

Relevance Today, 2050 & Beyond:
Suggestions for Preparing Trainees to Meet
the Clinical Demands in a Changing US
Culture

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HARVARD
MEDICAL SCHOOL



**Boston
Children's
Hospital**

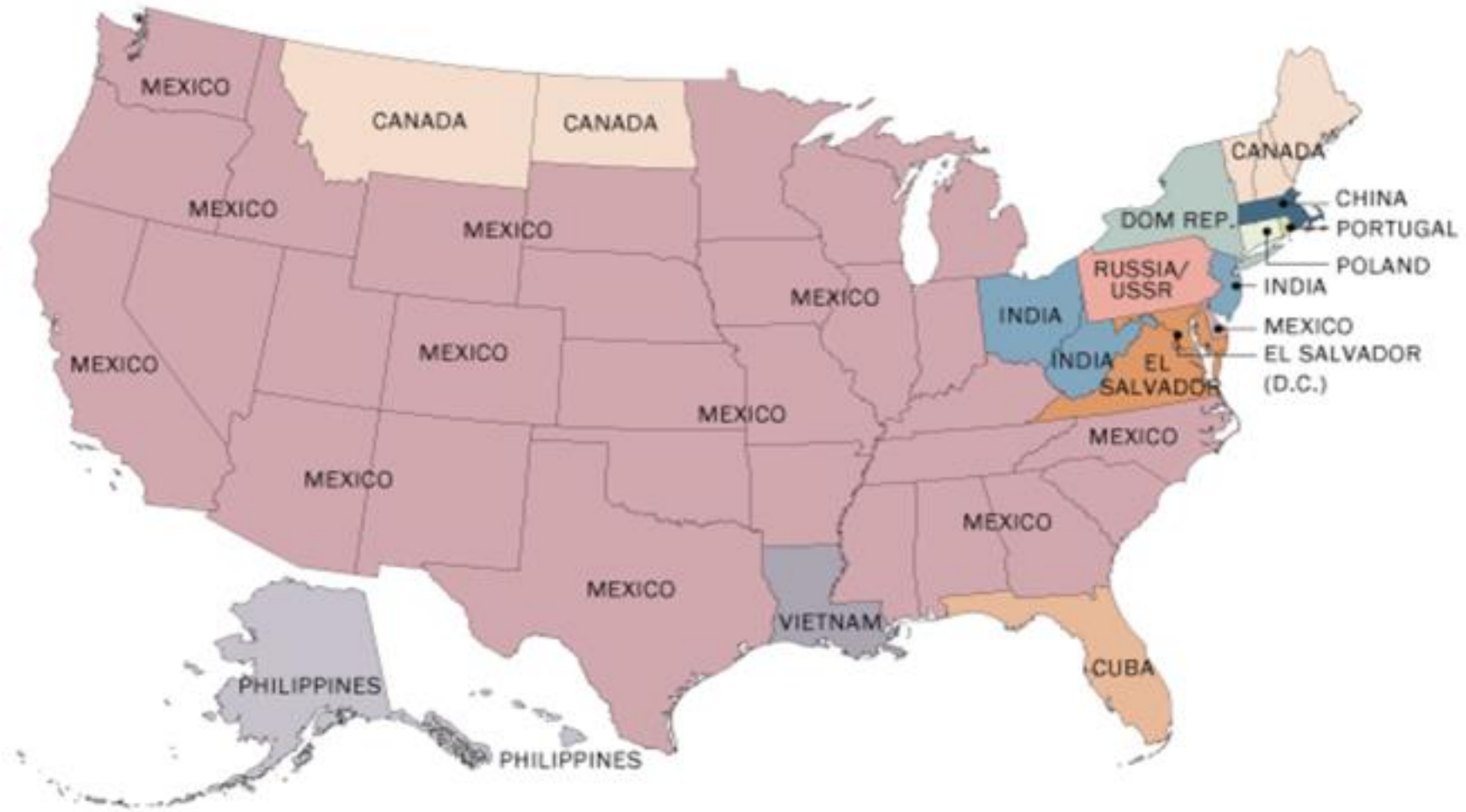
Until every child is well™

¡Gracias!

