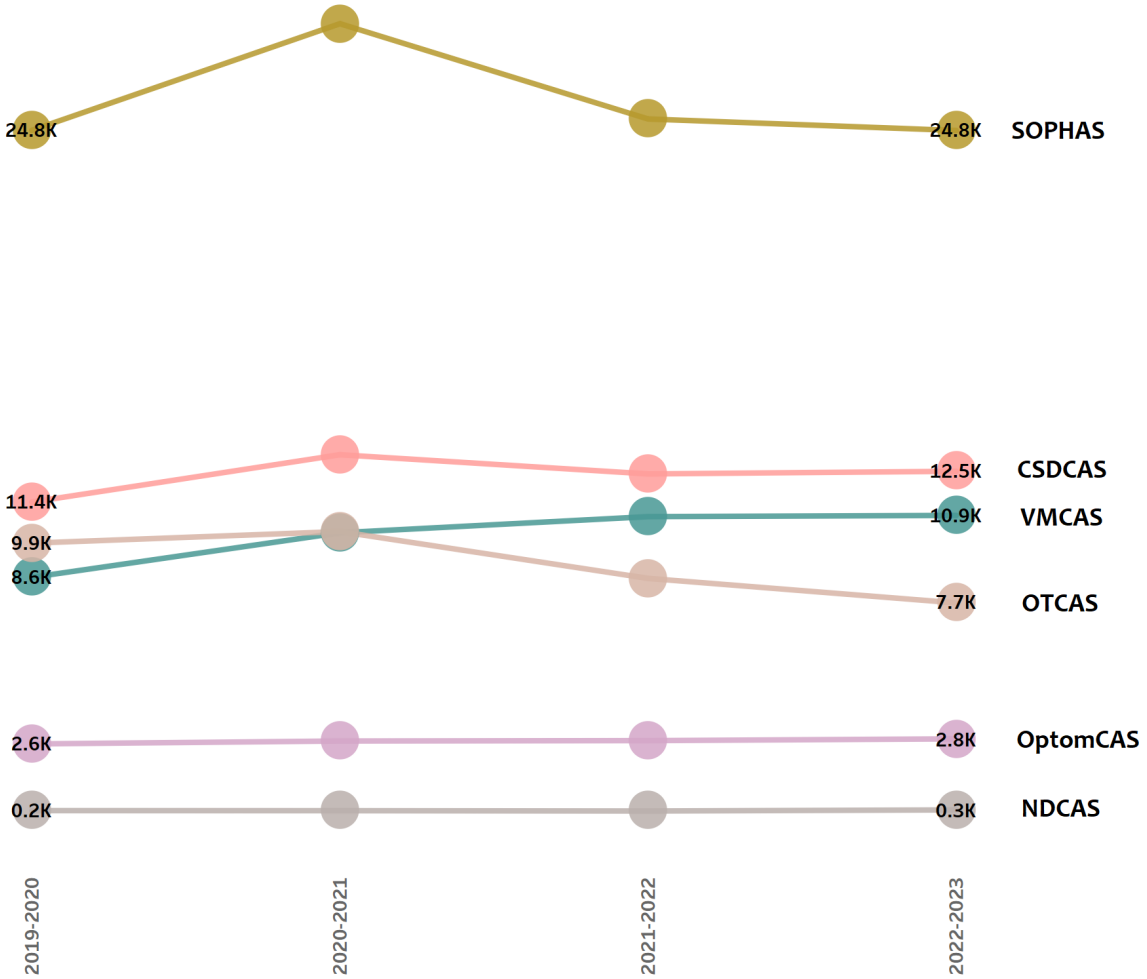
2019-2023



Applicants Trends per CAS

Health Professions Trends

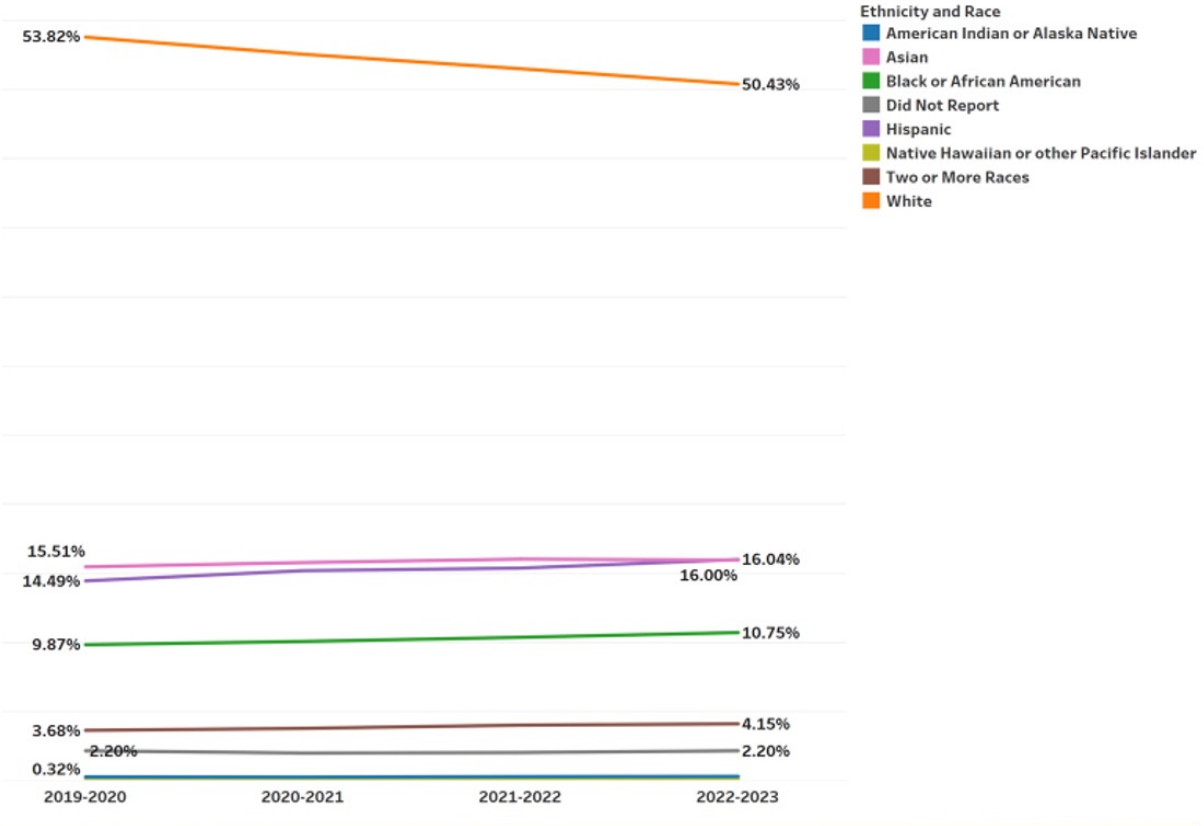
2019-2023



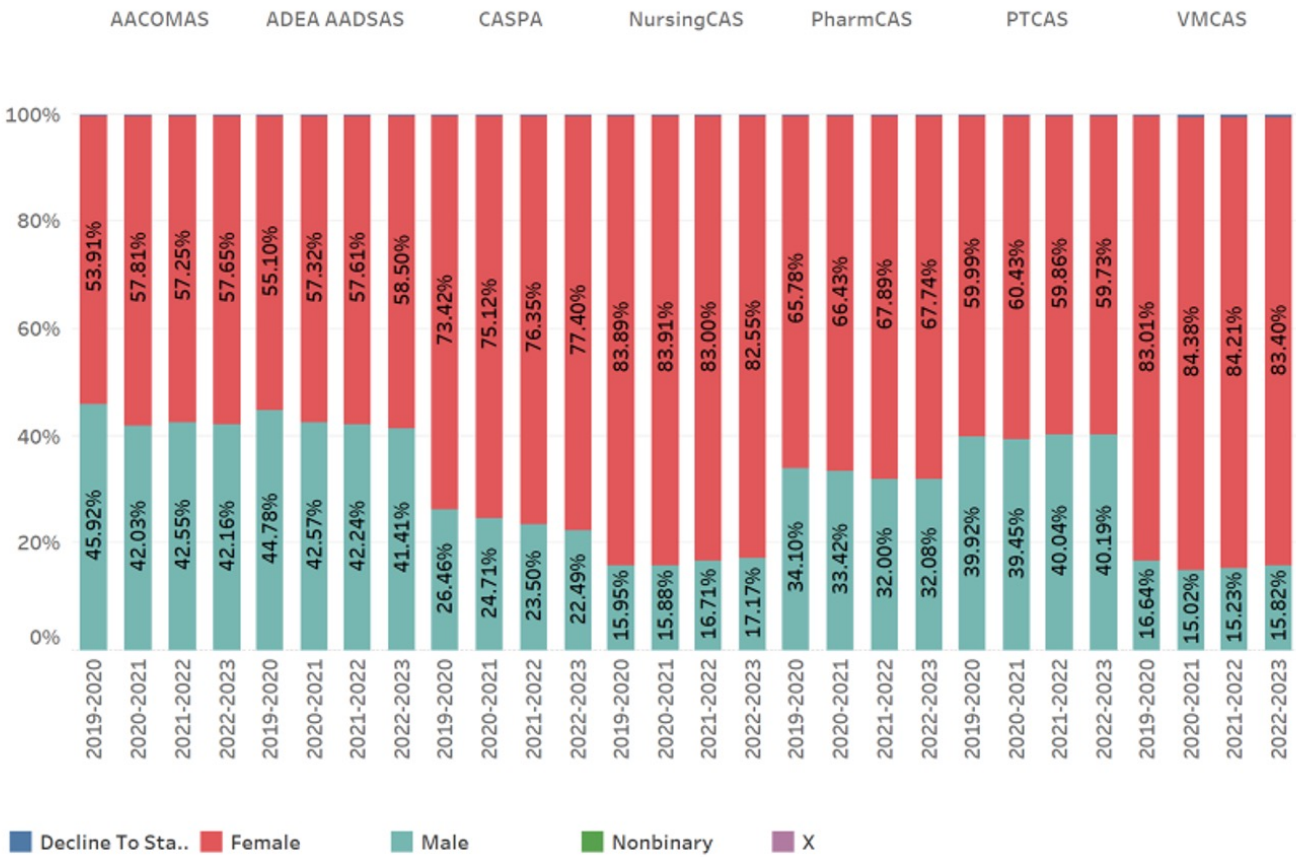
Race and Ethnicity

Health Professions 2019-20 to 2022-23 highlights

- White: largest % decrease in 4y from 53.8% to 50.4%
- Asian: gradual % increase from 15.5% to 16%
- Hispanic: gradual % increase from 14.5% to 16%
- Black & African American: gradual % increase from 9.9% to 10.8%



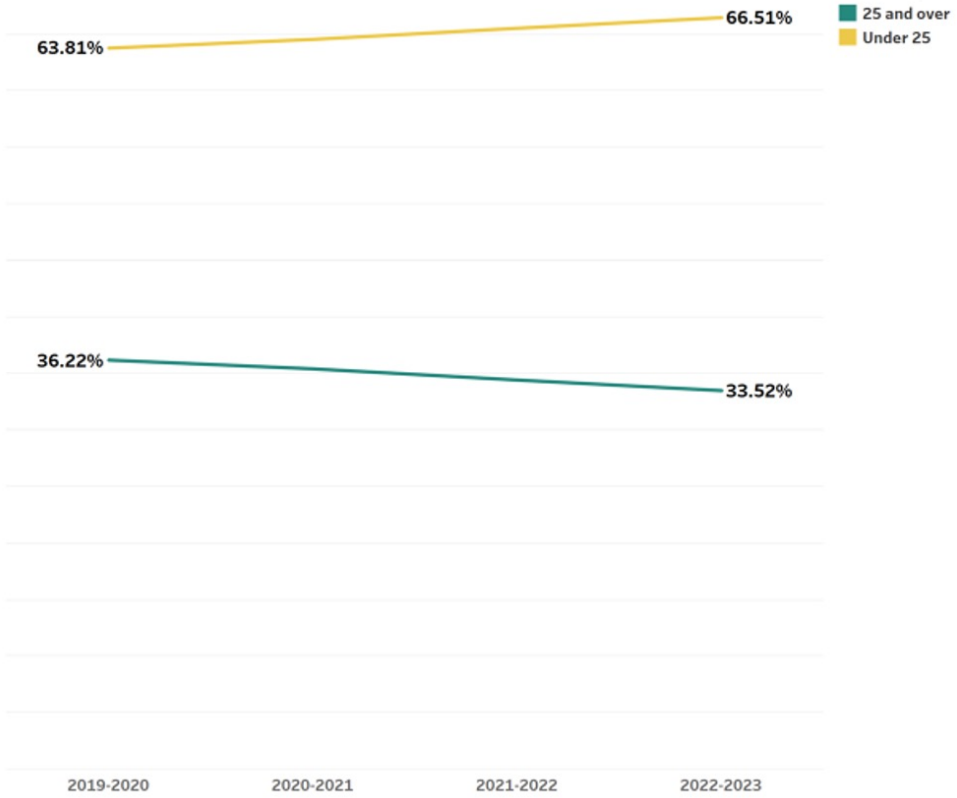
Gender



Health Professions: Applicant Age Trends

- The % of total applicants under 25 at the time of their application has gradually increased from 63.8% to 66.5%

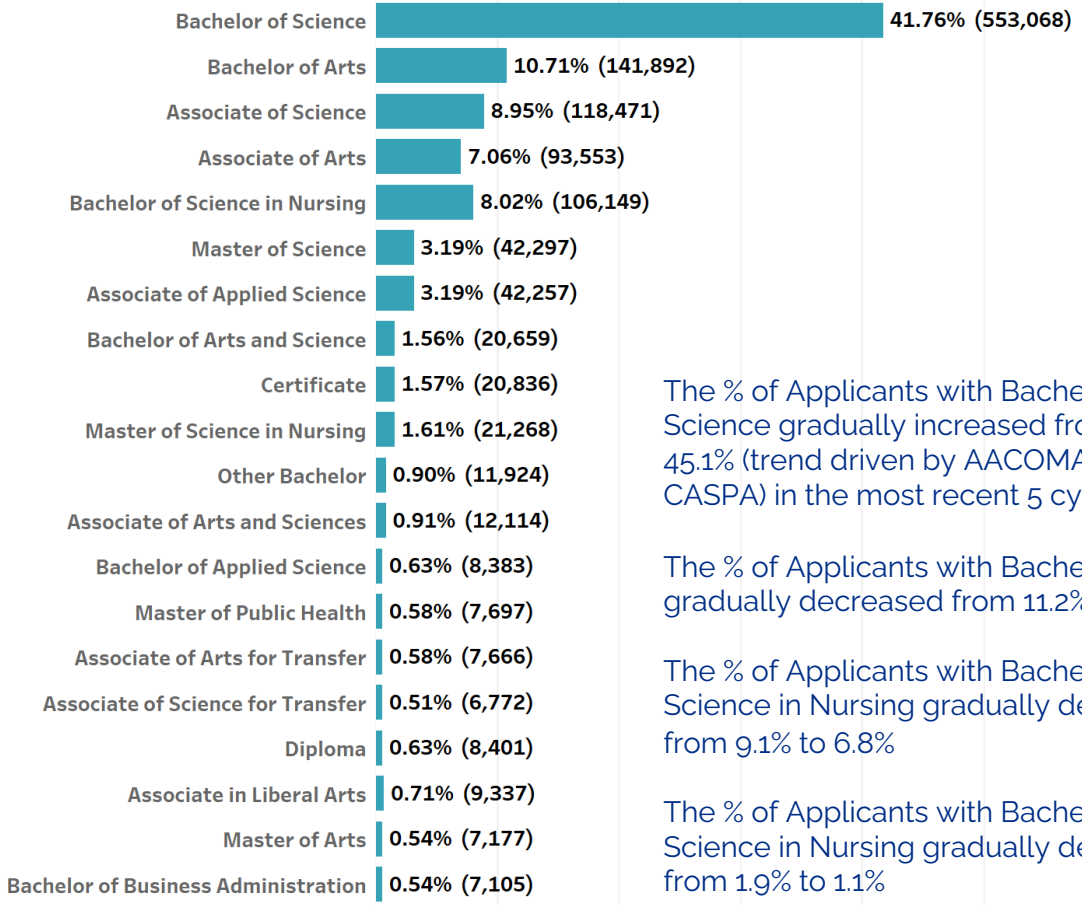
- The % of applicants 25 or older at the time of their application has gradually decreased from 36.2% to 23.5%



Prior Degrees Earned

Health Professions

2019-20 to 2023-24



The % of Applicants with Bachelor of Science gradually increased from 39.8% to 45.1% (trend driven by AACOMAS, AADSAS, CASPA) in the most recent 5 cycles

The % of Applicants with Bachelor of Arts gradually decreased from 11.2% to 10.3%

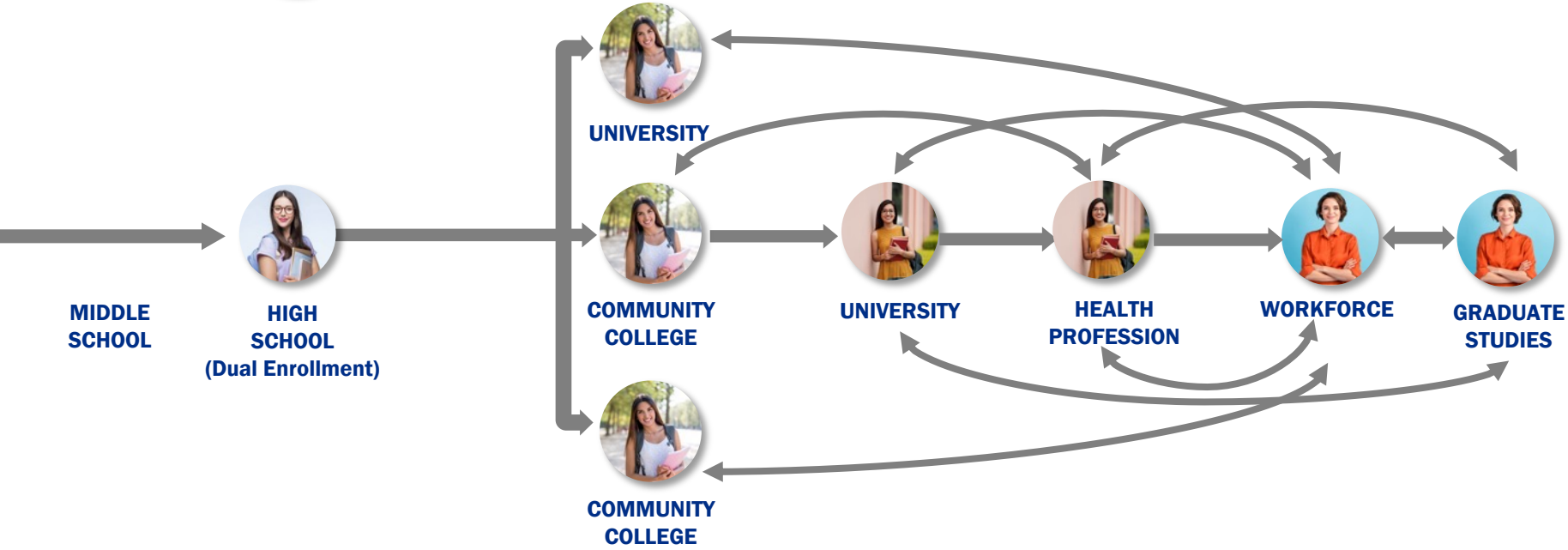
The % of Applicants with Bachelor of Science in Nursing gradually decreased from 9.1% to 6.8%

The % of Applicants with Bachelor of Science in Nursing gradually decreased from 1.9% to 1.1%

The Non-Linear Student's Path to the Workforce

ADVISORS, FACULTY AND PEERS

Advisors, faculty and peers work closely with the student to prepare her for college. They advise her on which courses to take, connect her to internship opportunities, offer guidance on best-fit career options and connect her to scholarships that expand her access to educational opportunities.



EMPLOYERS AND INDUSTRY EXPERTS

Employers and industry experts begin engaging the student as early as high school. They work with colleges to ensure that the student gains the skills to be successful in the workplace and offer the student internships, advice, support.

