Advancing Nursing through Education: Diversity, Disparities and Determinants of Health

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Professor
Director, Office of Public Engagement
Objectives (dynamic)

- Define social determinants of health
- Identify areas of health disparity
- Synthesize disparity, diversity and social determinants of health into action plan
- Report workforce analysis from current data
- Explain theoretical framework for work
Critical Social Theory and Social Justice

- Fundamental belief that we have disparity and inequity due to
  - Social determinants of health and
  - Uni-dimensional workforce

- CST = human emancipation
  - Explanatory
  - Practical and
  - Normative
Healthy People 2020

- Developing objectives that address the relationship between health status and biology, individual behavior, health services, social factors, and policies.

- Emphasizing an ecological approach to disease prevention and health promotion. An ecological approach focuses on both individual–level and population–level determinants of health and interventions.
Determinants of Health

- Factors that contribute to a person’s current state of health
- Biological, socioeconomic, psychosocial, behavioral, or social
Social determinants of health

- Reflect social factors and the physical conditions in the environment in which people are born, live, learn, play, work and age (Healthy People 2020).

- Factors separate from medical care that influence health
  - 10% influenced by providers care delivery (Elders, 2013)

- Recognition that too much emphasis on medical care and not enough on other factors
Examples of social determinants include:

- Availability of resources to meet daily needs, such as educational and job opportunities, living wages, or healthful foods.
- Social norms and attitudes, such as racism and discrimination.
- Exposure to crime, violence, and social disorder, such as the presence of trash.
- Social support and social interactions.
More social determinants

- Quality schools
- Transportation options
- Public safety
- Residential segregation
- Exposure to mass media and emerging technologies, such as the Internet or cell phones
- Socioeconomic conditions, such as concentrated poverty
Differences in health that adversely affect groups who are already at a disadvantage because of historical discrimination or marginalization

- Race or ethnicity
- Religion
- SES
- Sexual orientation
- Disability
Disparity

- UNJUST
- UNFAIR
- AVOIDABLE
All health differences unfair/unavoidable/unjust?

- Ice skaters have more arm/leg fractures than non–ice skaters
- People in affluent area have a specific health problem that those in poor area do not
- Younger adults are generally healthier than elderly
- Black children have greater rates of asthma than White children

(Braveman, 2012)
Rights based approach

- Achieve highest standard of health
- Education
- Living standard for health
- Benefits of progress
- Participation in society
Disparity and equity (Braveman, 2012)

- A health difference closely linked with social or economic disadvantage
- Health disparities adversely affect groups who have systematically experienced greater social or economic obstacles
- Equity (pursuing highest standard of care for all) vs equality: greatest attention on those who face the greatest obstacles
Disparities

- Black infants 1.5–3 x likely to die
- American Indian children 2.5 x rate of SIDS
- Black men 2.5 die from prostate cancer
- African American and American Indian 2 x diabetes
- Hispanic people 1.5 x diabetes
- 40% higher rates of hypertension in Blacks
- 30% < receive flu shot
- 35% < receive pneumonia vaccine
- 60% > risk stroke
Pursue equity by

- Knowing social determinants and
- Addressing disparity
Pursue equity

- through enhancement of diversity of workforce
Social Determinants of Health

- Segregated Neighborhoods
- SES
- Safety
- Transportatio
- Food
- Job opportunities

Diversity

Disparity
Diversity is the inclusion of things, people, and places that are different. For example, having different races, genders, ages, and ethnicities of people in one place is showing great diversity. No one thing or person is the same and is made up of different cultures and backgrounds. Also, diversity can be the different opinions of individuals.
“It has been concluded that racial and ethnic diversity in the health care workforce has profound implications for the U.S. health care system. Increasing diversity in the health care professions will improve health care access and quality for minority patients and assure a sound health care system for all of our nation’s citizens. ..
It will also strengthen health care delivery systems at multiple levels, enhance educational experiences for all health professions students, promote relevant research and needed changes in health policy, and prepare our nation for the emerging and culturally dynamic health care challenges of tomorrow. From an economic point of view, increasing diversity makes good business sense. From an ethical standpoint, it serves the cause of social justice” (Sullivan Commission, 2003, p.13).
CT Population diversity