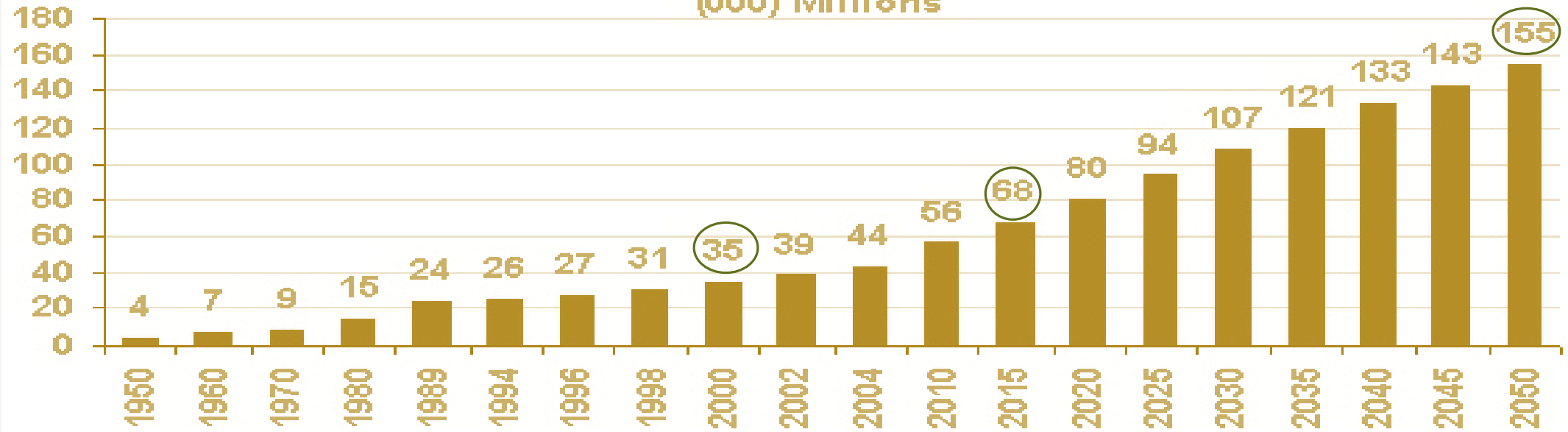


Demographics

Houston Conference ~2000

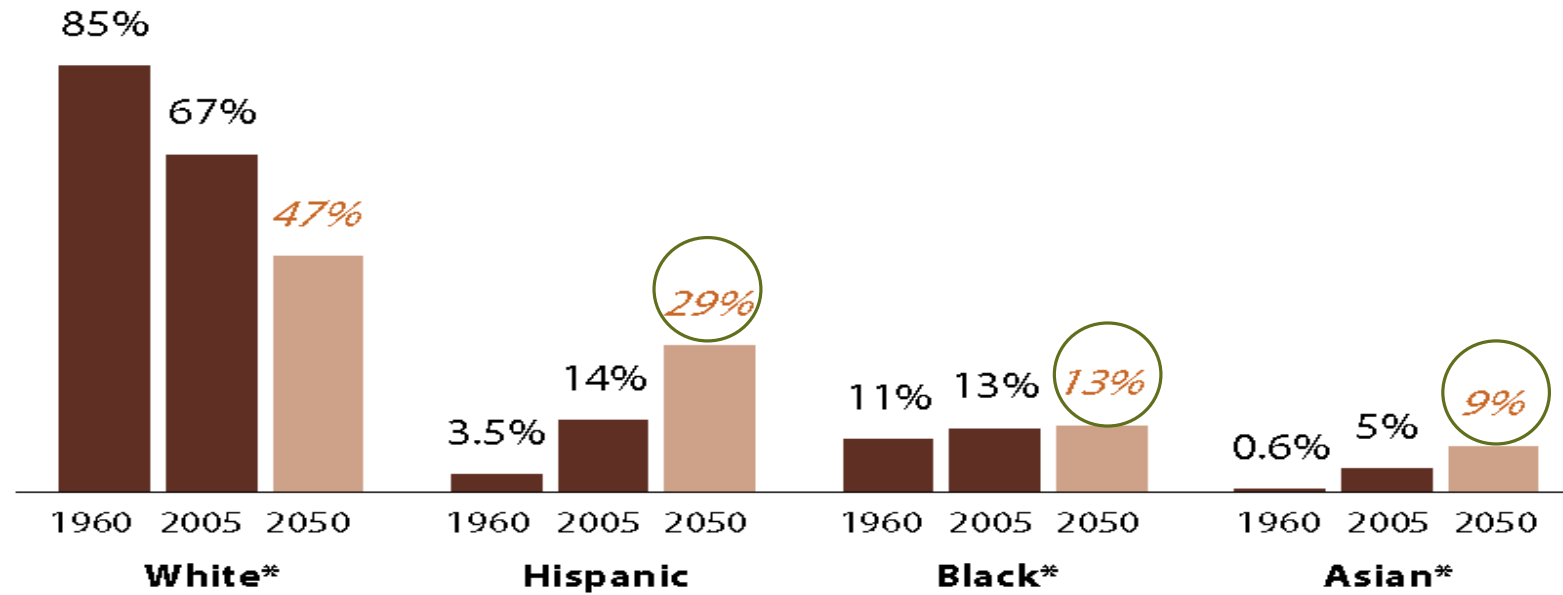


US Hispanic Population and Projections 1950-2050 (000) Millions



Source: Synovate, U.S. Census Bureau

Figure 6
Population by Race and Ethnicity, Actual and Projected:
1960, 2005 and 2050
(% of total)



Note: All races modified and not Hispanic (*); American Indian/Alaska Native not shown.
See "Methodology." Projections for 2050 indicated by light brown bars.

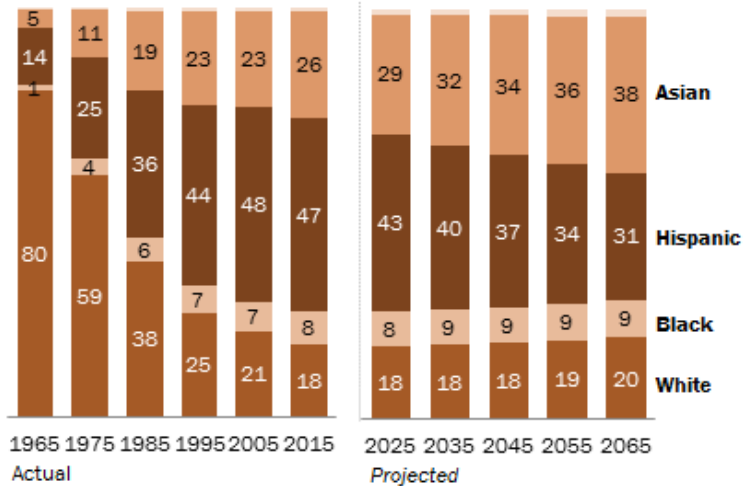
Source: Pew Research Center, 2008

The American Dream: Embracing Diversity

FIGURE 5

Asians Projected to Become the Largest Immigrant Group, Surpassing Hispanics

% of immigrant population



Note: Whites, blacks and Asians include only single-race non-Hispanics. Asians include Pacific Islanders. Hispanics are of any race. Other races shown but not labeled.