Technology & innovation

Identify Best-Aligned Adult Learners

Discover hard-to-find adults with a higher propensity to continue their education;

Customize the curation of subpopulations to match your school's specific objectives;

Increase outreach effectiveness enabling the personalization and micro-targeting of prospects

INTELLIGENTNAMES™ by LIAISON

Enrollment Marketing Challenges

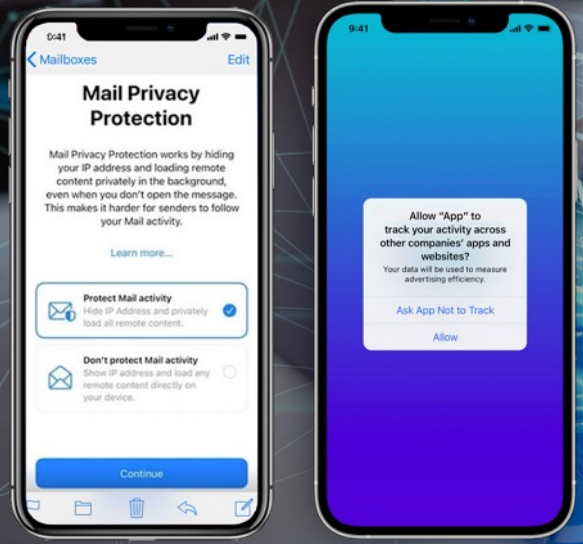
Apple's Tracking Privacy Protection

GDPR & CCPA Rules

End of Cookies

Google's Push to End Spam

Apple Mail's Privacy Protection



The result? Reaching your prospect is getting harder everyday!

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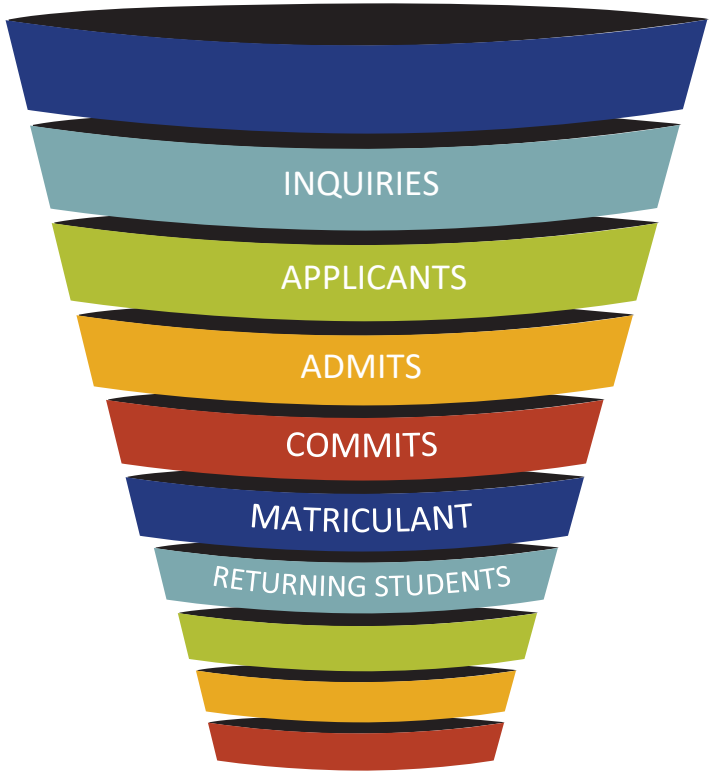
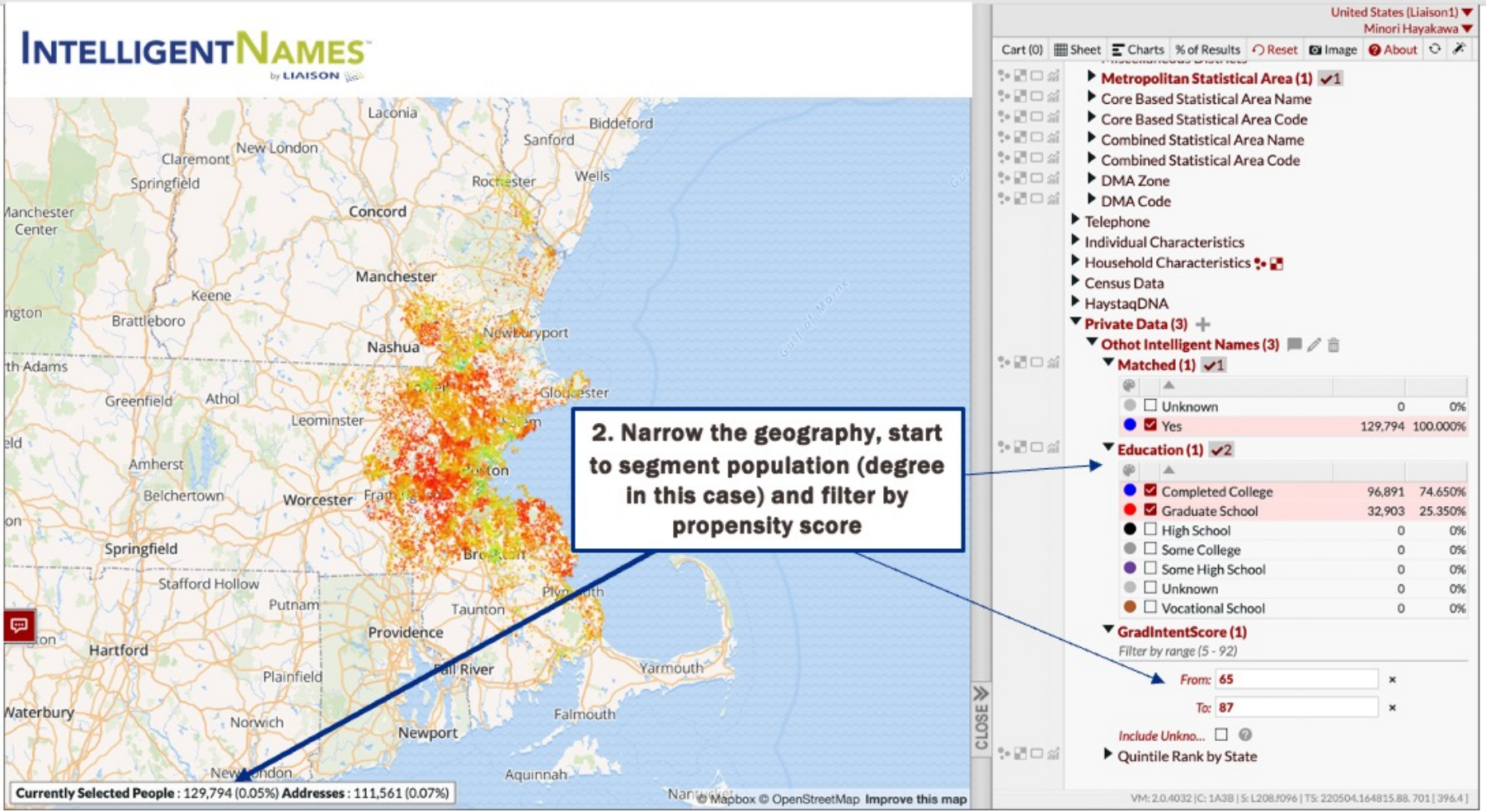
The Intelligent Funnel

INTELLIGENTNAMES™ by LIAISON





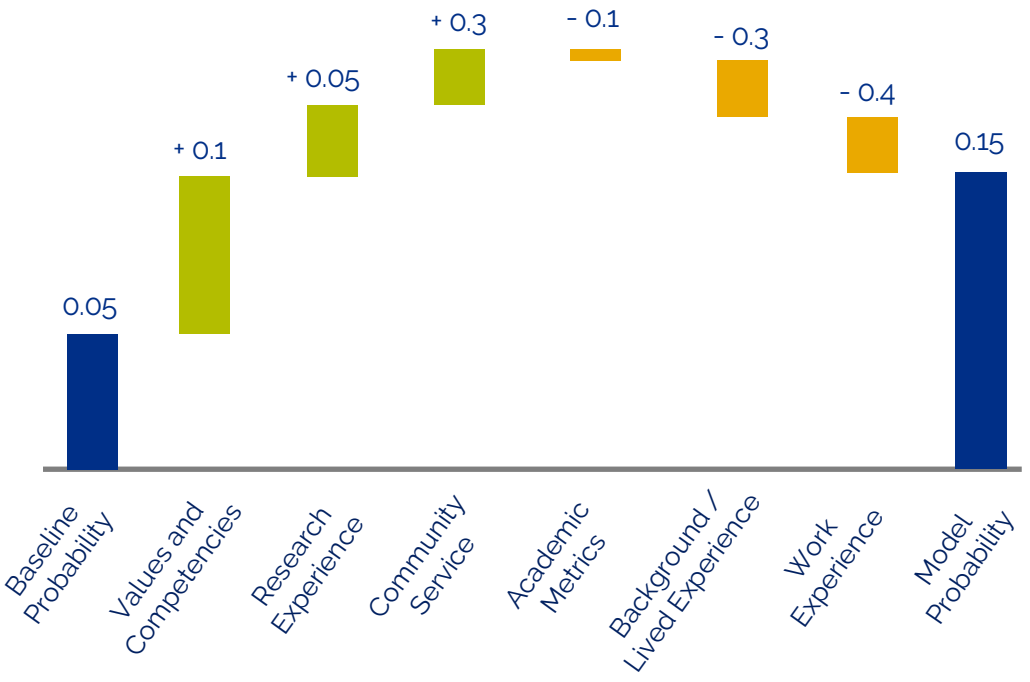
LIAISON

Using AI / machine learning models in application review

Explain the past: It is possible to make explicit what was driving historical decisions and outcomes ("explainable AI").

Predict the future: Each applicant can be assigned a likelihood to interview score.

Limitation: Models only replicate the past, so we look at holistic scoring next.



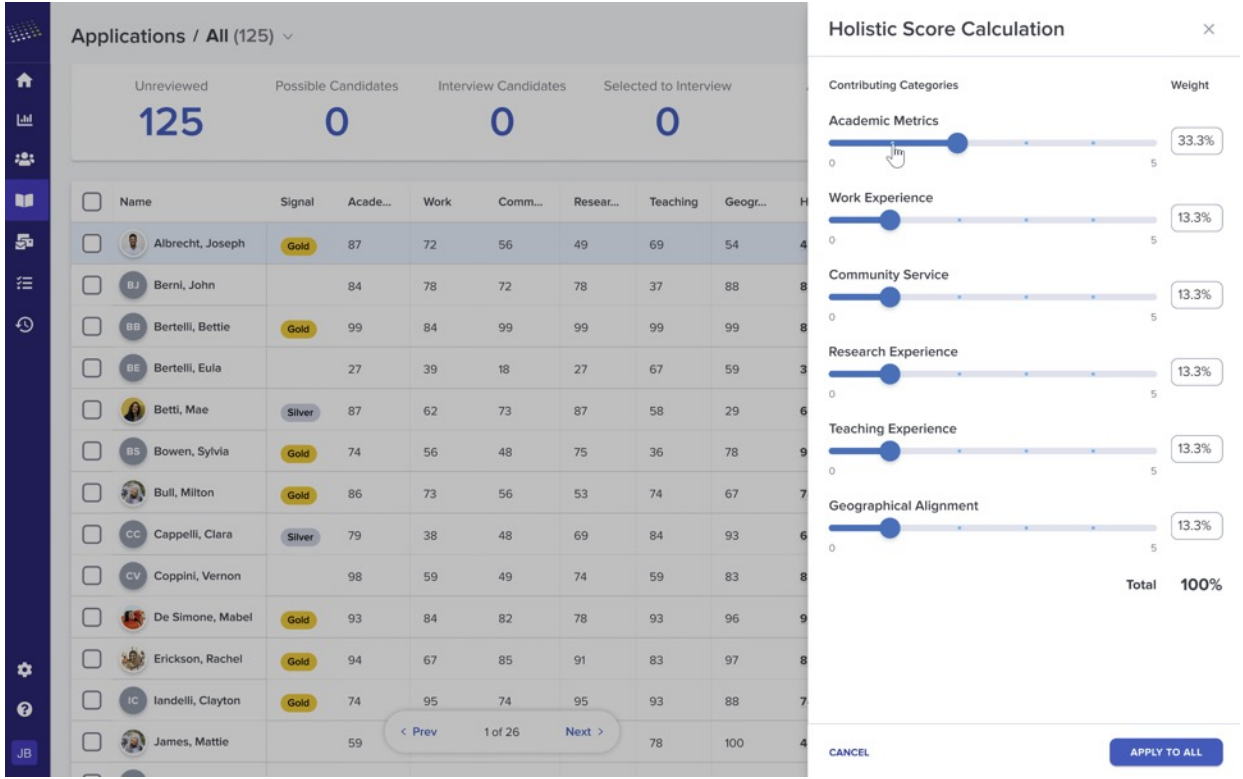
Can be done on individual and aggregate level

Can be done for past and future

LIAISON

Schools Can Weigh Domains by Importance

- Weights can be adjusted for each **domain**.
- This allows each program to express their **preferences** and what is important to them.



AI and Holistic Scoring Overview

Applications

(1) AI model

(2) Holistic model

AI ranking (retrospective)

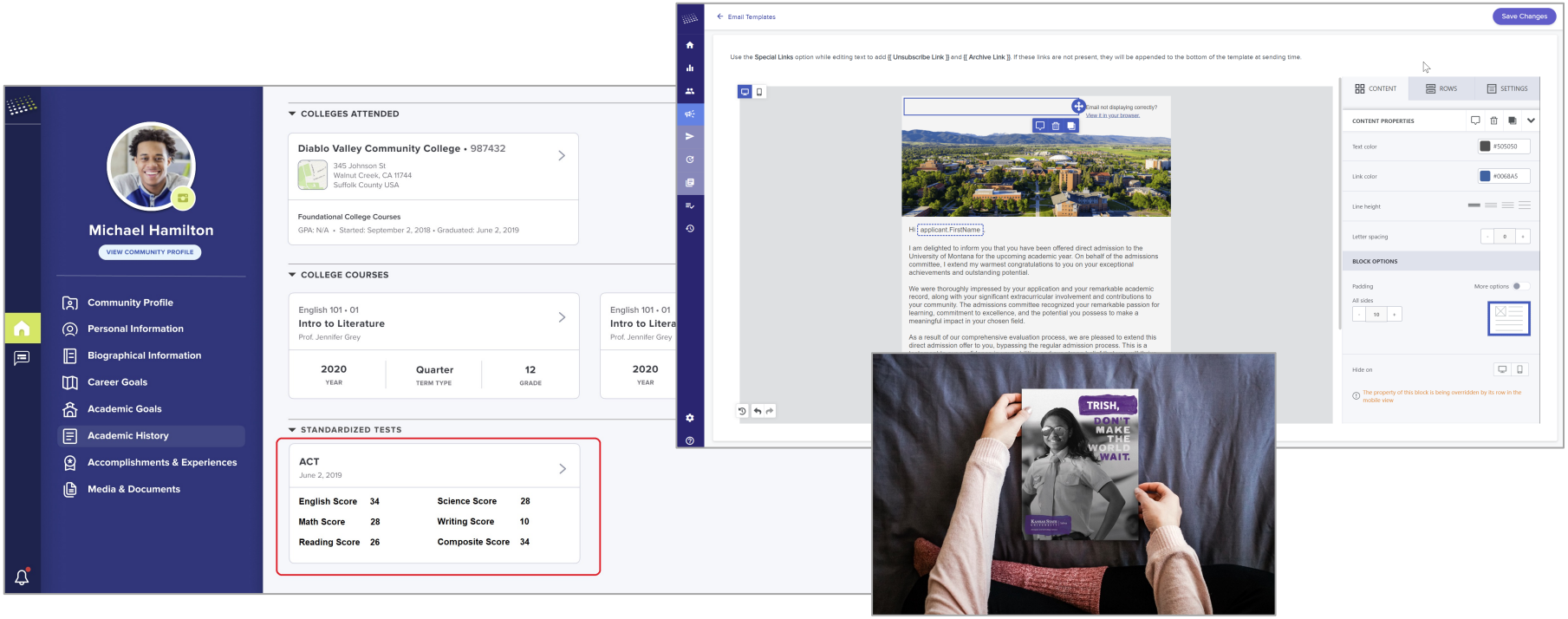
(3) Compare and complement

Holistic ranking (prospective)

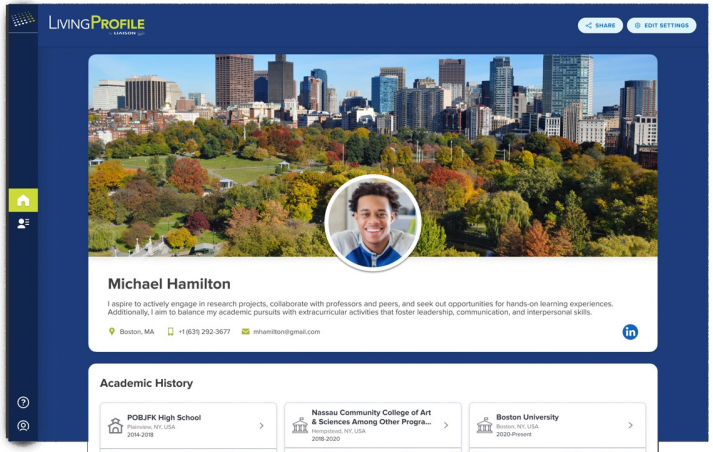
Applicant selection

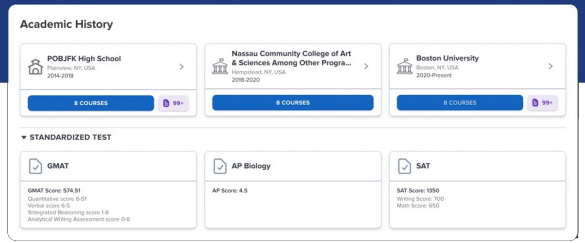
Combining AI and Holistic Review: Help with applicant selection

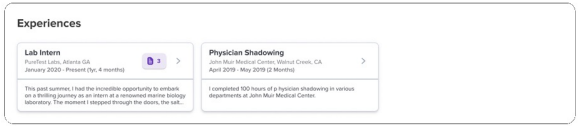
Living Profile

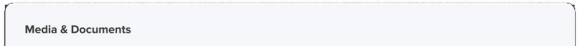


Sharable Profile

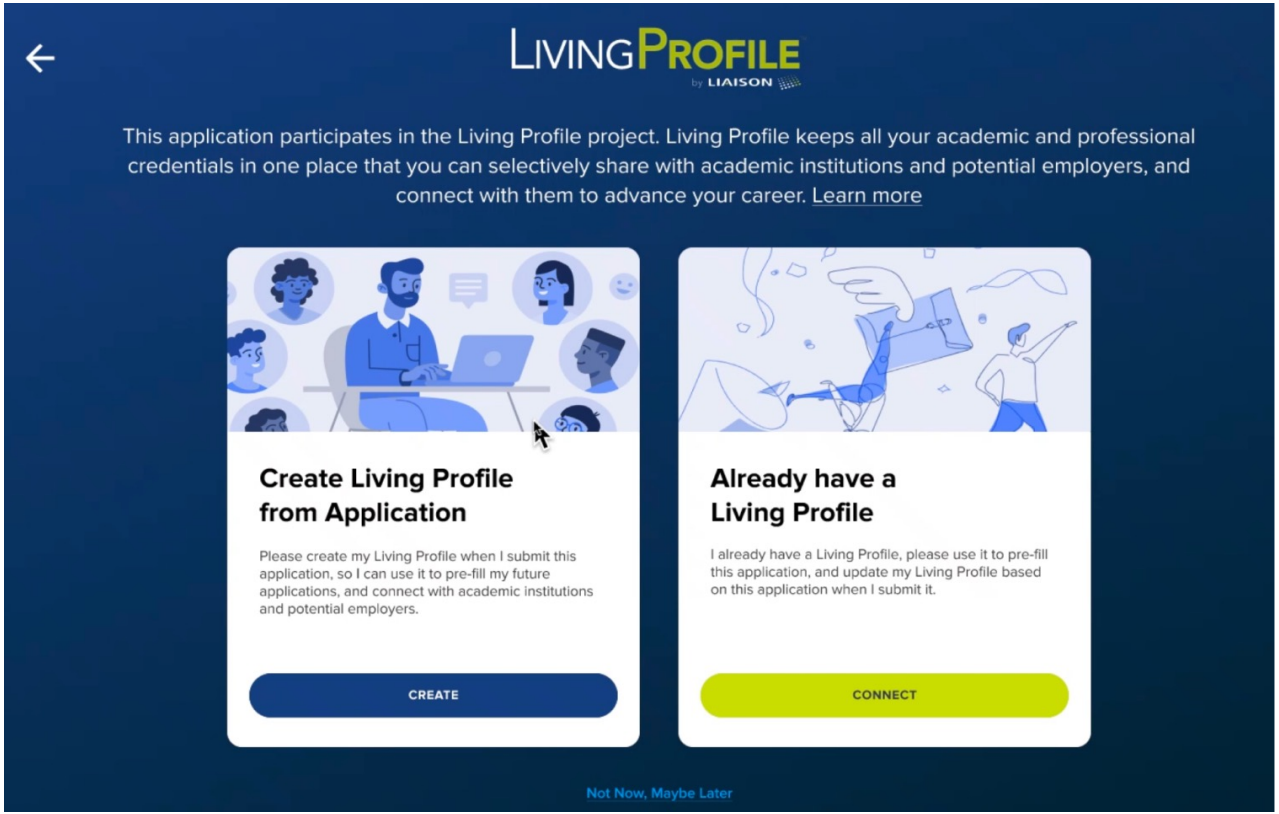








Integration with Liaison's CASs



Thank you!