Gender

Male: 1,780,816
Female: 1,835,893
<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Count</th>
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</thead>
<tbody>
<tr>
<td>Hispanic Male</td>
<td>246,707</td>
</tr>
<tr>
<td>Non Hispanic Male</td>
<td>1,533,233</td>
</tr>
<tr>
<td>Hispanic Female</td>
<td>247,583</td>
</tr>
<tr>
<td>Non Hispanic Female</td>
<td>1,589,186</td>
</tr>
</tbody>
</table>
CT by total race

- **White**: 3,020,193
- **Black**: 20,415
- **American Indian**: 155,396
- **Asian/PI**: 59,839

ALL Races
Nursing workforce CT

- 57695 Registered Nurses as of 5/1/13
- Renewals and/or new licenses
  - July 1, 2012–June 30, 2013
- Random sample N=1068 for statistical significance with a margin of error +/-3%

- Department of Public Health

- On line and paper databases
  - Renew online (less than 30% currently do)
  - Fill out forms COMPLETELY
CT Database/Minimum Data Set

- Hours worked (59% in our data)
- Name of employer (9.5% in our data)
- Address employer (<50% in our data)
- Setting not asked
- Specialty area not asked
- Highest education earned not asked
CT Nurses by Gender

- Female 84.6%
- Male 6.8%
- Missing data 8.6%
CT Nurses by Ethnicity

- 2.3% Hispanic
- 67.5% Non Hispanic
- 29% unknown
CT Nurses by Race

Race

- White 75.5%
- Black 6%
- Hispanic 3%
- Asian 4%
- American Indian .1%
- Unknown
Age of CT Registered Nurses

%

<table>
<thead>
<tr>
<th>Age Range</th>
<th>%</th>
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<tr>
<td>18-24</td>
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<tr>
<td>25-34</td>
<td>15</td>
</tr>
<tr>
<td>35-44</td>
<td>13</td>
</tr>
<tr>
<td>45-54</td>
<td>23</td>
</tr>
<tr>
<td>55-64</td>
<td>26</td>
</tr>
<tr>
<td>65-80</td>
<td>10</td>
</tr>
<tr>
<td>unknown</td>
<td>2</td>
</tr>
</tbody>
</table>

%
Nurses by Initial Education

%
## CT Population & Nursing Workforce

<table>
<thead>
<tr>
<th></th>
<th>CT Population</th>
<th>CT Nurses (adjusted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>51.3%</td>
<td>84.6%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>15%</td>
<td>3%</td>
</tr>
<tr>
<td>Asian</td>
<td>4.2%</td>
<td>4%</td>
</tr>
<tr>
<td>Black</td>
<td>11.2%</td>
<td>6%</td>
</tr>
<tr>
<td>White</td>
<td>82%</td>
<td>75.5%</td>
</tr>
<tr>
<td>American Indian</td>
<td>.5%</td>
<td>.2%</td>
</tr>
<tr>
<td>Age 19–64</td>
<td>63.1%</td>
<td>79.4%</td>
</tr>
</tbody>
</table>
Little synchrony between population served and nurses providing care

- Hispanic
- Black

Females
Older
BLS (3/12) reported that job growth in the healthcare sector accounted for one out of every 5 new jobs. The BLS confirmed that 296,900 jobs were added to the healthcare sector in 2011.

www.bls.gov/news.release/empsit.nr0.htm
More workforce needs

- RN workforce is the top occupation in terms of job growth through 2020. It is expected that the number of employed nurses will grow from 2.74 million in 2010 to 3.45 million in 2020, an increase of 712,000 or 26%.

- The projections further explain the need for 495,500 replacements in the nursing workforce bringing the total number of job opening for nurses to 1.2 million by 2020.

http://www.bls.gov/news.release/ecopro.t06.htm
Figure 2. The per Capita RN Workforce, Ranked by State
Nationwide Highest Degree Held

- Bachelor's, 44.6%
- Associate's, 37.9%
- Graduate, 10.6%
- RN Diploma, 5.9%
- Master's, 10.3%
- Doctorate, 0.4%

ACS 08-10
Figure 9. The Changing Age Distribution of RNs, in Five-Year Increments
## CT RN Population and Nation