Source: Pew Research Center estimates for 1965-2015 based on adjusted census data; Pew Research Center projections for 2025-2065

PEW RESEARCH CENTER

FIGURE 1

U.S. Foreign-Born Share Projected to Hit Record Milestone by 2065



Note: Data labels are for 1850, 1890, 1970, 2015 and 2065.

Source: Gibson and Jung (2006) for 1850 to 1890. Edmonston and Passel (1994) estimates for 1900-1955; Pew Research Center estimates for 1960-2015 based on adjusted census data; Pew Research Center projections for 2015-2065

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Heterogeneity of Subgroups

Hispanics/Latinos

education
ethnicity
language race nationality
country
culture
acculturation
immigration insurance

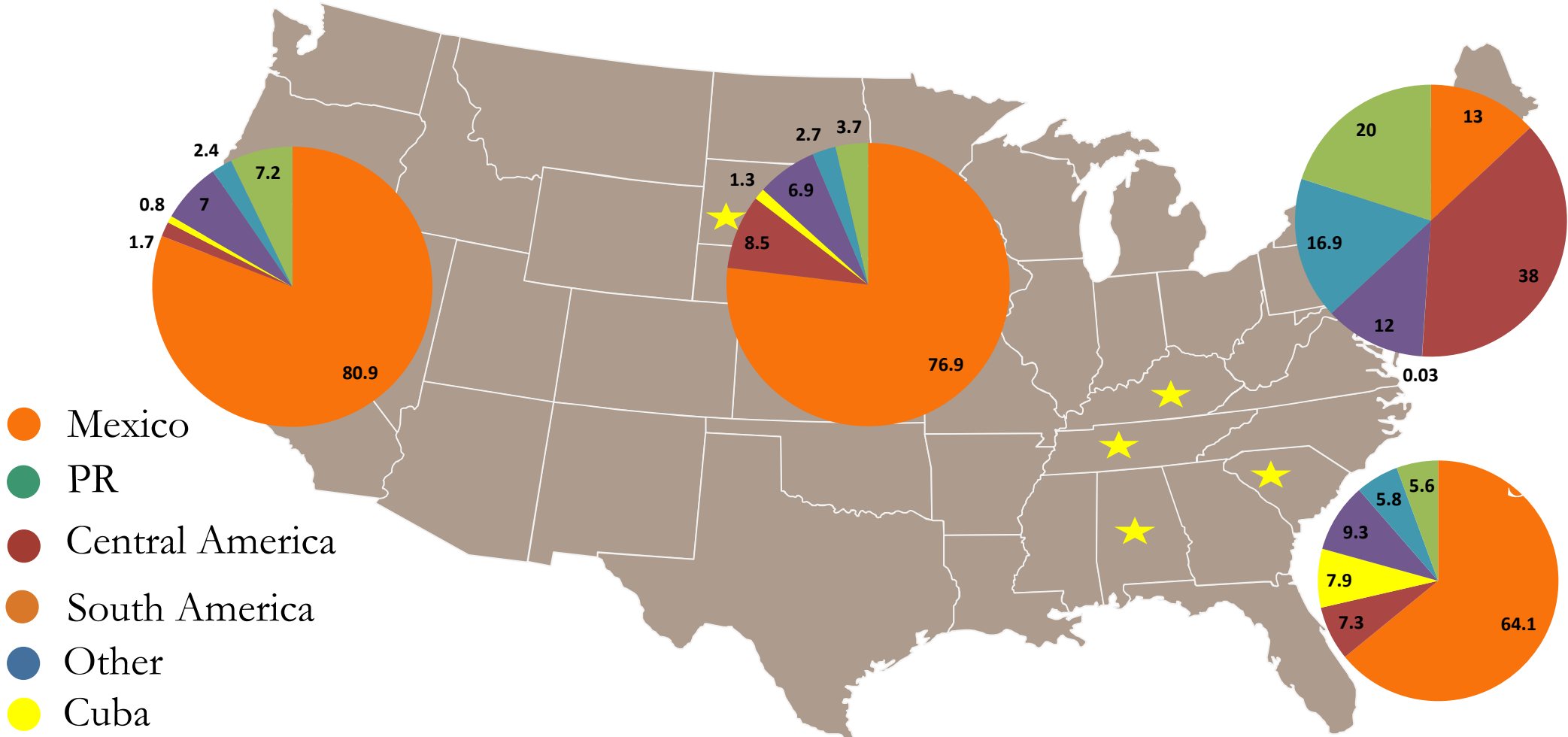
literacy
politics

economics

religion



Hispanic Subgroups by Region



Adapted from Pew Research Center, 2010 (Salinas, in preparation for presentation)