George Haddad
ghaddad@liaisonedu.com

UH West O'ahu Value Proposition

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WEST O'AHU

UH West O'ahu prepares 21st Century Leaders - Career Creators - through integrated, transdisciplinary programs where learners discover, innovate and engage diverse communities to create a vibrant and just world!

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PROMISE TO SERVE"

(The Future of Health Career Training)

Inspiring and Training Future Healers to Serve The Community

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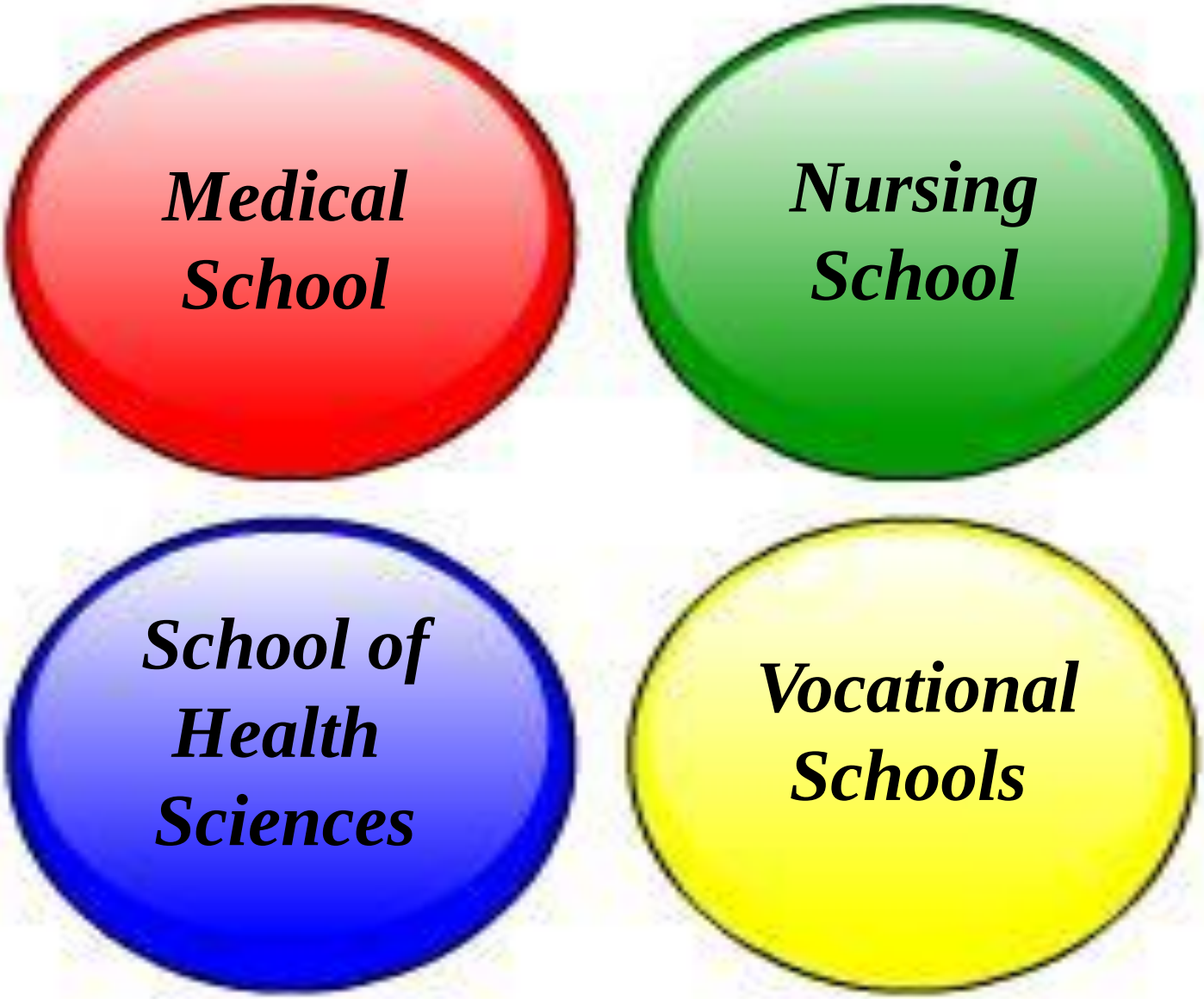
PRESENT DAY SILOS




WORLD SERIES
MW


U.A
14
WEST
20
15


2023
LITTLE LEAGUE BASEBALL
WORLD SERIES
CHAMPIONS

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Pediatrician & Professor of Health Professions

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“DR. RIC, YOU WANNA START A HEALTH SCIENCE PROGRAM?”

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- **Over 6 million healthcare providers out of 11 million healthcare workers**
- **Aides, Assistants, Technicians, Technologists, Therapists**
- **More than 85 Occupations Distinct from Medicine or Nursing**


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Dietitian
Medical Social Worker
Medical Laboratory Technologist
HEALTH SCIENCE HAS THE POTENTIAL
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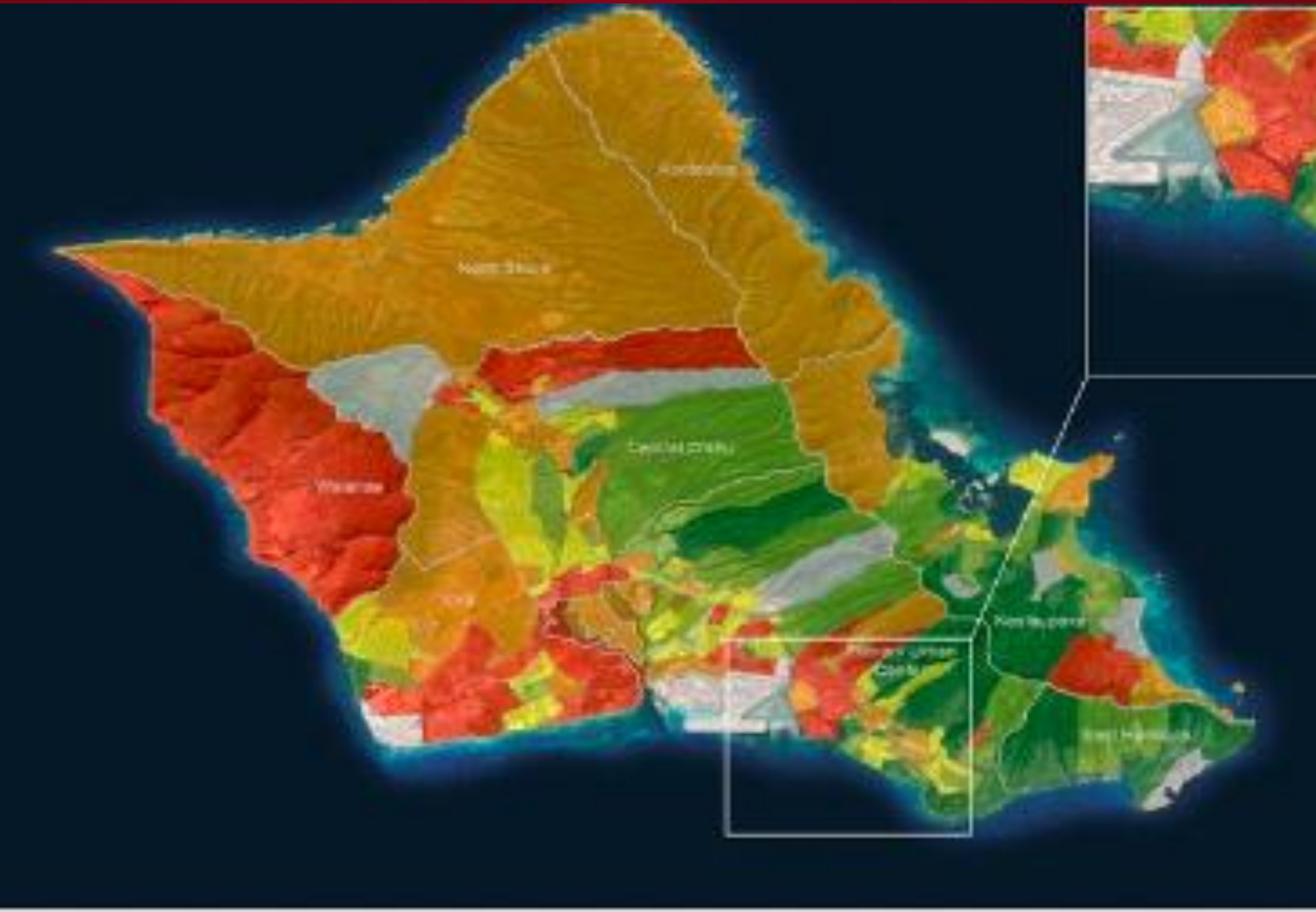
Occupational Therapist
Optometrist
Oral Health Therapist
Orthoptist
TO TRAIN 100's OF UNDERSERVED
Perfusionist
Pharmacist
Physiotherapist
Podiatrist
Psychologist
STUDENTS OVER TIME
Radiation Therapist
Radiographer
Respiratory Therapist
Sonographer
Speech Therapist

SOCIAL VULNERABILITY INDEX – RED IS BAD – WEST O'AHU IS ALL RED



EAST vs. WEST OAHU

(Kahala, Waialae, Hawaii Kai) (Waianae, Nanakuli, Kapolei)

DISPARITY	CATEGORY	EAST OAHU	WEST OAHU
ETHNIC	Native/Pacific Islander	5%	46%
	White	25%	5%
	Asian	49%	7%
ECONOMIC	Per Capita Income	$198,000	$77,000
	Home Value	$1,800,000	$582,000
	Poverty	4%	18%
HEALTH	% Disability Under 65 y/o	3.7%	8.4%
EDUCATIONAL	Bachelor's Degree	56%	17%

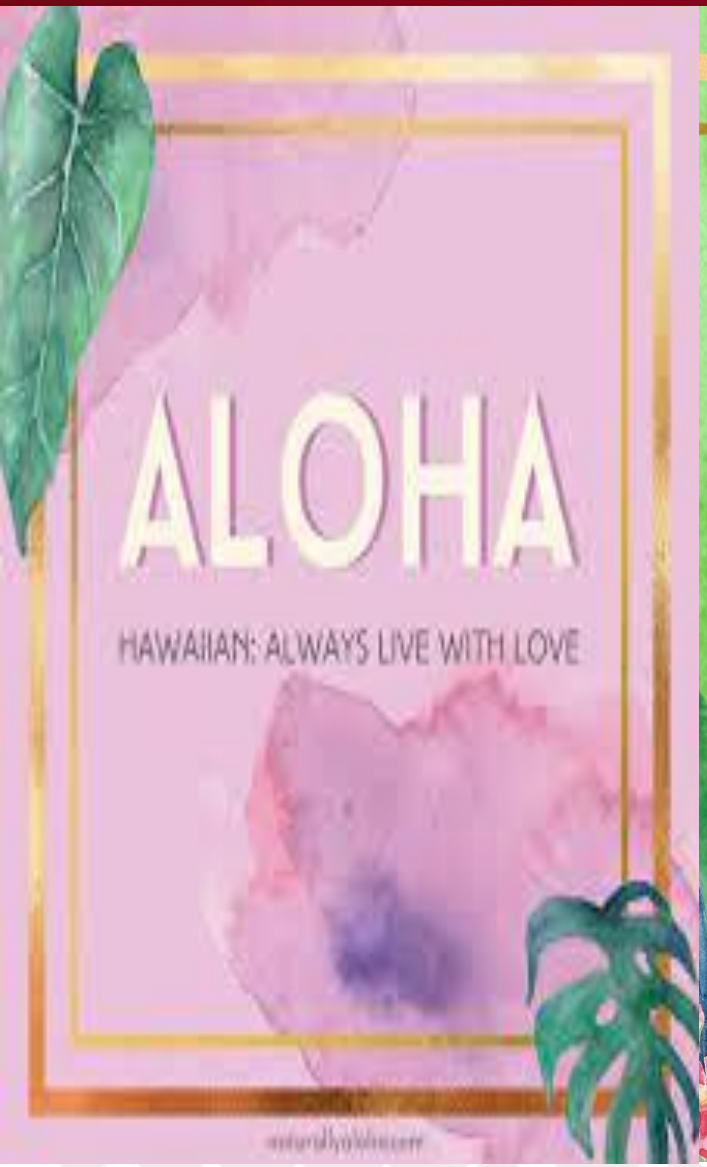
Source: United States Census Bureau & Zillow (Home Values)

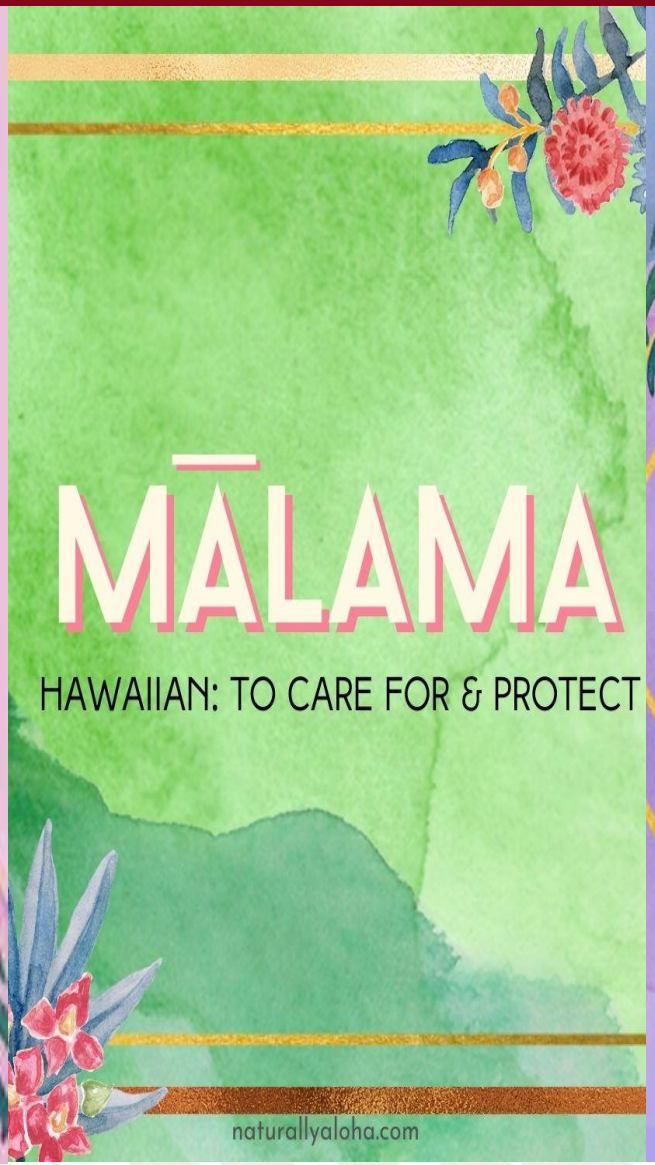
GROWING OUR OWN, FROM OUR COMMUNITY, FOR OUR COMMUNITY.

University of Hawai'i West O'ahu

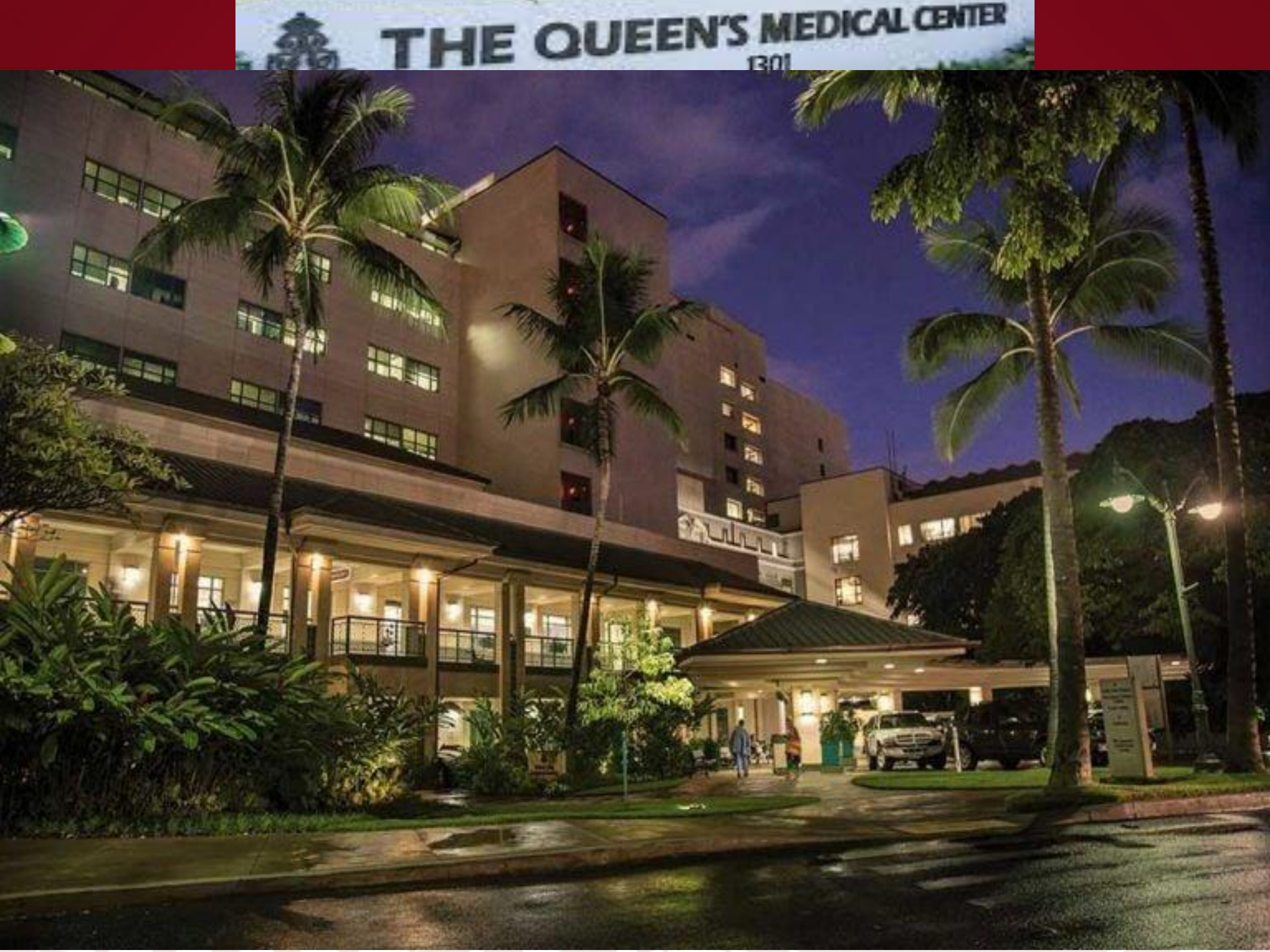
EXPOSURE CHANGES TRAJECTORY


BURNING HEART BY JOEL GUSTAFSSON

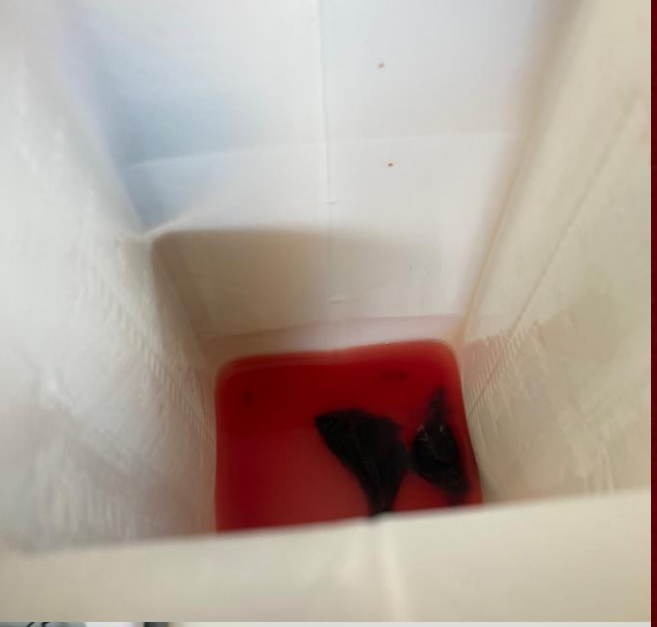

ALOHA
HAWAIIAN: ALWAYS LIVE WITH LOVE

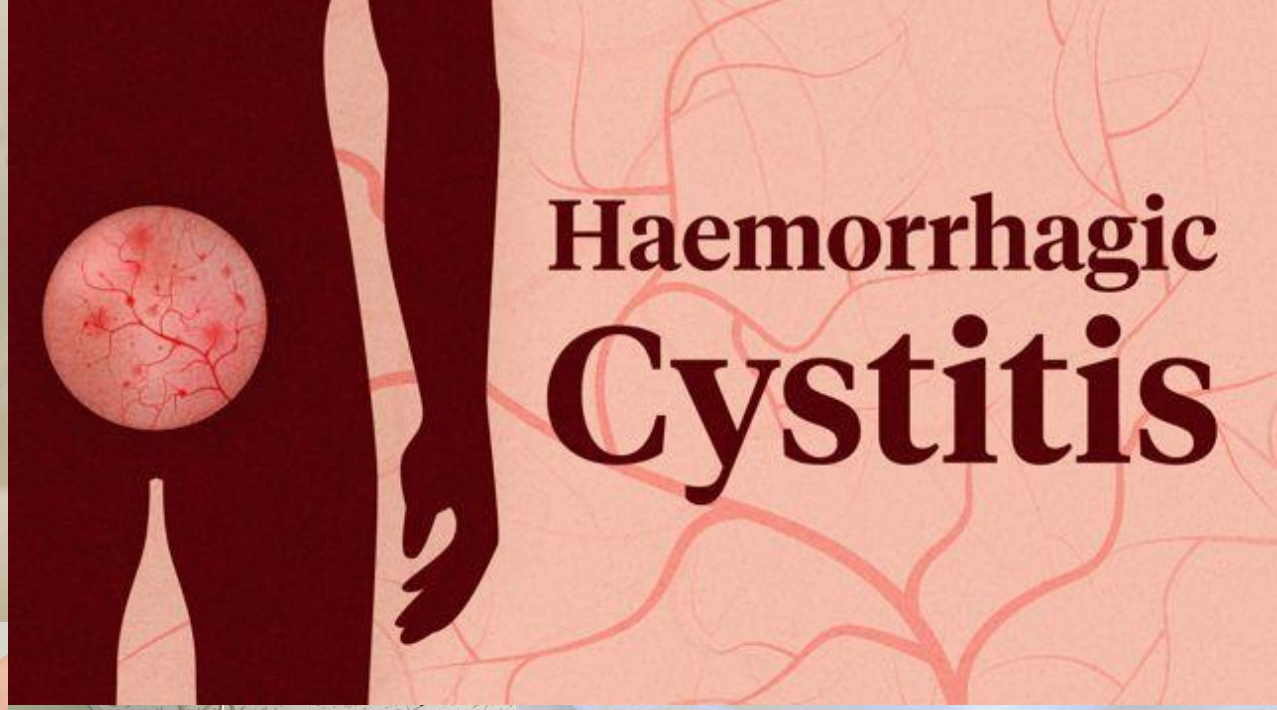

MĀLAMA
HAWAIIAN: TO CARE FOR & PROTECT
naturallyaloha.com

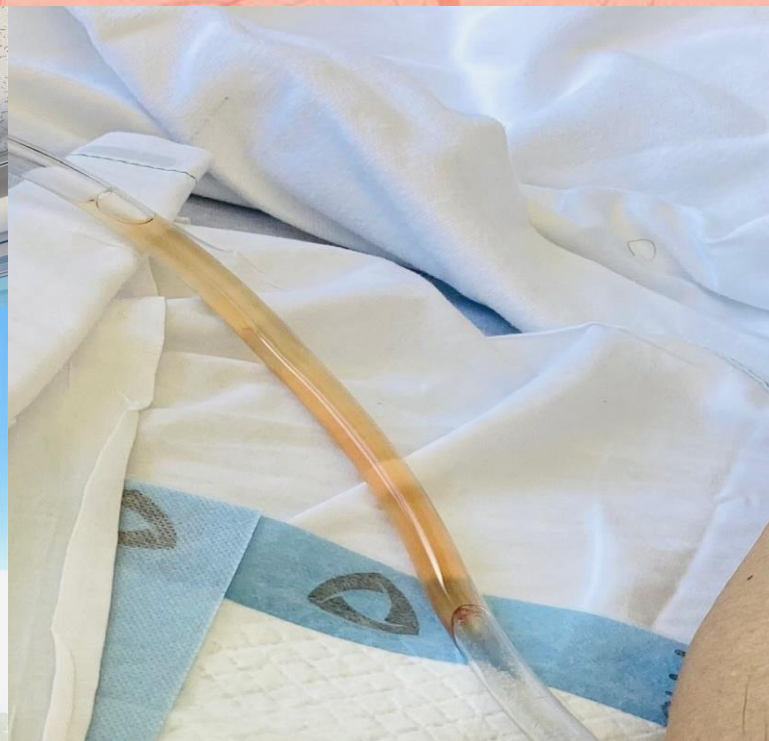

'OHANA
HAWAIIAN: WE ARE ALL FAMILY
naturallyaloha.com


THE QUEEN'S MEDICAL CENTER


Castle
Medical
Center




Haemorrhagic
Cystitis



UROLOGIST

former classmate

HOSPITALIST

former student

RESPIRATORY CARE

son's colleague

NIGHT NURSE

former patient

UNIVERSITY of HAWAI'I® WEST O'AHU

GOALS

University of Hawaii - West Oahu

Undergraduate Health Science Program

1. To create career opportunities.
2. To bridge & establish pathways.
3. To seek innovation & excellence.

UH WEST OAHU
HEALTH SCIENCE TENENTS:

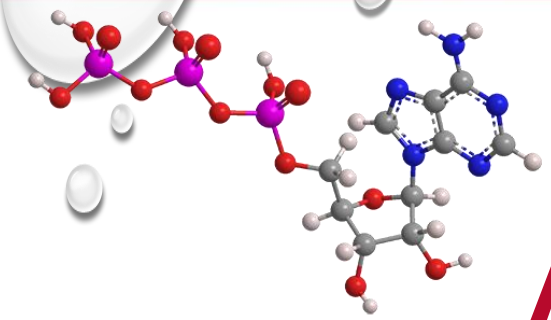
1. Must be Community-Based

2. Must Integrate Learning with Service

3. Must Produce Multidisciplinary Teams

HEALTH SCIENCE START-UP STRATEGY

- BUILD HEALTH SCIENCE LABS & BUILDING
- CREATE 6 TOTALLY NEW BACHELOR DEGREES
- CREATE NEW HEALTH SCIENCE JOBS THAT PAY AT LEAST $40/HR, $80,000/YR
- TEACH NEW HANDS ON SKILL SETS



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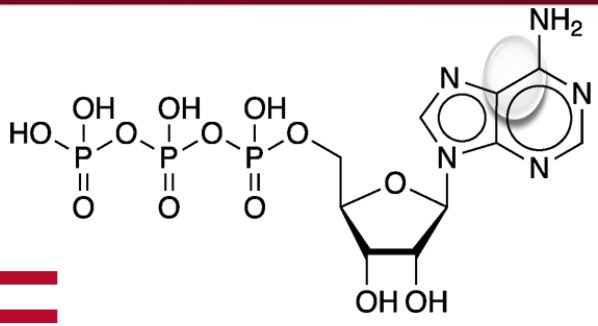
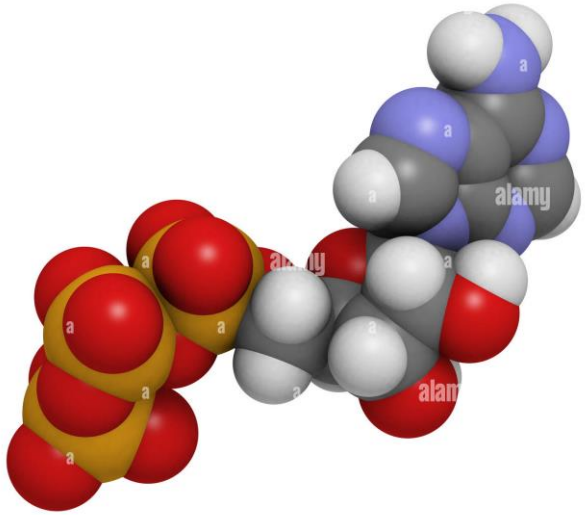
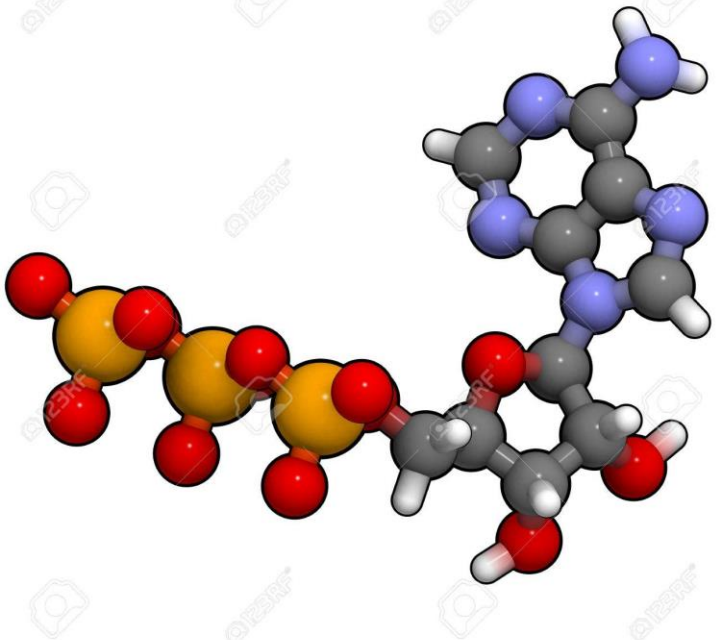


AUTHORIZATION TO PLAN





THE SIX DEGREES

Health Professions

Long Term Care

Respiratory Care

Community Health

Health Information Technology

Hawaiian & Indigenous Health & Healing

THE SIX DEGREES

Health Professions

Long Term Care

Respiratory Care

Community Health

Health Information Technology

Hawaiian & Indigenous Health & Healing

HEALTH PROFESSIONS CONCENTRATION

Pre-Physical Therapy

Pre-Occupational Therapy

Pre-Pharmacy

Pre-Physician Assistant

Pre-Nursing

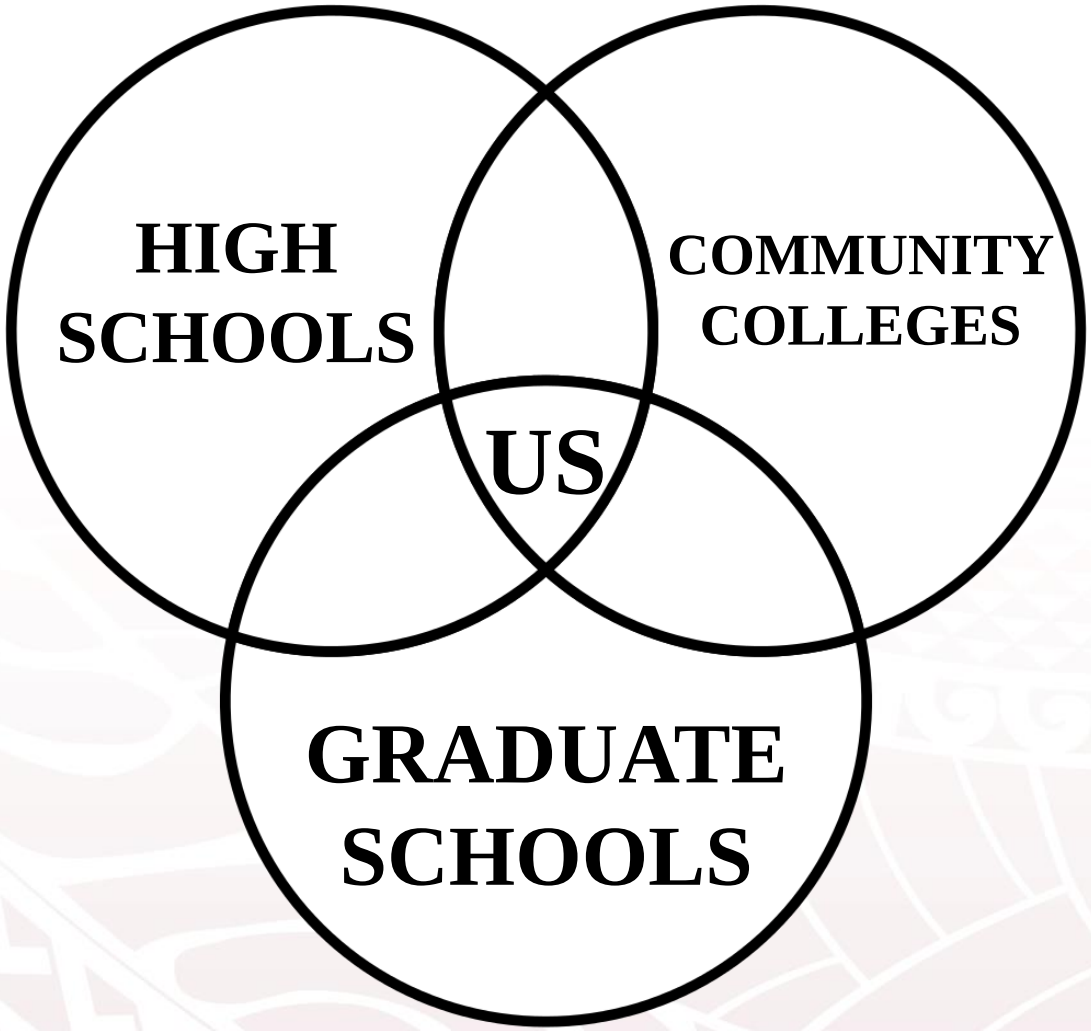
Pre-Medical

General

UNIVERSITY of HAWAI'I® WEST O'AHU


OCCUPATIONAL THERAPY
PHYSICIAN ASSISTANT
PHYSICAL THERAPY
NURSING
PHARMACY
MEDICINE

ARTICULATION AGREEMENTS



HEALTH PROFESSIONS FOUNDATIONS REQUIREMENTS:

HLTH 117 Survey of Health Professions

HLTH 123 Introduction to Clinical Skills & Patient Care

HLTH 204 Introduction to Native Hawaiian & Indigenous Health & Healing

PSY 100 Survey of Psychology

HLTH 395 Health and Wellness for Life

HLTH 488 Practicum in Health Professions

Total = 18 Credits (Six 3-Credit Courses)

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HLTH 395 Health and Wellness for Life

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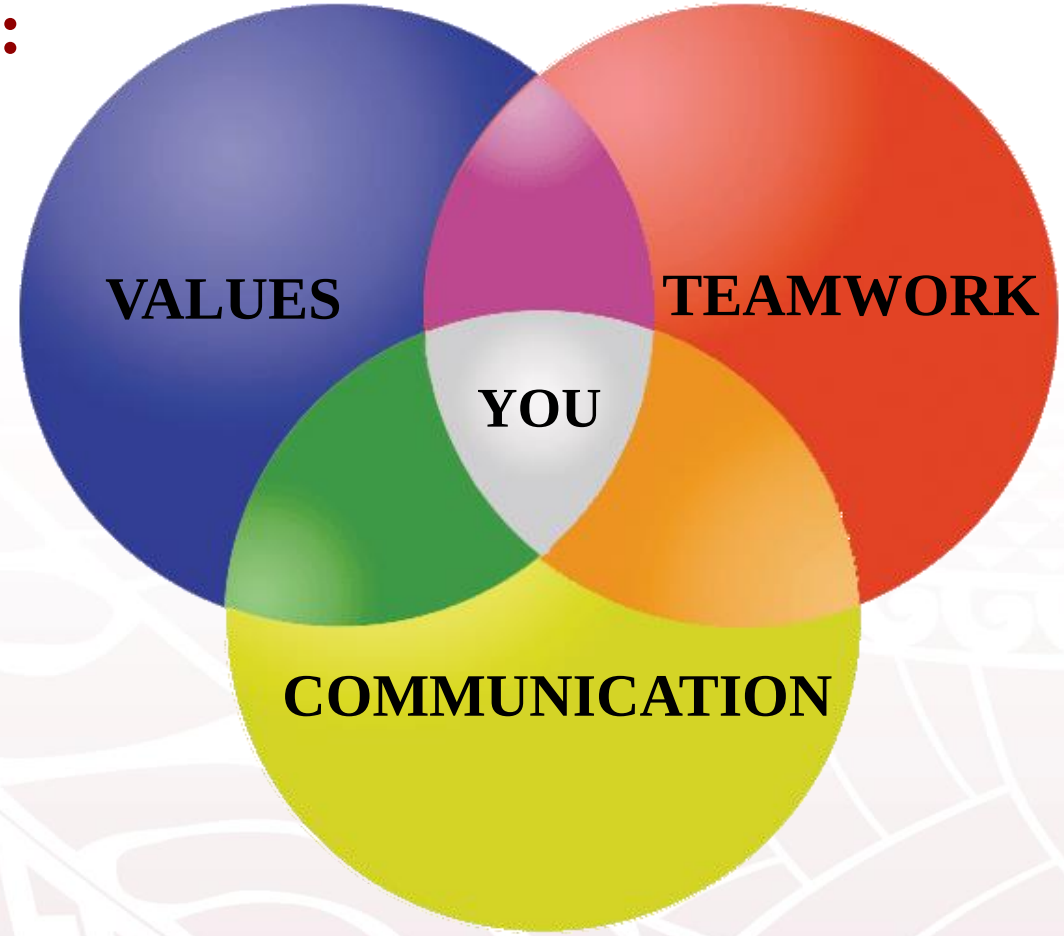
Total = 18 Credits (Six 3-Credit Courses)

TO BE AN EXCELLENT HEALTH PROFESSIONAL YOU NEED:



HLTH 117 & HLTH 123

Health Professional Foundation

Week #1: Overview & Personal Introduction

Week #2: Values

Week # 3: Communication

Week #4: Teamwork

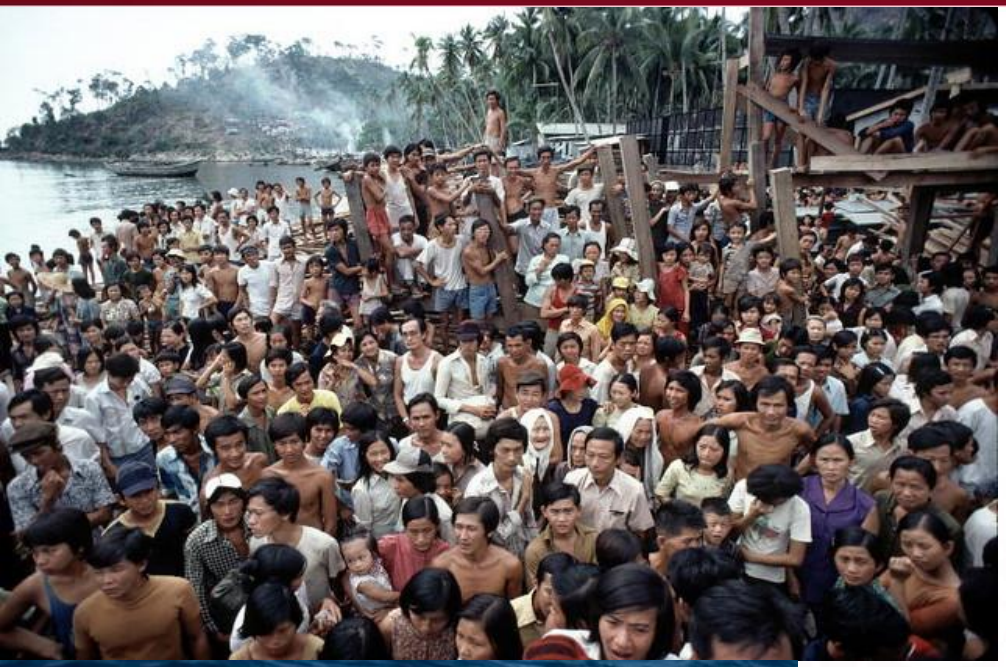
HLTH 117: SURVEY OF HEALTH PROFESSIONS

"What health career interests you?"