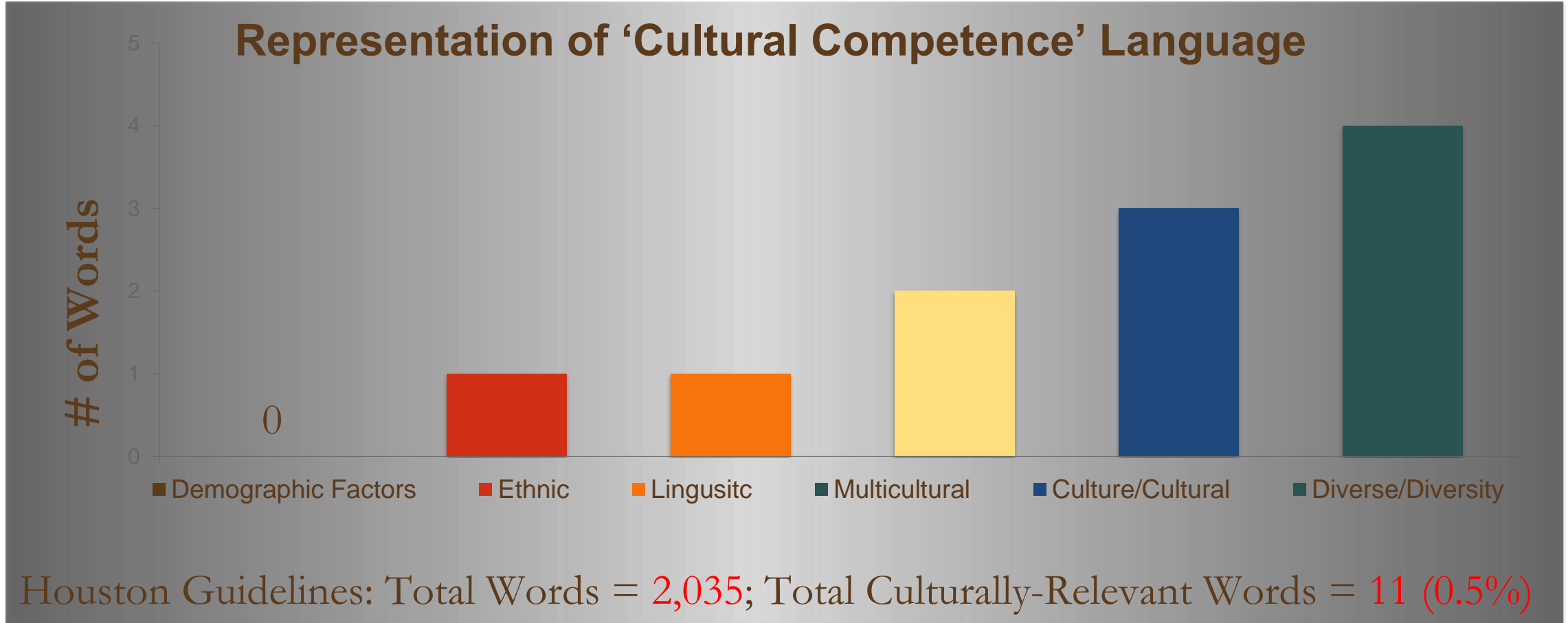
Language Use Among Hispanics

- ~50% of the world are bilinguals
- ~20% of US citizens are bilinguals/Spanish is 2nd most common language (38M)
- 82% of Latino adults speak Spanish*
 - 76% Spanish “dominant” or bilingual
 - 24% English “dominant”
 - Importance of indigenous languages
- **Dialect differences**
 - (“tutear”; grammar use; vocabulary)
- Cultural influences on L1 maintenance

Implications For Neuropsychology & Community

Relevance Today!!!

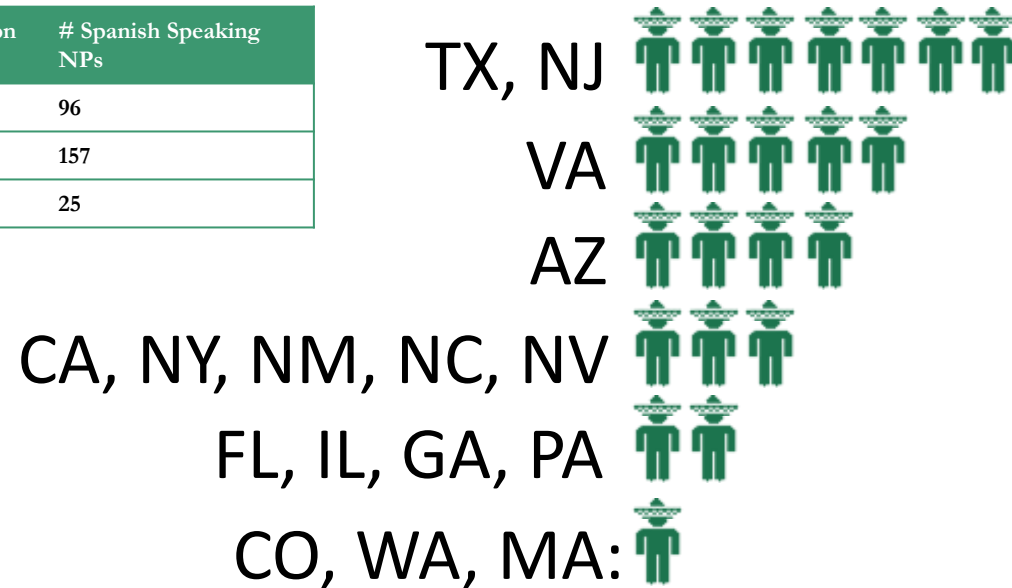
Current Guideline Recommendations




Slide Courtesy of Monica Rivera Mindt

Healthcare Disparities for Hispanics

Organization	# Spanish Speaking NPs
NAN	96
HNS	157
AACN	25



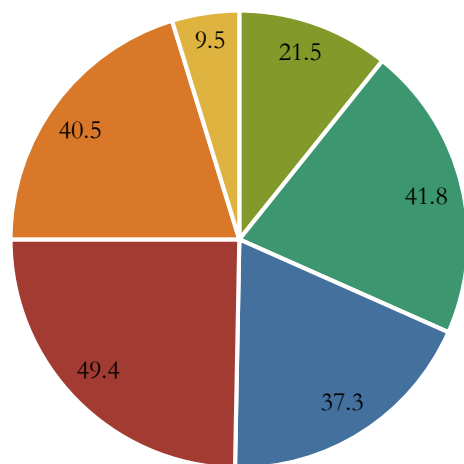
 = 1:81,000

*ratio expected based on Division 40 membership and US population

*Spanish speaking population has 2-7x LESS ACCESS to Neuropsychology in most states

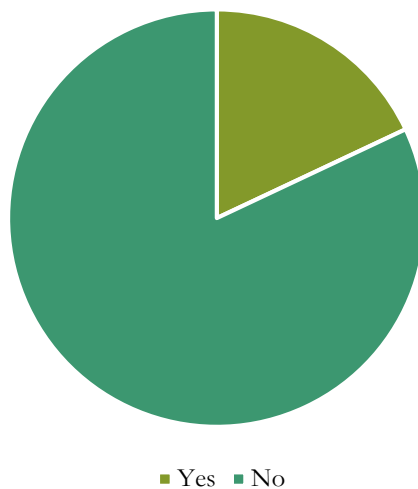
Training Challenges: Hispanics

Type of Training Received to work with Hispanics



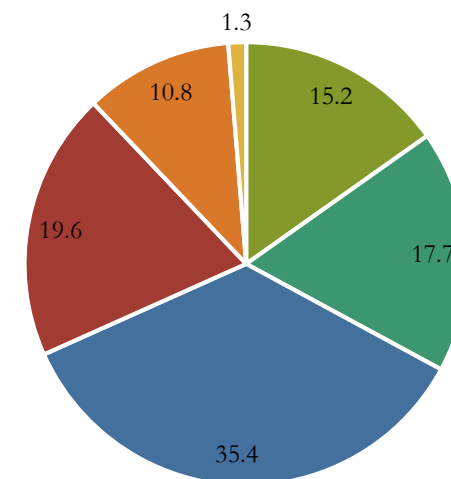
■ None ■ Graduate School ■ Internship/PostDoc ■ CE ■ Peer Consultation ■ Self-Taught

Feel Prepared



■ Yes ■ No

Satisfaction with Training Received to Work with Hispanics



■ N/A ■ Dissatisfied ■ Somewhat Satisfied
 ■ Moderately Satisfied ■ Extremely Satisfied ■ Did not disclose

Echemendia et al, 1997; Renteria et al, 2010; Renteria, Saez, Salinas, & Pliskin, in preparation

Lack of Postdocs with multicultural NP training/bilingual NPs

- Review of HNS Training database and Pediatric Programs that are Association of Postdoctoral Programs in Clinical Neuropsychology (APPCN) Members with Spanish speaking supervisors
 - Boston Children's Hospital (1);
 - Children's Hospital Colorado (3);
 - Kennedy Krieger Institute (1 + 1 Affiliated);
 - St. Louis Children's Hospital (1)
 - Children's National Medical Center (1)
 - Other non-match sites such as UCLA Cultural Neuropsychology Initiative, MGH MUNDOS, University of New Mexico, Baylor

Salinas, in preparation for presentation

Challenges in Clinical Practice

- ~15% of 3500 tests are in Spanish
 - Only 5 meet Standards for Educational & Psychological tests
- Use and selection of appropriate interpreters
 - 25% of neuropsychologists still use family members
- Verbatim translations are used more than adaptations
 - Up to 1/3 of time!!
- Clinicians are NOT using normative data for Spanish tests when available
 - Only 1/3 of time!
- Lack of supervision for bilingual and diverse psychometrists and trainees
- Minorities are judged as cognitively impaired more often
- Recommendations may be based on myths, not evidence (e.g., English only ST)

Renteria et al, 2010; Ojeda & Puente, 2010; Echemendia & Harris, 2004; Manly et al, 1998