- Physicians
- Nurses
- Social Workers
- Pharmacists
- Registered Dieticians
- Respiratory Therapists
- Public Health Experts
- Physical Therapists
- Occupational Therapists
- Chief Medical Officers
- Traditional Healers
- Psychologists
- Researchers
- Hospital CEO's

VIRTUAL DURING COVID, ALL IN-PERSON NOW

GUEST SPEAKERS: Family Practice DO, Mental Health Trainer, Nutritionist, Cardiologist



LELAND STANFORD JUNIOR UNIVERSITY
DIE LUFT DER FREIHEIT WEHT
1891

STAMFORD
★1641★
CONNECTICUT

MONICA, PhD (Nutritionist), May Rose, PhD (Research), Michelle, PhD (Public Health)

GUEST SPEAKERS: DANIEL, PA (Yale) & SHAWNEA, PA Student

GUEST SPEAKERS: MAHE, DO & MONICA , Pre-Med

GUEST SPEAKERS: GOV. JOSH GREEN, MD

EXPOSURE CHANGES TRAJECTORY

HLTH 123: INTRODUCTION TO CLINICAL SKILLS & PATIENT CARE

"Do you like touching patients?"

- **Hands On Clinical Skills**
- **CPR Certification**
- **Mental Health First Aid**
- **Safety Awareness / Threat Assessment**
- **School & Clinical Site Visits**
- **Clinical Cases**

UNIVERSITY of HAWAI'I® WEST O'AHU

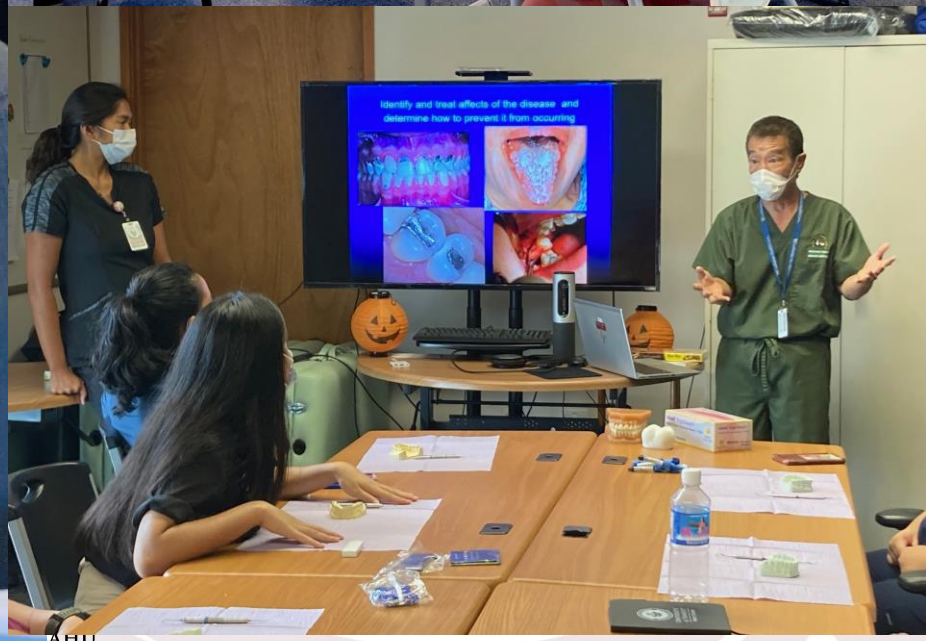
FIRE EXTINGUISHERS, PPE, ULTRASOUND, ANATOMY

MORE FIRE EXTINGUISHERS

VITAL SIGNS & SIMULATIONS

TRADITIONAL HEALING & SUTURING

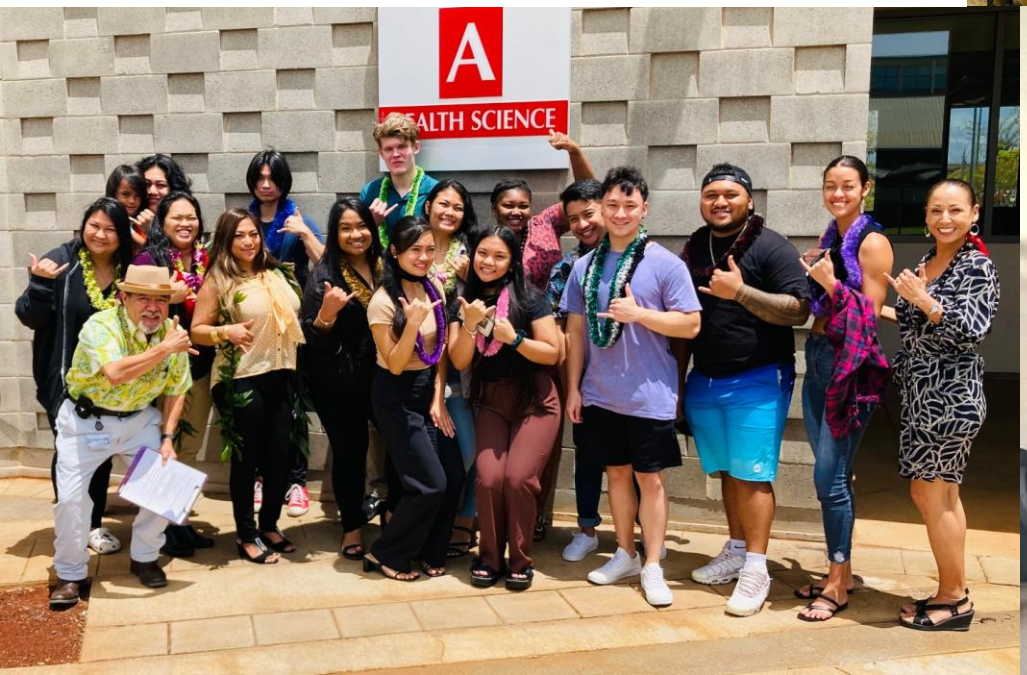
FIRST AIDE – CPR – DENTAL FILLINGS



PHYSICAL THERAPY & MENTAL HEALTH

HO'IKE

A final presentation to display what you have learned over the semester.



HO'IKE

POTLUCK

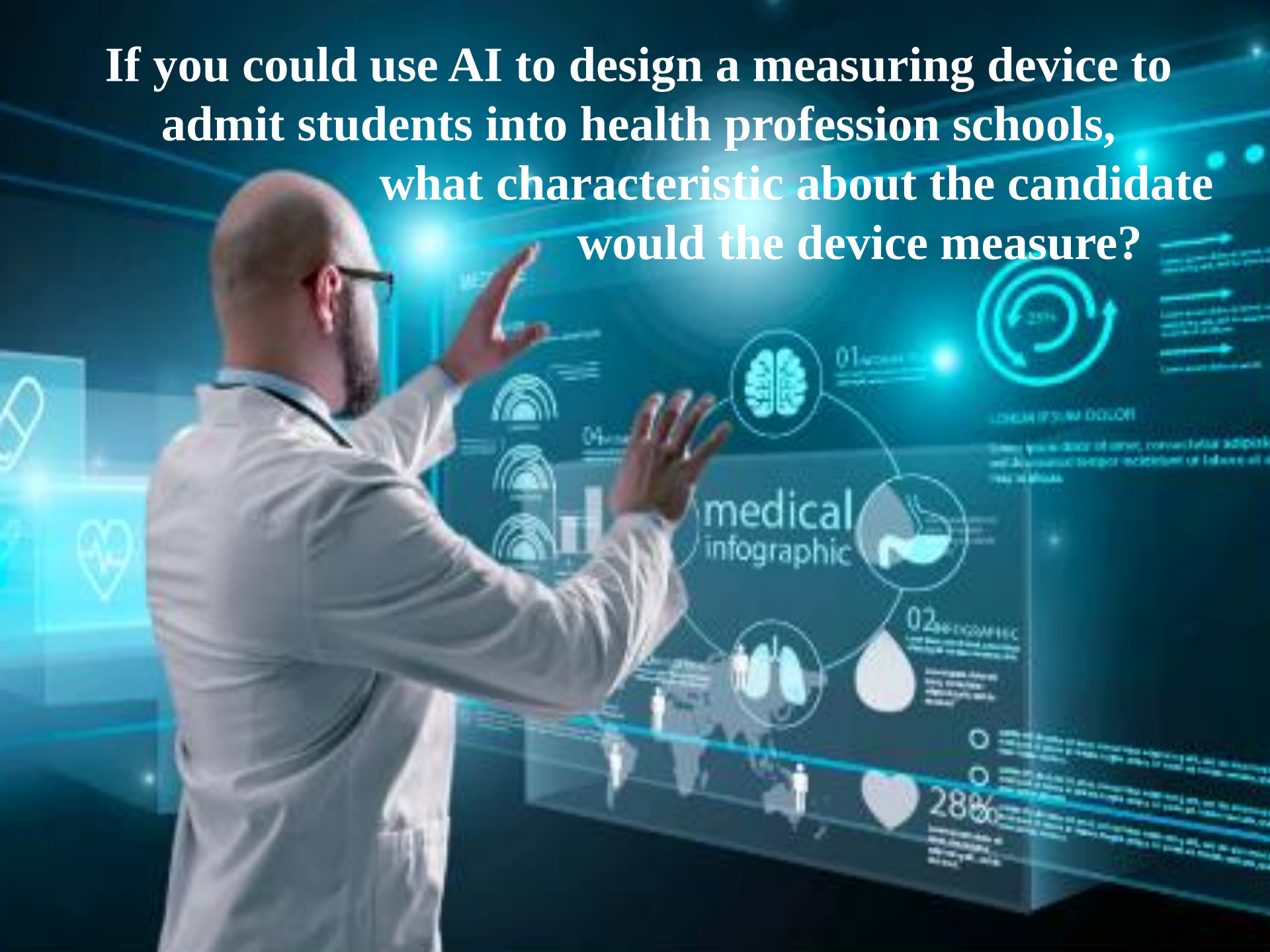
FAMILY, FRIENDS, SPEAKERS, KIDS & PETS INVITED

GRADUATION

GRADUATION

WE JUST GOTTA START EARLIER

DARE TO DREAM, PROMISE TO SERVE.


If you could use AI to design a measuring device to admit students into health profession schools, what characteristic about the candidate would the device measure?
medical
infographic

COMPASSIONOMETER

MAHALO & ALOHA

Growing socially accountable graduates: From pre-admissions through practice outcomes.

Professor Sarah Larkins

sarah.larkins@jcu.edu.au

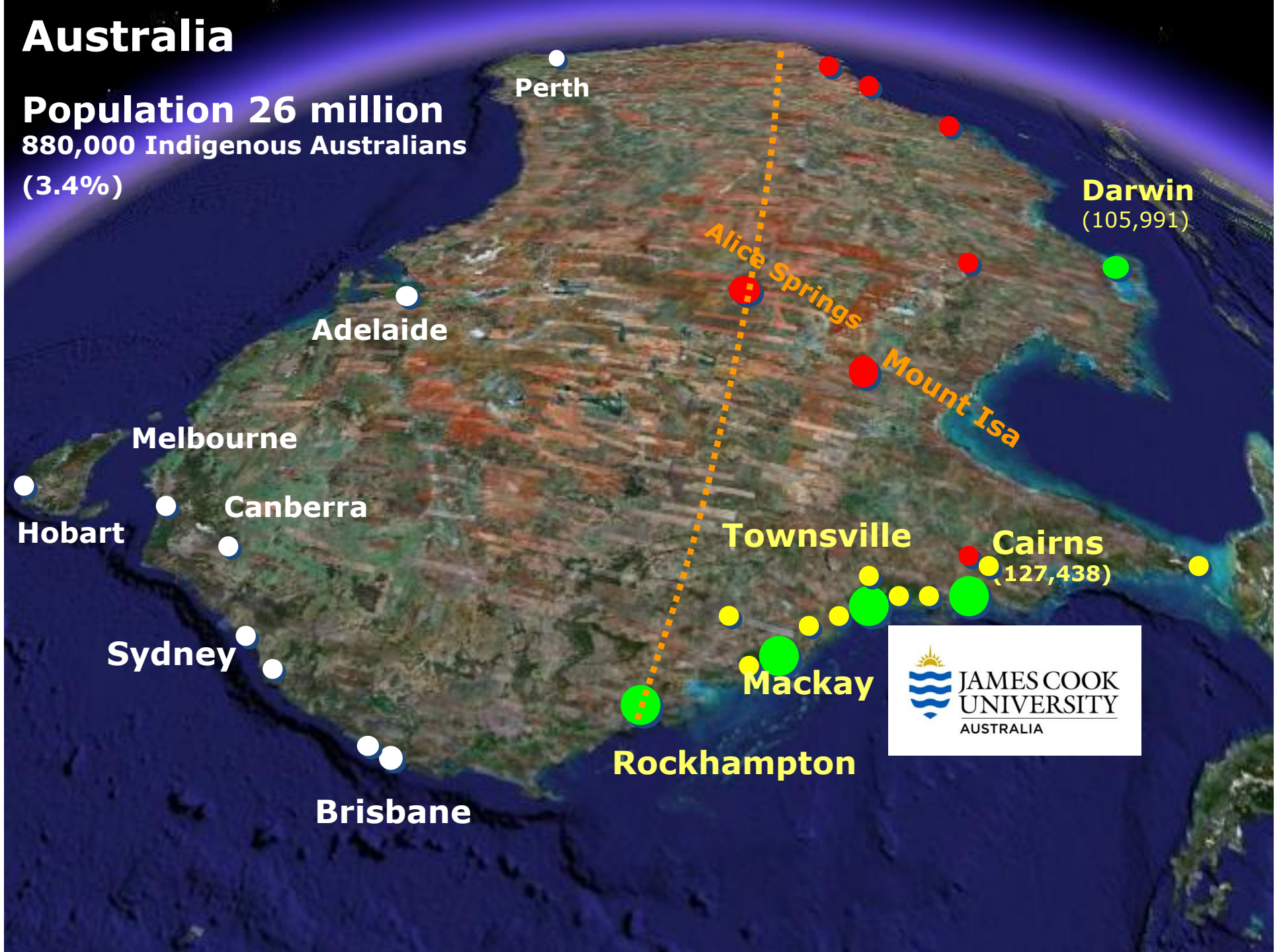
Global Forum on Innovation in Health Professional Education

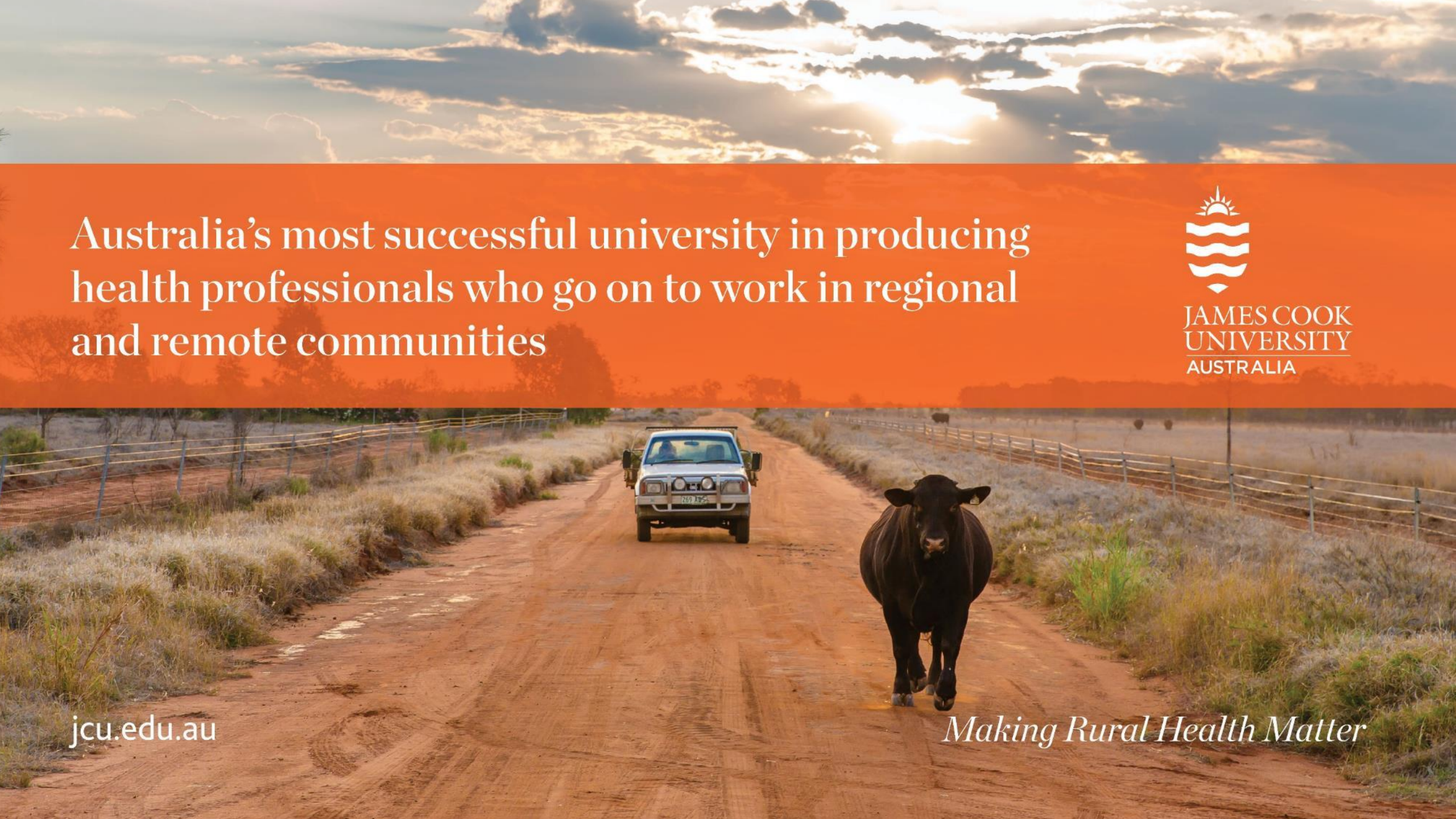
US National Academies of Science

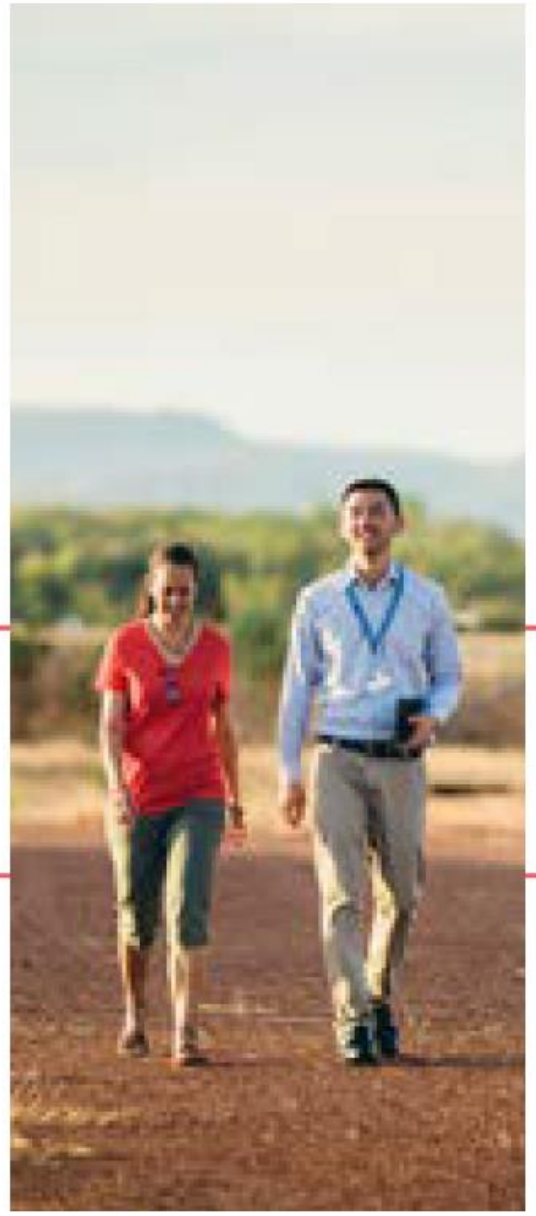
28th March 2024

Acknowledgement of Country

We acknowledge the traditional owners of the country on which we live, work and travel and recognise their continuing connection to land, waters and community.
We pay our respect to them and their cultures and to elders both past and present.