Challenges in Cultural NP Research

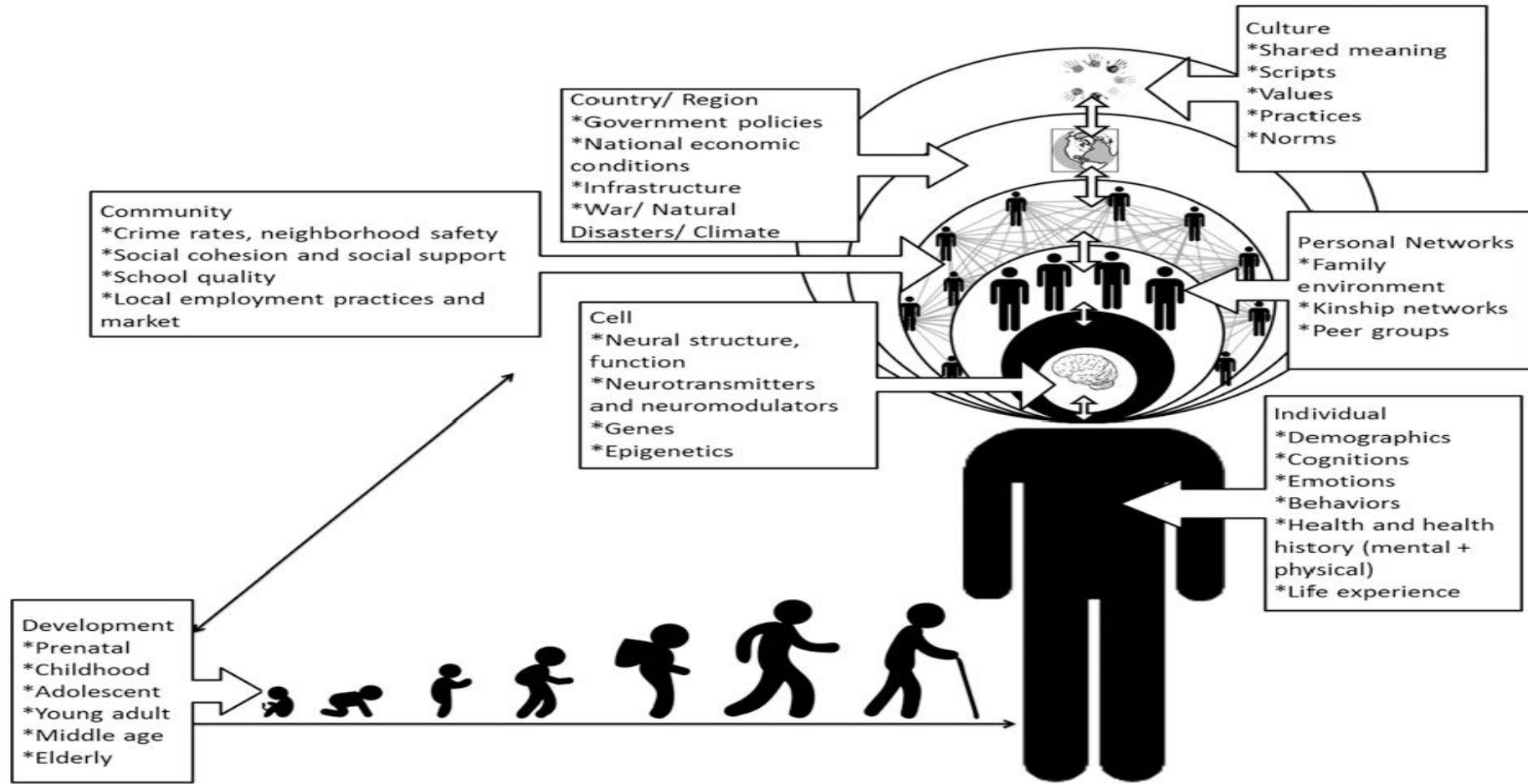
- >600 abstracts reviewed (PubMed):
 - Keywords: Epilepsy+ language, memory, cognition, behavior, QOL, neuropsych, fMRI
 - Important Keywords: culture, Hispanic, Spanish
 - Only **15** articles identified for inclusion in review:
 - Peer reviewed
 - Use of at least one standardized or experimental neuropsychological test
 - Sample size greater than 5

How can training programs prepare trainees to meet the clinical demands in a changing US culture?

Read/Teach Historical Antecedents

- anthropology (Boas)
- genetics (Belyaev)
- Vygotsky
- Luria

Promote Cultural Neuroscience Models



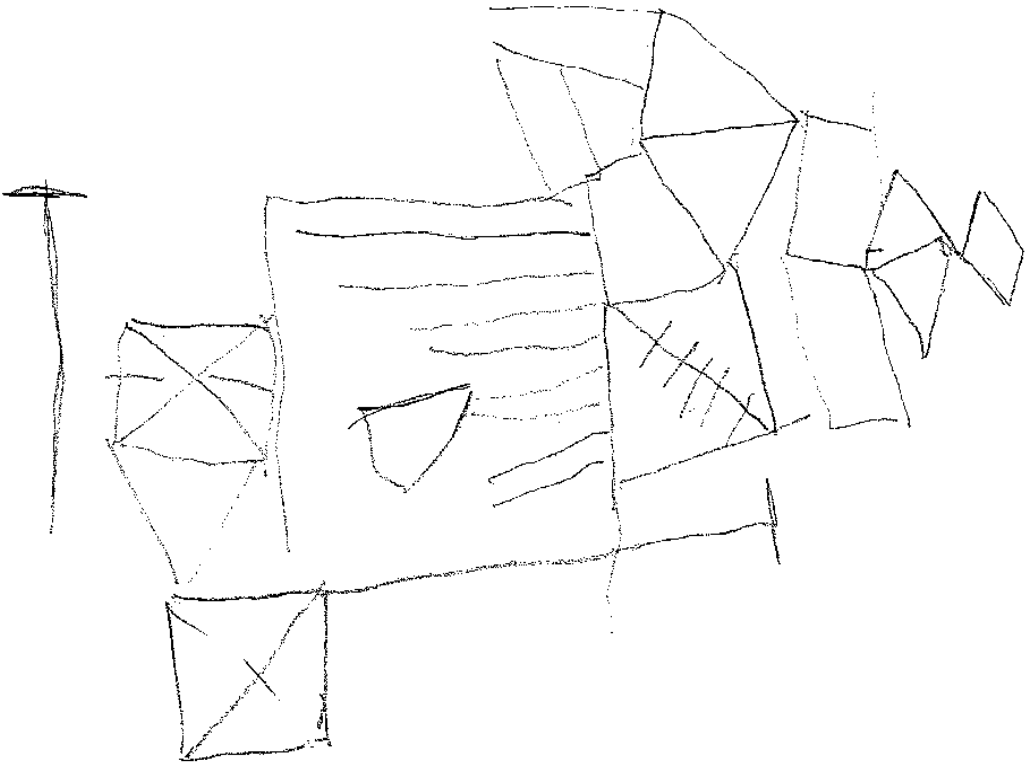
Falk et al., 2013; Chiao et al, 2013

Conceptualize Whole Child/Person

4. **The brain does not operate in isolation.** Both the structure of the brain and its development depend on the context in which it operates. How brain function is manifested in behavior at any given moment is determined as much by contextual variables as by brain structures. Observed behavior is the product of transactions between the organism and its environment. Assessment of behavior must therefore be based on close scrutiny of the *context* in which the brain operates and behavior is observed.

5. The theoretical matrix within which developmental neuropsychological assessment takes place is therefore conceptualized as one whose interacting variables are BRAIN, **CONTEXT**, and DEVELOPMENT. All behaviors are scrutinized within this matrix. No behavioral outcome can be understood in terms of only one of the variables in the matrix.

Re-Evaluate Whether Nonverbal Tests are Culture “Free”



Slide Courtesy of Tony Puente

Some Examples:

Do you think that things should be done...?

As faster as possible, no matter if you make mistakes



Slowly and without making mistakes

Agranovich et al. (2011). The culture of time in neuropsychological assessment: exploring the effects of culture-specific time attitudes on time test performance in Russian and American samples. JINS

Promote Cultural Competence Framework for NP

AWARENESS

- Assumptions/values/biases @ cultural minorities
- Impact provision of NP services
- Positive stance towards multiculturalism

+

KNOWLEDGE & UNDERSTANDING

- Own world view
- Clients' culture & world view impacts NP performance & intervention
- Understanding of sociopolitical influences

+

ACQUISITION

- Specific, culturally appropriate *assessment, intervention, & communication* skills
- Necessary to effectively work with cultural minority groups

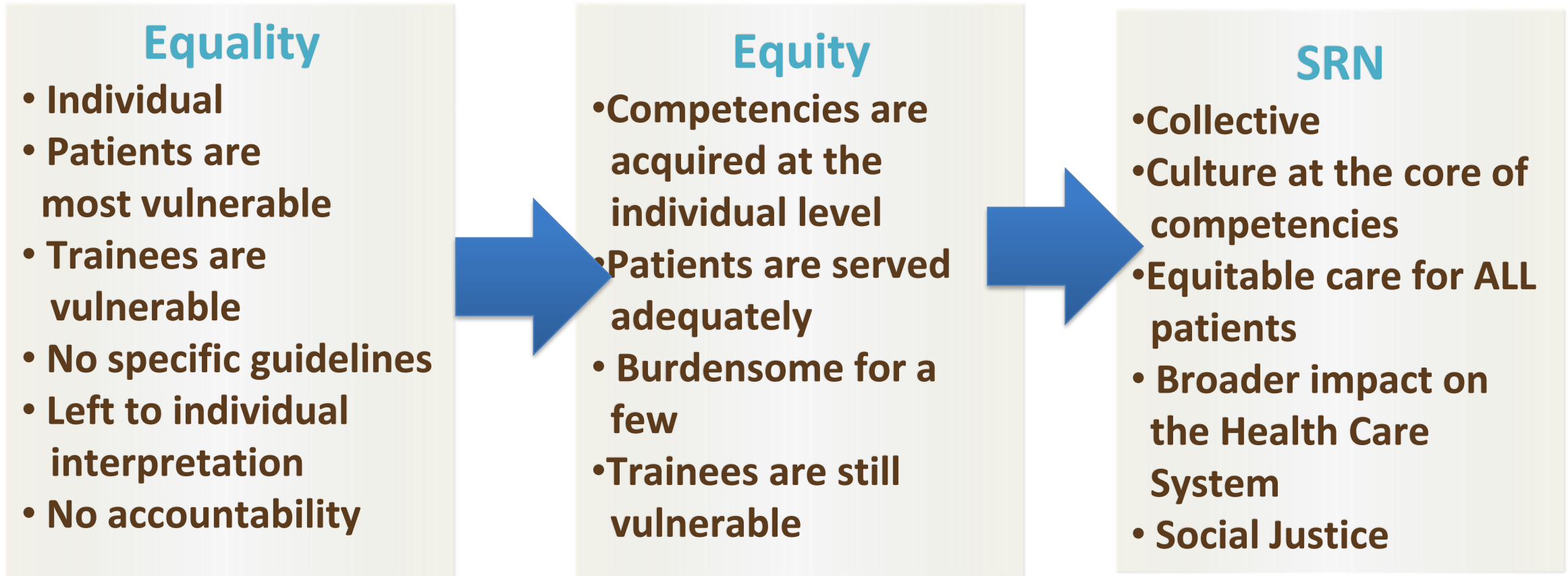


INDIVIDUALS & ORGANIZATIONS

- Development of core cultural competencies
- Based on new theories, practices, policies
- Organizational structures that are more responsive to *all* groups.

Engage in Socially Responsible Neuropsychology

Ethical framework which suggests that an entity, be it an **organization** or individual, has an obligation to act for the benefit of society at large



Promote Paradigm Shift in NP

- Move from Universalism to Relativism
- Avoid having conversations about cultural issues in silos
- Integrate Culture into all that you do/teach
- Create + Implement Multicultural NP Training Standards/Benchmarks
- Foster Evidence Based Approach to Cultural NP
- Implement Reflective Research Practices
- Know/Teach that cultural experiences not only modulate but determine pre-existing patterns of neural activity (Han and Northoff, 2008)
- Know/Teach that cultural differences can be expressed in actual brain structural changes (e.g., gray-matter volume; Park and Gutchess, 2002; Draganski et al., 2004; Mechelli et al., 2004; Turner and Whitehead, 2008).