Australia
Population 26 million
880,000 Indigenous Australians
(3.4%)
Perth
Darwin
(105,991)
Alice Springs
Adelaide
Mount Isa
Melbourne
Canberra
Hobart
Townsville
Cairns
(127,438)
Sydney
Mackay
JAMES COOK UNIVERSITY
AUSTRALIA
Rockhampton
Brisbane


Australia's most successful university in producing health professionals who go on to work in regional and remote communities
JAMES COOK UNIVERSITY AUSTRALIA
jcu.edu.au
Making Rural Health Matter



NATIONALLY...

1 IN 5 Health Professionals

in outer regional, rural and remote locations

are JCU graduates

JCU graduates recruited from and trained in regional, rural and remote communities are more likely to stay in those locations

of JCU students from outer regional locations stayed outer regional

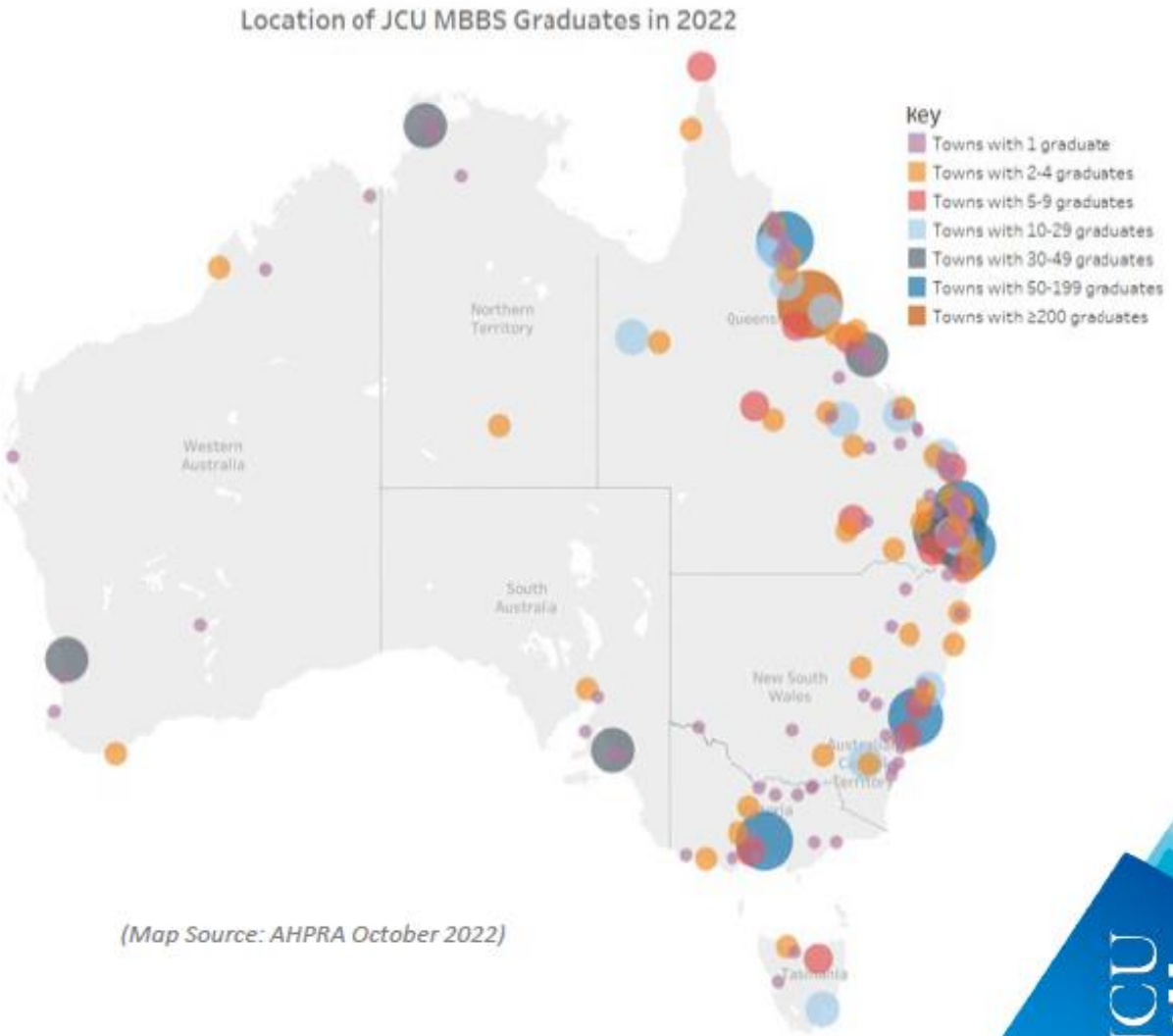
of JCU students from remote locations stayed outer regional or remote

**Source: Graduate Outcomes Survey, November 2020. Raw dataset supplied to JCU by Universities Australia accessed 27 April, 2021. Survey produced and reported by Social Research Centre. Graduate Outcomes Survey – Longitudinal, release August 2020. Raw data set supplied to JCU by Universities Australia 27 April, 2021. Survey produced and reported by Social Research Centre.*

Where do JCU MBBS graduates end up? Location of practice

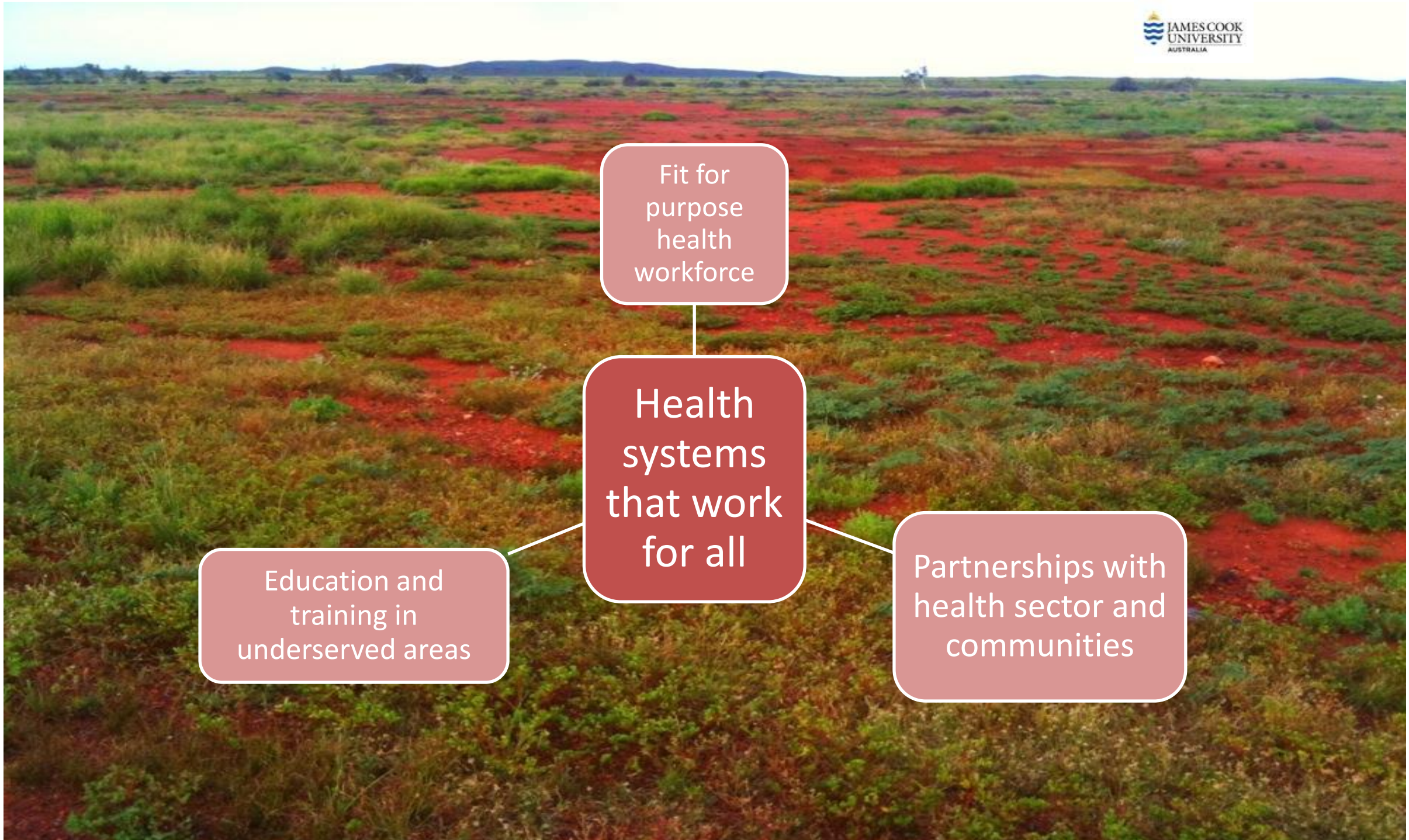
JCU is producing well-trained doctors to join the workforce and meet community needs in regional, rural and remote Australia.

- 66% of medical students stay in the region after graduating[1].
- Just under half of JCU's medical graduates pursue careers in general practice, one third of those in rural generalism.
- 44% of North and Central Queensland towns with a hospital and /or medically led community health centre have one or more JCU medical graduates[2].



(Map Source: AHPRA October 2022)

1. AHPRA Data 1 Oct 2021. | 2. Woolley T, Sen Gupta T, Paton K. Mid-career graduate practice outcomes of the James Cook University medical school: key insights from the first 20 years. Rural Remote Health. 2021


Fit for purpose health workforce
Health systems that work for all
Education and training in underserved areas
Partnerships with health sector and communities

What does this mean for the health workforce?

- Need to manage a **transition of current workforce** to **new and different ways of working**

- Consider what is needed to **select and train a future health workforce** that can deliver health outcomes in a changing health landscape into the future.

What about the future workforce?

What is the **role** of health professional schools?

- To train health professionals to a **set of professional standards**?

- To be a partner in producing a **fit-for-purpose health workforce** and **addressing priority health needs** of local populations?

(Julian Tudor Hart)

Are we teaching:

- the *right* people
- the *right* things
- at the *right* time
- in the *right* places?

….to address the inverse care law in health care

(Thanks to Tarun Sen Gupta)

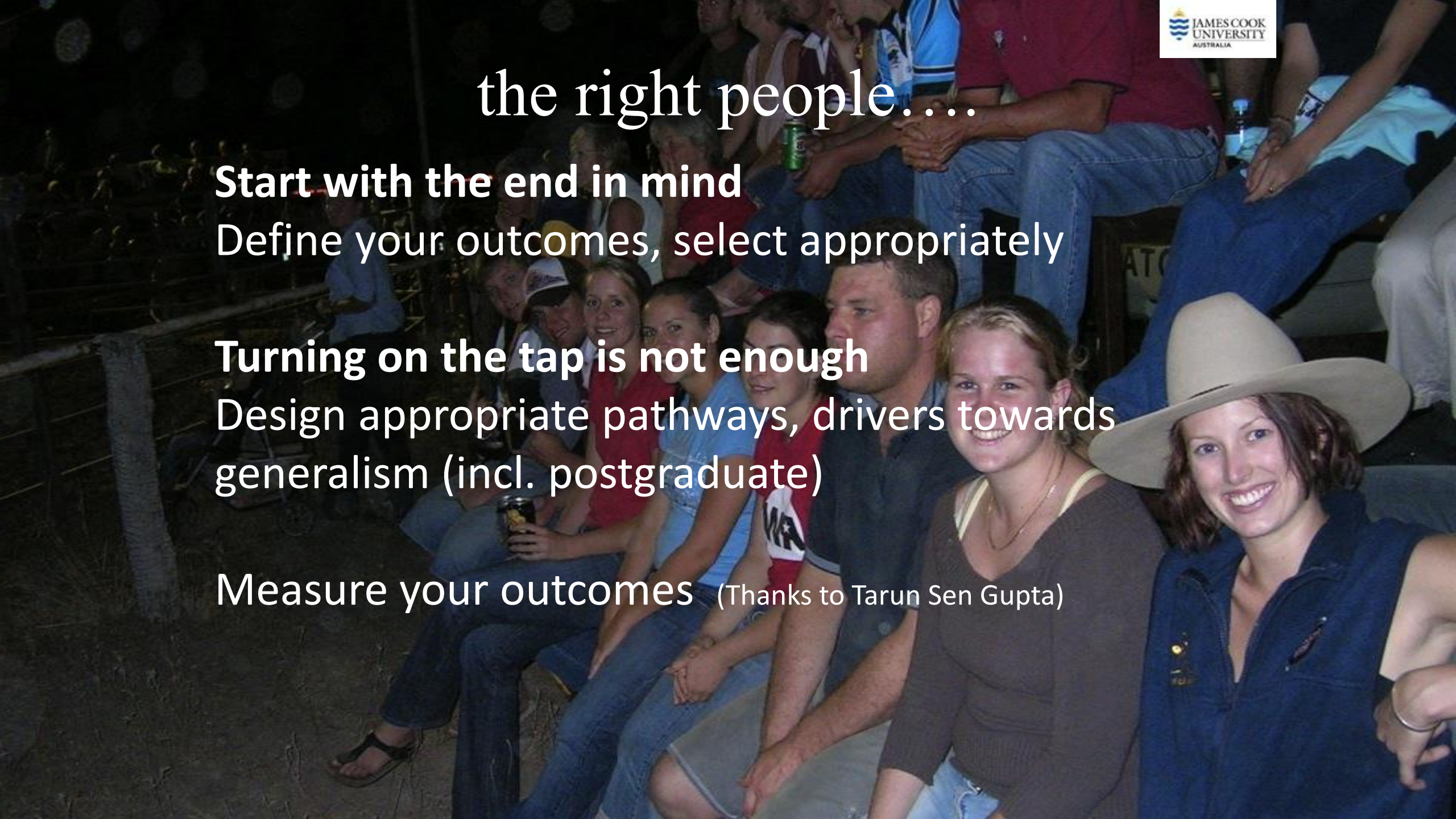
Who are the 'right' people?

It depends….

…..Representation is important !

AITHM | AUSTRALIAN INSTITUTE OF TROPICAL HEALTH & MEDICINE

JAMES COOK UNIVERSITY AUSTRALIA



the right people….

Start with the end in mind

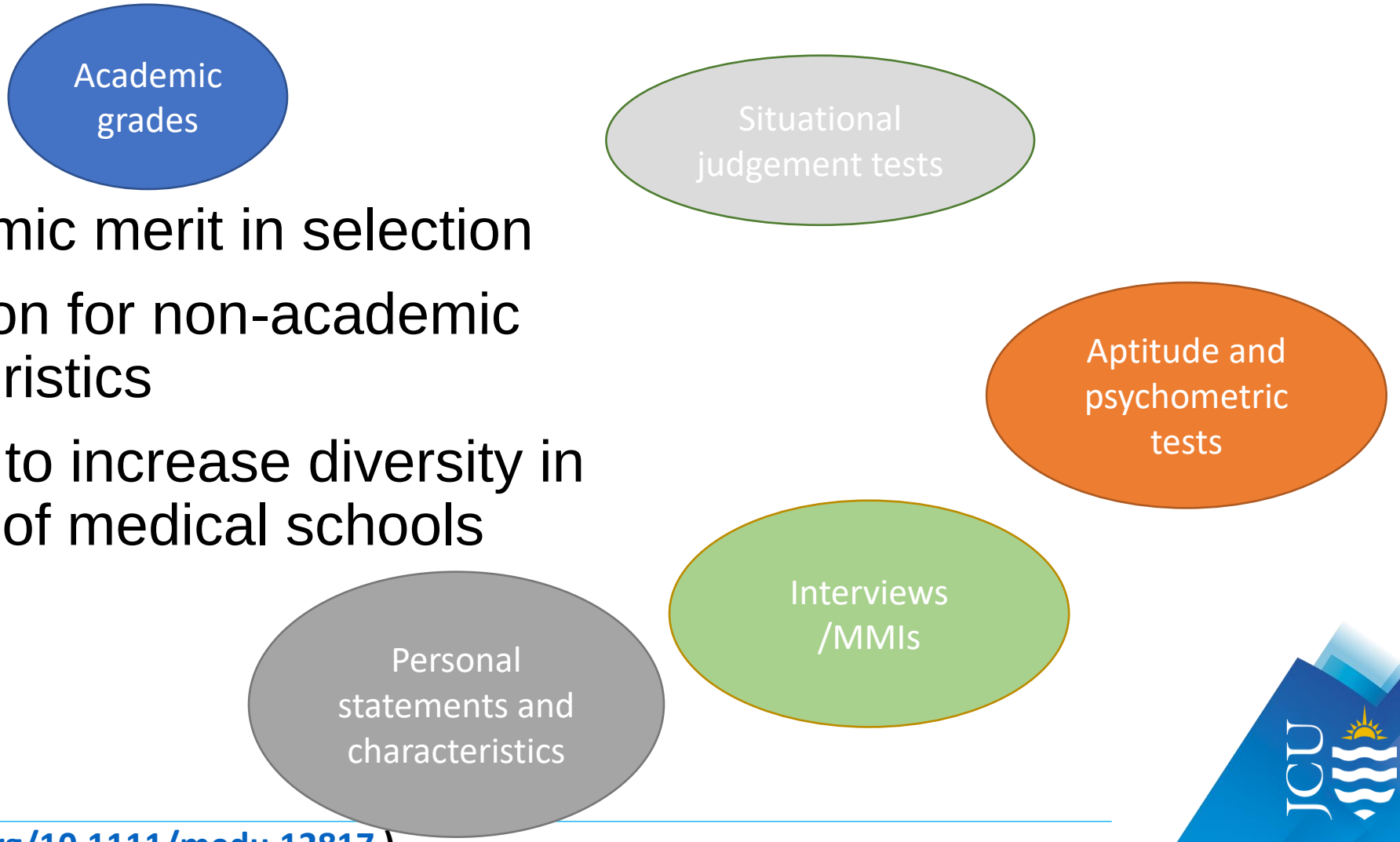
Define your outcomes, select appropriately

Turning on the tap is not enough

Design appropriate pathways, drivers towards generalism (incl. postgraduate)

Measure your outcomes (Thanks to Tarun Sen Gupta)

What do we know about selection?



- Lots about academic merit in selection
- And about selection for non-academic personal characteristics
- Little on selecting to increase diversity in intake and output of medical schools

(Patterson et al. 2015 https://doi.org/10.1111/medu.12817)

For a more equitable health system which is the right formula for health professional education?