Promote Paradigm Shift in NP (continued)

- Acknowledge test limitations & problems of equivalence with use of interpreters/translations
- Know/Teach literature regarding NP in bilinguals (Bialystock literature; delayed dementia; EF “advantage”; lexical access)
- Understand Role and Influence of Education, Acculturation, Stereotyped Threat, Institutional Racism, Locus of Control, Communication Preferences, Sociopolitics, Health Disparities on behavioral presentation + NP evaluations/response to interventions
- Promote Lifespan Model to Learning/Achieving Cultural Competence
- Encourage Ethnographic/Anthropological Approach (Read Paul Farmer’s Work!)
- Be a Model Advocate, especially in interdisciplinary teams!

Additional Solutions & Next Steps? Ideas
from Houston to Austin: HNS Brainstorming
Session (11/2015, >60 attendees)

Diversity Recruitment

Eliminate training pipeline barriers

Access to bilingual & bicultural supervisors, members, consultants

Retention of Students

Access to funding for training for minority students

↑ DIVERSITY OF TRAINERS + TRAINEES

More culturally diverse faculty supervisors in training

Incentives to programs with cultural competencies / Bilingual Profs

Political advocacy & leadership development

Explicit mentor network / database

Improving Access to Cultural NP Knowledge

Cultural NP
Wiki



Google scholar
CNP
①

Summer institutes
within US

Centralize information
to not reinvent
the wheel

Train the
trainers

Open
source
download
of texts

Have all
the national
NP orgs create
a website w/
resources on
cultural NP

Cultural
Fairness
Access
(e.g. advanced school
administrators training)

Get to know
what other
countries are
doing

Grand-
source
CNP training
materials

Pool
expertise

Promote Diversity/2nd Language Experiences

Rosetta
stone
partnership
(my hospital
had free access)

immersion
teach ^{content} courses
in Spanish

③ Hands-on
experience.
working with
individuals of
diff. cultures

VOLUNTEER
W/ UNDERSERVED
COMMUNITIES

→ Meals with
culturally
diverse
individuals

~~Immersion~~
Immersion
activities to
place trainees
in shoes of the
minority group

Professional
Time for
Developing
language/cultural
competencies

Student
"hopping" to
close institutions
for training

Exposure to
diverse
communities:
Exchange programs
anyone?! ✓

④ Visiting
communities
(community outreach)

Spend
1 week
w/ family
on reservation

students need
to understand
their own
cultural background.

exposure
to diverse
patients

RESILIENCE
TRAINING

Didactics/Training

-acknowledge that
we don't know
everything & that's
OK - ~~but~~

Teach
health
disparities
course

Integrate
Cultural Neurosci
issues into
Bio Aspects of
Beh. courses

Ask new
trainees (people
applying) what
they want to
learn...

Integration
of ideas/
context
training

have students
attend cultural
events throughout
educational
experience

Share
Cultural
Values
w/ Each Other

Teach
Reflective
Research
Practices

Use tele-
virtual
TRAINING
mode

Knowledge
of
Literature

CULTURAL
CLASSES
~~EDU~~ ~~EDU~~ CULTURAL
NEUROSCIENCE
- education
- epigenetics

Didactics/Training Continued

Teach how to ask patients what may be important to know about their culture

Knowledge/contributions
*Decision Tree for what to do w/ diverse pts.

Training in Public Policy + how to influence legislation

Training in Immigration Status + Law

CLASS @ SOCIO-POLITICAL FACTORS THAT CONTRIBUTE TO HEALTH DISPARITIES

Supervision + Training in how to use interpreted

Read book Cultural Humility

Engage in case studies/ case conference that must include multicultural cases

Teach culturally competent research methods course

Promote Cultural Competence

All groups
in Ψ Agree
that this is
Priority

INFUSE
CULTURE
AS
A
BASIC VARIABLE
SUCH AS
AGE
IN ALL TRAINING

Consultation
network
@ national
level

Commit
to
this

Mandatory
CEs in multicultural
competence
for licensure

More concrete
explanation of
~~the~~ cultural
competencies

International
development of
NP curricula
i.e. - dissemination
of NP abroad

Cultural
Competency
as standard
for AN

Bigger emphasis
on cultural issues
on Board
Certification
Exams

Taskforce
to guide
training
curricula

Incentivize
language/diversity
training

① Coursework/
seminars on
cultural
competence

CC
Exit Criteria
- For different
levels

Suggested Readings

- Ardila, A., Bertolucci, P. H., Braga, L. W., Castro-Caldas, A., Judd, T., Kosmidis, M. H., Matute, E., Nitrini, R., Ostrosky-Solis, F., Rosselli, M. (2010). Illiteracy: The neuropsychology of cognition without reading. *Archives of Clinical Neuropsychology*, 25, 689-712.
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- Rivera Mindt, M., Byrd, D., Saez, P., & Manly, J. (2010). Increasing culturally competent neuropsychological services for ethnic minority populations: A call to action. *The Clinical Neuropsychologist*, 24(3), 429-453.

Free access to articles

- <http://antonioepuente.com>
- <https://aalfredoardila.wordpress.com/articles-papers/>

Resources

- Hispanic Neuropsychological Society <http://hnps.org/>
- SCN Ethnic Minority Affairs (<http://www.scn40.org/ethnic-minority-affairs-subcommittee.html>)
- Office of Minority Health at the Department of Health and Human Services <http://minorityhealth.hhs.gov/>
- National Culturally and Linguistically Appropriate Services (CLAS) Standards <https://www.thinkculturalhealth.hhs.gov/content/clas.asp>
- APA Multicultural Guidelines (APA, 2002) <http://www.apa.org/pi/oema/resources/policy/multicultural-guidelines.aspx>
- NIH Office of Equity, Diversity, and Inclusion (EDI) <http://edi.nih.gov/>
- National Institute on Minority Health & Health Disparities <http://www.nimhd.nih.gov/>