Traditional, city-based

Socially-accountable, located in areas of need

Sons and daughters of a city elite

Diverse, including rural, Indigenous and underserved

Sub-specialist focus

Generalist focus

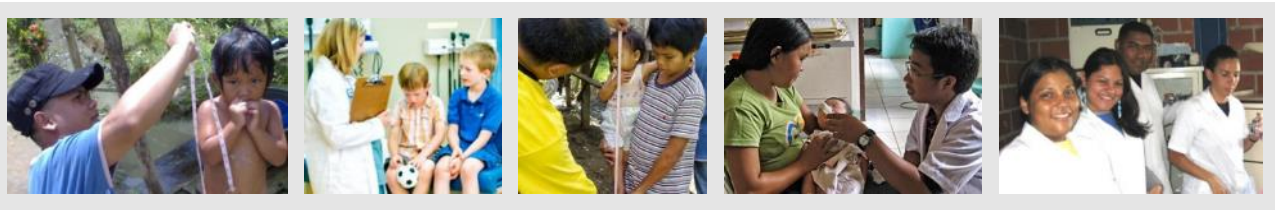
Large acute hospital-based

Community and team-orientated

Recruiting for the health care workforce of the future

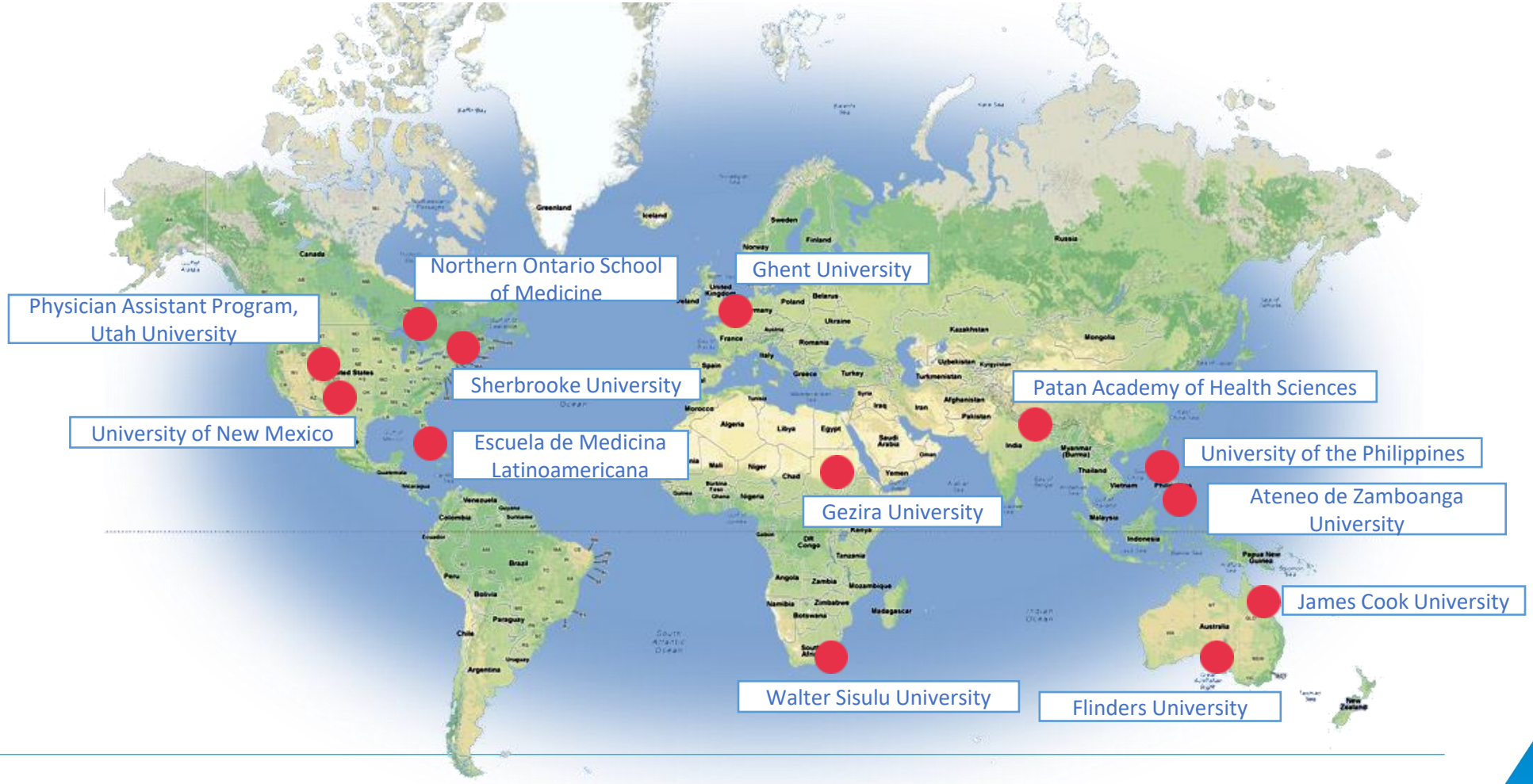
Everyone is a genius. But if you judge a fish on its ability to climb a tree, it will live its whole life believing that it is stupid.

-A Einstein



THEnet
Training for Health Equity Network

The Training for Health Equity Network



Key Components of the Evaluation Framework

THEnet

How does our School work?

- What do we believe in?
- Who do we serve? (Reference Populations)
- What are the needs of these populations?
- What are the current and future needs of the health system?
- How do we work with others?
- How do we make decisions? (Governance)

What do we do?

- How do we manage our resources? (Resource Allocation)
- What, where and how do we teach?
- Who are our learners?
- Who does the teaching?
- How do our research activities address health and health system needs?
- What contribution do we make to the delivery of health services?

What difference do we make?

- Where are our graduates and what are they doing?
- What difference have we made to our reference populations?
- What difference have we made to our health system?
- How has our research affected policies?
- How have we shared our ideas and influenced others?
- What impact have we had on other schools?

(Larkins et al, Medical Teacher 2013)

Impact of selection strategies on representation of underserved populations and intention to practise: international findings

Sarah Larkins,[1,2] Kristien Michielsen,[3] Jehu Iputo,[4] Salwa Elsanousi,[5] Marykutty Mammen,[4] Lisa Graves,[6,7] Sara Willems,[8] Fortunato L Cristobal,[9] Rex Samson,[9] Rachel Ellaway,[6] Simone Ross,[1,2] Karen J[illegible] Anselme Derese[8] & André-Jacques Neusy[3]

Larkins et al 2015.
Medical Education
Doi:10.1111/medu.12518

CONTEXT Socially accountable medical schools aim to reduce health inequalities by training workforces responsive to the priority health needs of underserved communities. One key strategy involves recruiting students from underserved and unequally represented communities on the basis that they may be more likely to return and address local health priorities. This study describes the impacts of different selection strategies of medical schools that aspire to social accountability on the presence of students from underserved communities in their medical education programmes and on student practice intentions.

METHODS A cross-sectional questionnaire was administered to students starting medical education in five institutions with a social accountability mandate in five different countries. The questionnaire assessed students' background characteristics, rurality of background, and practice intentions (location, discipline of practice and population to be served). The results were compared with the characteristics of students entering medical education in schools with standard selection procedures, and with publicly available socio-economic data.

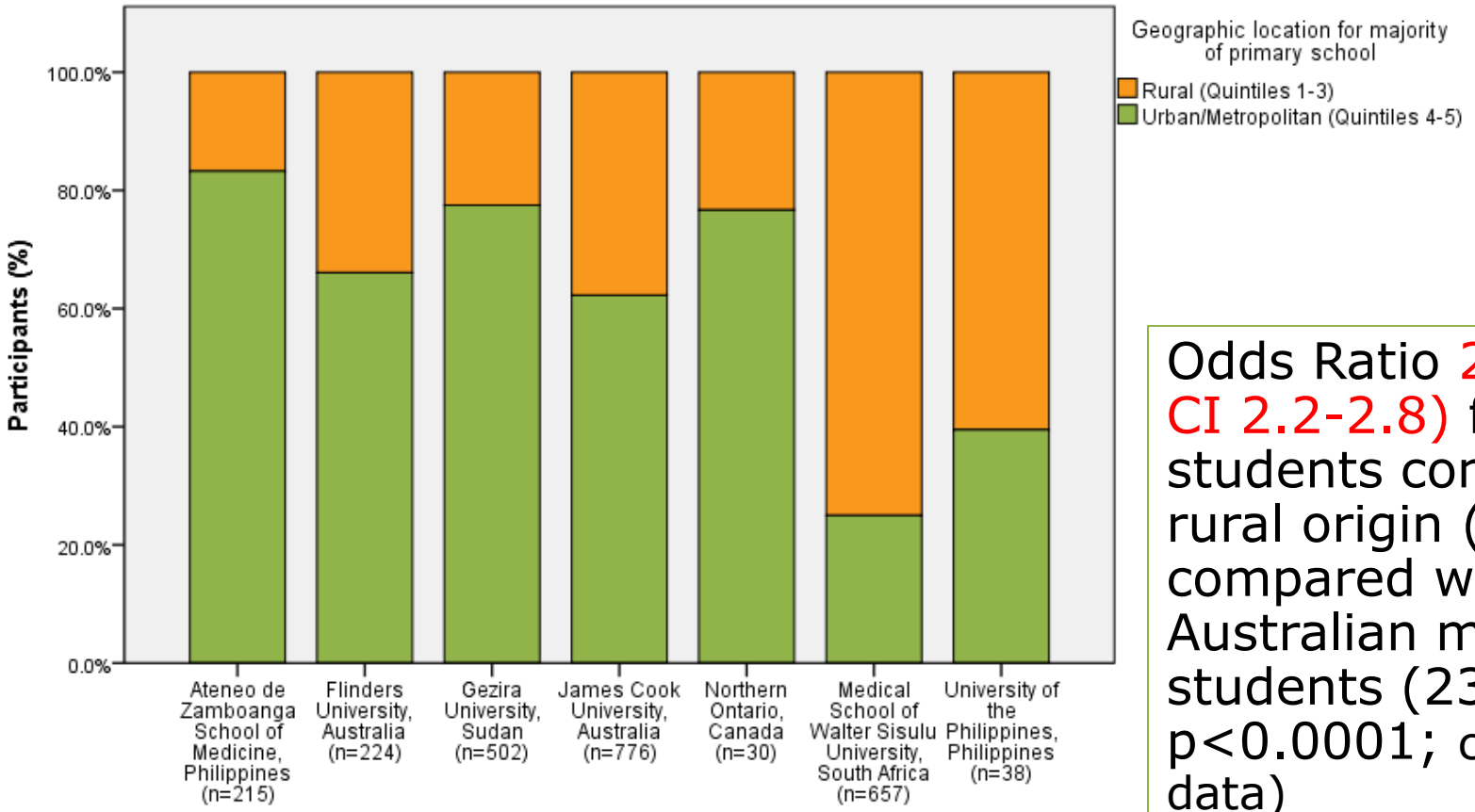
RESULTS The selection processes of all five schools included strategies that extended beyond the assessment of academic achievement. Four distinct strategies were identified: the quota system; selection based on personal attributes; community involvement, and school marketing strategies. Questionnaire data from 944 students showed that students at the five schools were more likely to be of non-urban origin, of lower socio-economic status and to come from underserved groups. A total of 407 of 810 (50.2%) students indicated an intention to practise in a non-urban area after graduation and the likelihood of this increased with increasing rurality of primary schooling ($p = 0.000$). Those of rural origin were statistically less likely to express an intention to work abroad ($p = 0.003$).

CONCLUSIONS Selection strategies to ensure that members of underserved communities can pursue medical careers can be effective in achieving a fair and equitable representation of underserved communities within the student body. Such strategies may contribute to a diverse medical student body with strong intentions to work with underserved populations.

Medical Education 2015: 49: 60–72
doi: 10.1111/medu.12518

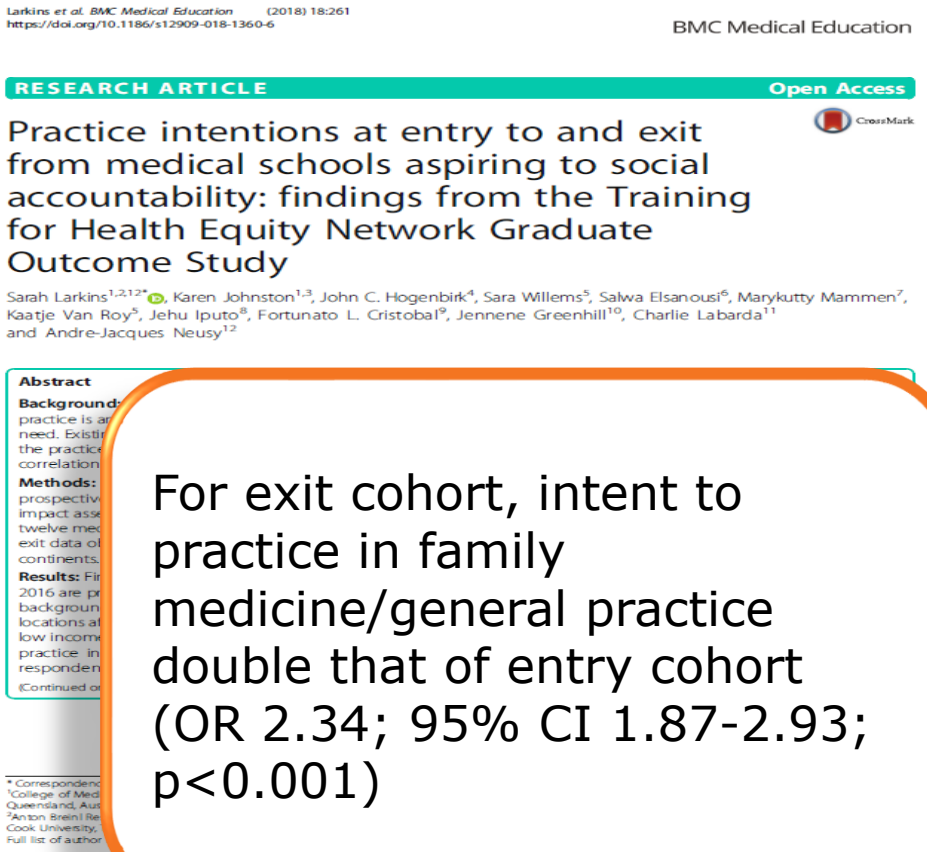
Findings





Odds Ratio 2.5 (95% CI 2.2-2.8) for THEnet students coming from rural origin (42.6%) compared with all Australian medical students (23.2%; $p<0.0001$; c.f. MSOD data)

Intended practice discipline


Larkins et al. BMC Medical Education (2018) 18:261
https://doi.org/10.1186/s12909-018-1360-6

BMC Medical Education

RESEARCH ARTICLE Open Access

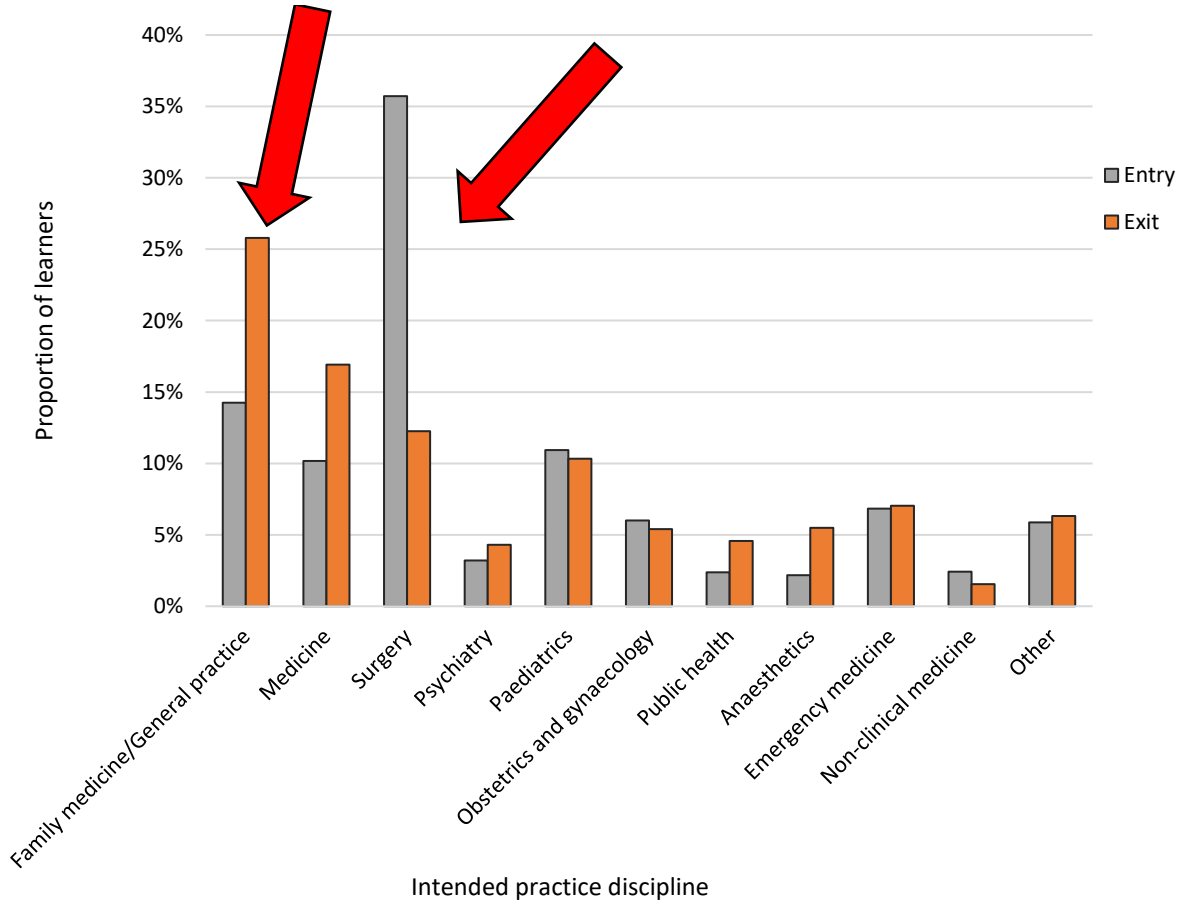
Practice intentions at entry to and exit from medical schools aspiring to social accountability: findings from the Training for Health Equity Network Graduate Outcome Study

Sarah Larkins[1,2,12*], Karen Johnston[1,3], John C. Hogenbirk[4], Sara Willems[5], Salwa Elsanousi[6], Marykutty Mammen[7], Kaatje Van Roy[5], Jehu Iputo[8], Fortunato L. Cristobal[9], Jennene Greenhill[10], Charlie Labarda[11] and Andre-Jacques Neusy[12]

Abstract

Background:
practice is ar
need. Existi
the practice
correlation
Methods:
prospectiv
impact asse
twelve med
exit data ol
continents.
Results: Fir
2016 are pr
backgroun
locations at
low income
practice in
responden
(Continued o

For exit cohort, intent to practice in family medicine/general practice double that of entry cohort (OR 2.34; 95% CI 1.87-2.93; p<0.001)

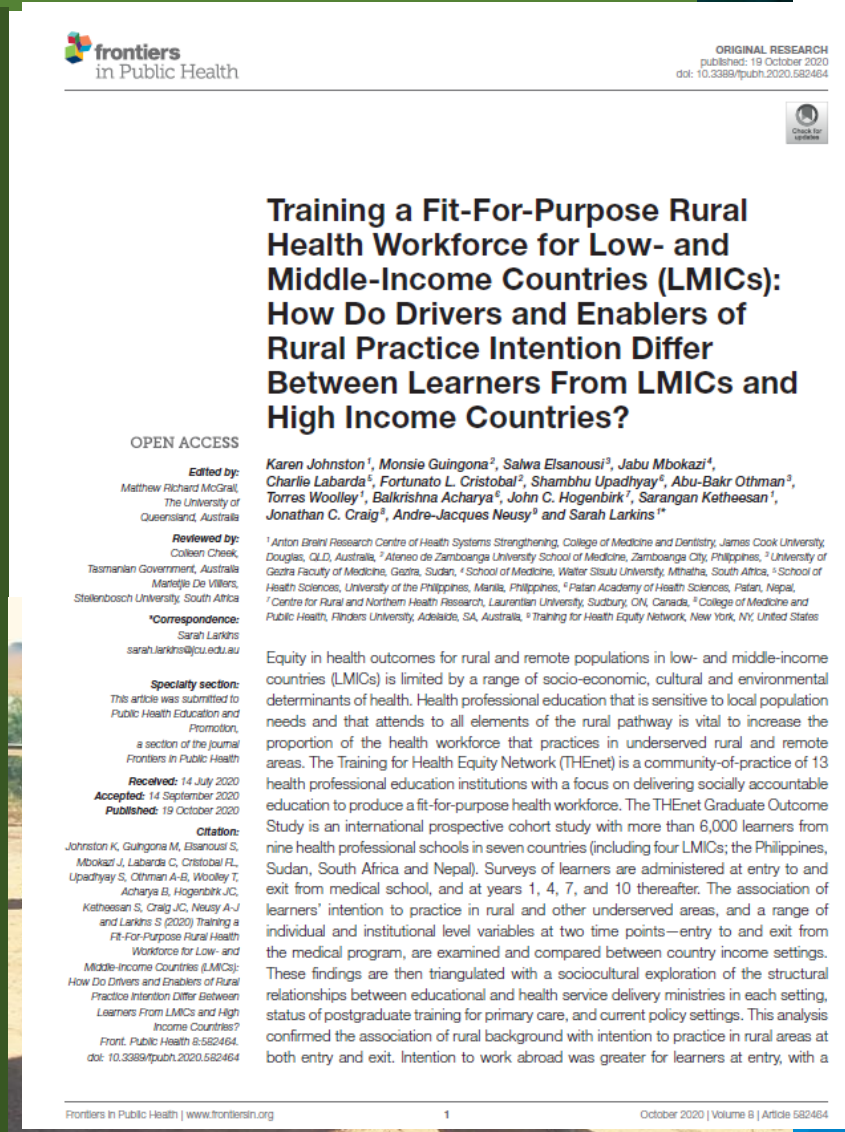


Findings – Practice intentions

Intention to work abroad

5 schools in Africa, Philippines and Nepal combined

- Intention to work abroad significantly lower for exit cohorts (29.3%) compared with entry cohorts (61.9%) (OR 0.25, p<0.001)
- Proportion of learners intending to work abroad for >10 years also significantly lower (OR 0.24, p=0.005^{FET})
- Intention to stay in country motivated by desire to respond to the need for doctors in their country (55.2%) or preference to stay close to home or family (40.0%).



frontiers in Public Health

ORIGINAL RESEARCH
published: 19 October 2020
doi: 10.3389/fpubh.2020.582464

Training a Fit-For-Purpose Rural Health Workforce for Low- and Middle-Income Countries (LMICs): How Do Drivers and Enablers of Rural Practice Intention Differ Between Learners From LMICs and High Income Countries?

OPEN ACCESS

Karen Johnston[1], Monsie Guingona[2], Salwa Elsanousi[3], Jabu Mbokazi[4], Charlie Labarda[5], Fortunato L. Cristobal[2], Shambhu Upadhyay[6], Abu-Bakr Othman[3], Torres Woolley[1], Balkrishna Acharya[6], John C. Hogenbirk[7], Sarangan Ketheesan[1], Jonathan C. Craig[8], Andre-Jacques Neusy[9] and Sarah Larkins[1]*

[1] Anton Breinl Research Centre of Health Systems Strengthening, College of Medicine and Dentistry, James Cook University, Douglas, QLD, Australia, [2] Ateneo de Zamboanga University School of Medicine, Zamboanga City, Philippines, [3] University of Gezira Faculty of Medicine, Gezira, Sudan, [4] School of Medicine, Walter Sisulu University, Mthatha, South Africa, [5] School of Health Sciences, University of the Philippines, Manila, Philippines, [6] Patan Academy of Health Sciences, Patan, Nepal, [7] Centre for Rural and Northern Health Research, Laurentian University, Sudbury, ON, Canada, [8] College of Medicine and Public Health, Flinders University, Adelaide, SA, Australia, [9] Training for Health Equity Network, New York, NY, United States

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Specialty section:
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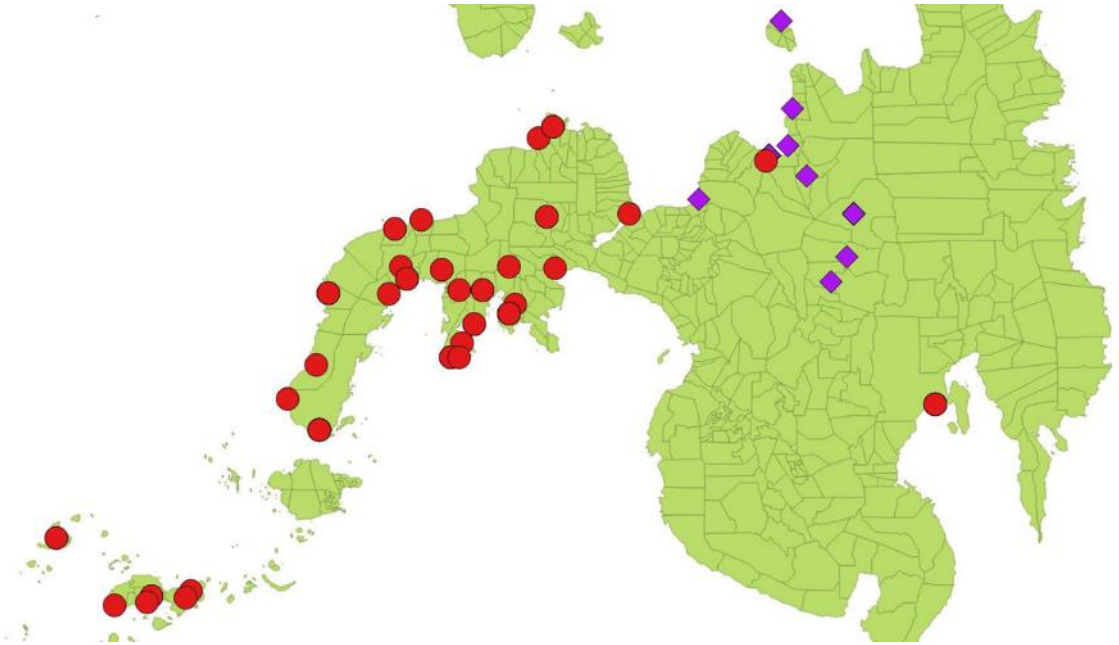
Published: 19 October 2020

Citation:
Johnston K, Guingona M, Elsanousi S, Mbokazi J, Labarda C, Cristobal FL, Upadhyay S, Othman A-B, Woolley T, Acharya B, Hogenbirk JC, Ketheesan S, Craig JC, Neusy A-J and Larkins S (2020) Training a Fit-For-Purpose Rural Health Workforce for Low- and Middle-Income Countries (LMICs): How Do Drivers and Enablers of Rural Practice Intention Differ Between Learners From LMICs and High Income Countries? Front. Public Health 8:582464. doi: 10.3389/fpubh.2020.582464

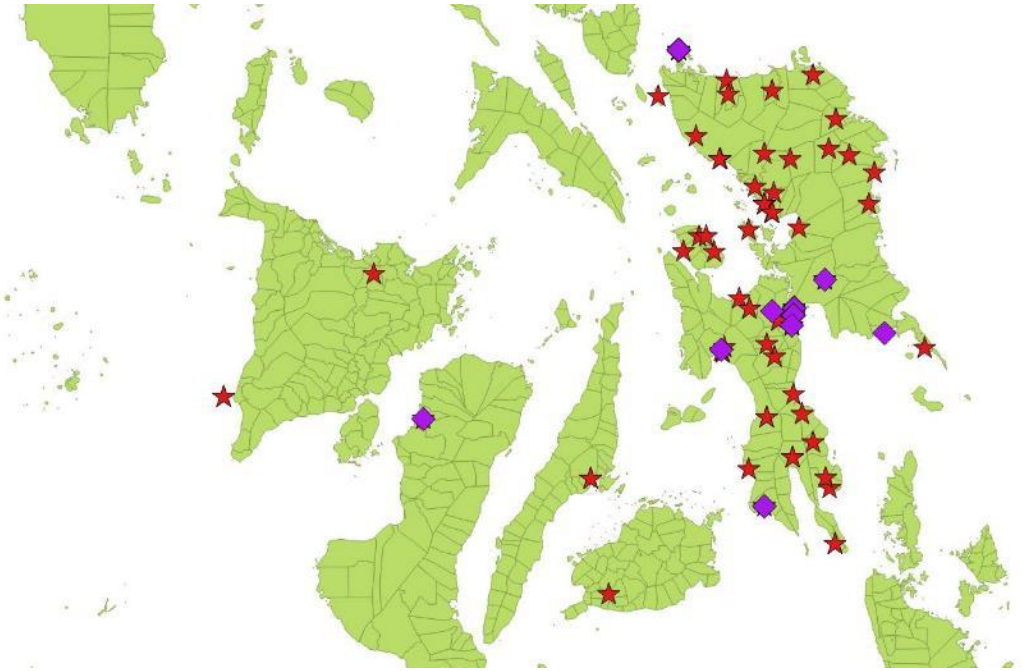
Equity in health outcomes for rural and remote populations in low- and middle-income countries (LMICs) is limited by a range of socio-economic, cultural and environmental determinants of health. Health professional education that is sensitive to local population needs and that attends to all elements of the rural pathway is vital to increase the proportion of the health workforce that practices in underserved rural and remote areas. The Training for Health Equity Network (THEnet) is a community-of-practice of 13 health professional education institutions with a focus on delivering socially accountable education to produce a fit-for-purpose health workforce. The THEnet Graduate Outcome Study is an international prospective cohort study with more than 6,000 learners from nine health professional schools in seven countries (including four LMICs; the Philippines, Sudan, South Africa and Nepal). Surveys of learners are administered at entry to and exit from medical school, and at years 1, 4, 7, and 10 thereafter. The association of learners' intention to practice in rural and other underserved areas, and a range of individual and institutional level variables at two time points—entry to and exit from the medical program, are examined and compared between country income settings. These findings are then triangulated with a sociocultural exploration of the structural relationships between educational and health service delivery ministries in each setting, status of postgraduate training for primary care, and current policy settings. This analysis confirmed the association of rural background with intention to practice in rural areas at both entry and exit. Intention to work abroad was greater for learners at entry, with a

Graduate outcomes - Philippines

Practice locations for graduates from **ADZU-SOM** (red dots) and a conventional medical school (purple dots); both located on the island of Mindanao



Practice locations for graduates from **SHS-Palo** (red stars) and from a conventional medical school (purple diamonds); both located in the Eastern Visayas



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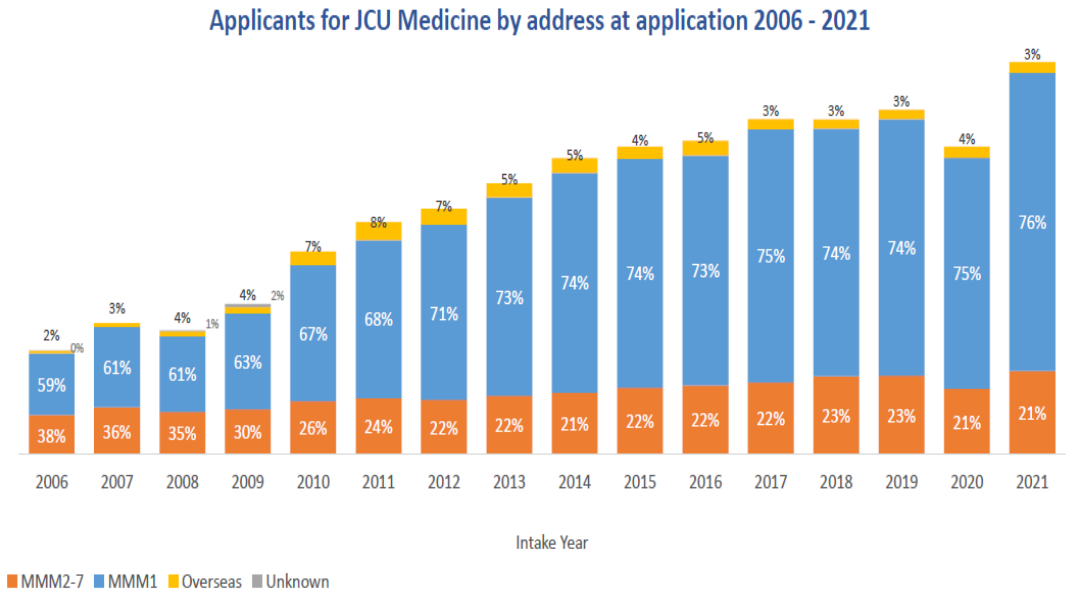
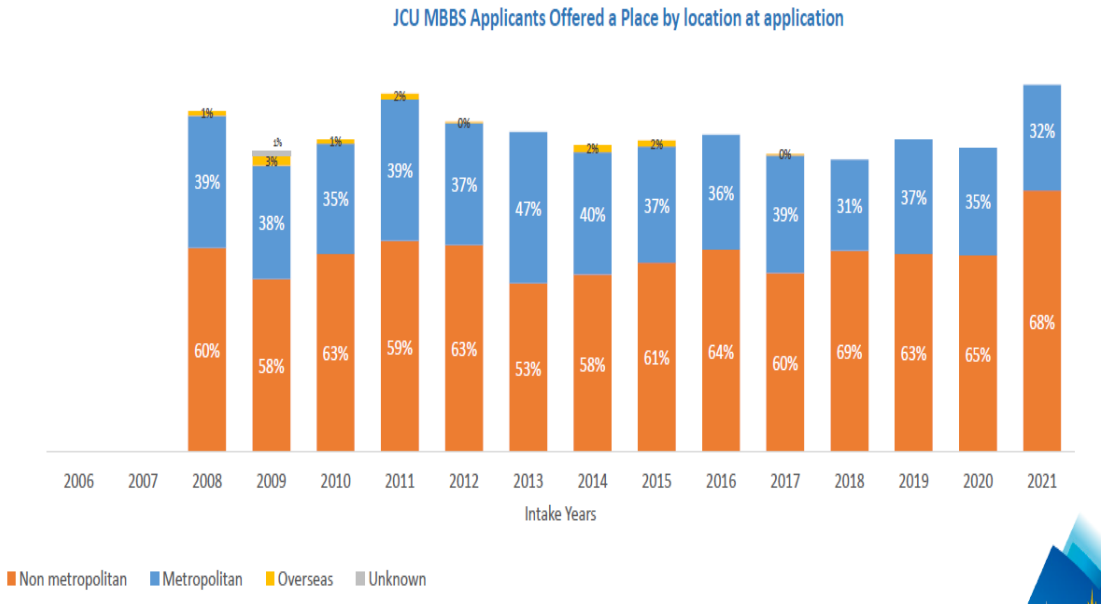
And back to JCU…Metropolitan demand is growing but maintaining 2/3 RRR offers…

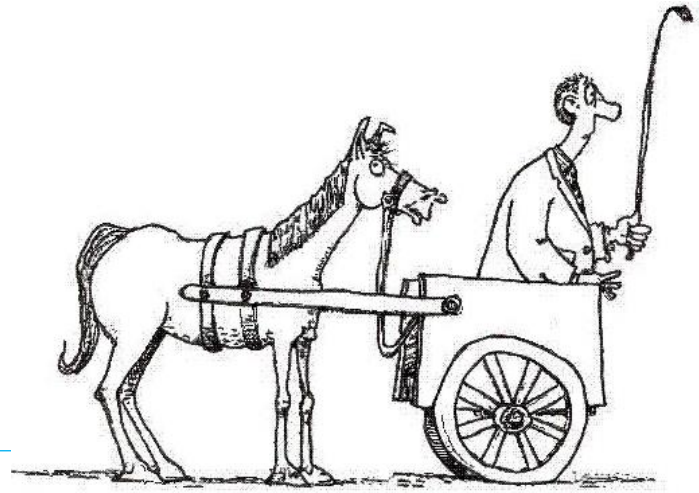




Better approaches to HRH planning for future workforce

- Priority health care needs (basket of services)
  - …. and considering resource constraints, subgroup access, evidence for quality and effectiveness
- Options for configuration of health services *THEN*: Health workforce implications…
- and what this means for training
- and selection….

(WHO 2013 Guidelines for Transforming and Scaling-up Health Professional Education)
(and thanks to Richard Murray)



So to conclude…..”start with the end in mind”

- To respond to health care challenges we need supportive policy, creative service delivery models and a flexible and responsive workforce
- Call to heed evidence about the importance of selection and the “rural pipeline” for training a fit-for-purpose health workforce
- Selection processes must address diversity and equity as well as academic success and competence – they are not mutually exclusive
- As educators we need to hold ourselves responsible for the health system and workforce outcomes from our graduates

Table question:

What can you do in your institution to adjust selection and admissions processes to ensure:

- recruitment and training of a diverse and representative cohort of students; and
- increased likelihood of producing a fit-for-purpose health workforce to meet the needs of the population you serve?

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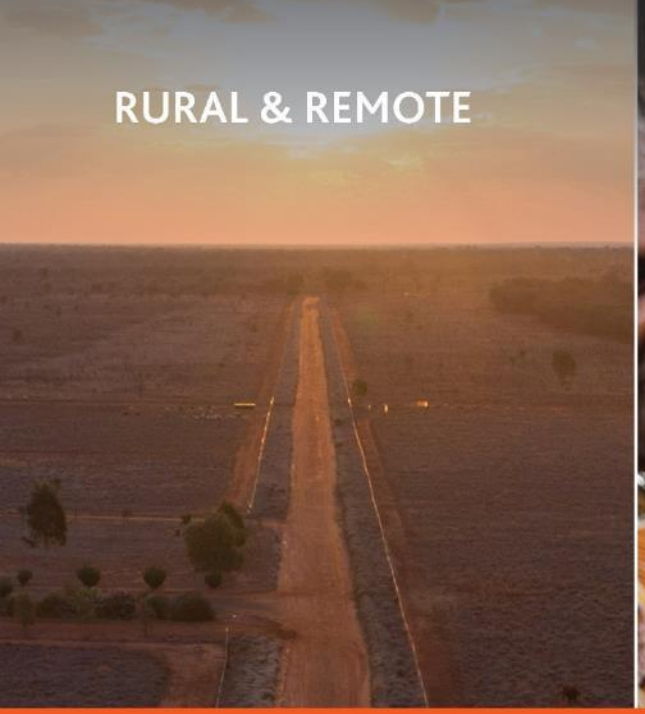

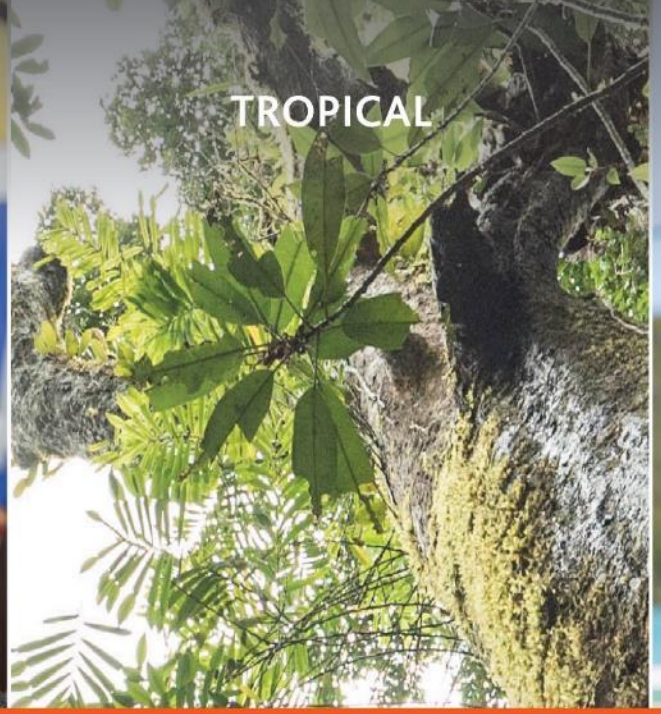

JCU: Experience has no substitute

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