<table>
<thead>
<tr>
<th></th>
<th>CT %</th>
<th>Nation %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>84.6* (8.6 U)</td>
<td>91%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3</td>
<td>4.8</td>
</tr>
<tr>
<td>Black</td>
<td>6</td>
<td>9.9</td>
</tr>
<tr>
<td>White</td>
<td>75.5</td>
<td>75.4</td>
</tr>
<tr>
<td>Asian</td>
<td>4</td>
<td>8.2</td>
</tr>
<tr>
<td>American Indian</td>
<td>.2</td>
<td>.4</td>
</tr>
<tr>
<td>Diploma</td>
<td>12.2 initial</td>
<td>6.9 as highest</td>
</tr>
<tr>
<td>Associate</td>
<td>20.4 initial</td>
<td>37.9 as highest</td>
</tr>
<tr>
<td>Baccalaureate</td>
<td>30.3 initial</td>
<td>44.6 as highest</td>
</tr>
<tr>
<td>Masters</td>
<td>UK</td>
<td>10.3 as highest</td>
</tr>
<tr>
<td>Doctorate</td>
<td>UK</td>
<td>.4 as highest</td>
</tr>
</tbody>
</table>
Therefore….Determinants, Disparities and Diversity

- Critical Social Theory
  - Explanatory
  - Practical
  - Normative
**Explanatory**

- What is wrong?

- Decreased diversity in workforce due to
  - Limited awareness
  - social determinants
  - disparities
Practical

- Who can change this
  - Each of us
  - Governments
  - Policy makers
    - Boards of Education
    - Affordable Care Act
  - People themselves
Normative

Achievable goals for social transformation
  ◦ Increase diversity in workforce
    • Gender
    • Race
    • Ethnicity
    • Ideas
  ◦ Academy of Nursing & Health Sciences as model for change
Hartford’s system of schools exists to provide all students with access to participation in a global economy through attainment of Academic Standards of the State of Connecticut and readiness for post-secondary education.
‘Hartford Public Schools’ is (sic) a system of high performing, distinctive schools of choice. The attainment of Hartford students in reading, math, science, and college readiness will reflect the high educational outcomes of the State of Connecticut.
Beliefs

- All students can learn at or above grade level.
- The achievement gap must and can be eliminated, by each student reaching his/her learning potential.
- Schools have an enormous impact on students’ lives.
- All parents must be empowered to play an active role in their students’ education.
- Community collaboration is fundamental to achieving and sustaining excellence.
HPHS...challenge

- Second oldest continually running high school in country (1638)
- Capital city with few resources
- Social promotion
- Diverse population with 95–100% eligible for services due to poverty
- Teacher response
- Safety v education
The Hartford Public School System is committed to school designs that will improve the overall performance of students, as well as respond to the identified needs of the Hartford community.
School Choice

- Small learning communities
- Theme-based academies relating to student interests
- Increased parent empowerment and involvement
- School models with demonstrated success will be employed
- Rigorous college-ready curriculum
- Enhanced teacher and staff commitment
- Build meaningful relationships (rigor, relevance, relationships)
Academies

- Law and government
- Journalism
- Green technology
- Nursing and health care
My role

- Design team chair
- Advisory Board chair
  - Mentor
  - Curriculum
  - Grant writer
  - Fundraiser
  - Parent communication
  - Student experiences
  - Partnership with UConn
  - Community liaison
Work in progress
The Academy of Nursing & Health Sciences is a college preparatory small school for 400 high school students from grades 9 through 12 who are interested in pursuing a college Nursing degree or a science-based college degree.
The establishment of a standards based Nursing Academy curriculum as measured by a 100 percent college enrollment rate:

- Create a vibrant and supportive learning environment to ensure students are prepared for a nursing career and other related fields, and will be able to address changing health needs.
- Fulfill its commitment to CARE (Character, Accountability, Responsibility and Excellence) by preparing students to contribute to the continuous improvement of health care.
The Nursing Academy will include multiple science labs and technology that will simulate a health care environment.

The school **greenhouse** will be used to teach students about holistic health and nutrition.

Students will have multiple opportunities to learn from and interact with experienced nurses and other health care providers.
The Academy curriculum is based on the concept of C.A.R.E. (Character, Accountability, Responsibility and Excellence). This concept will be developed with all students as they prepare to deliver excellence in the nursing and health field.
Learning communities (LC)

- Cohort-based communities addressing the teaching and developmental needs of “a group of people engaged in intellectual interaction for the purpose of learning” (Cross, 1998, p.4).
- Essence of a learning community as a caring place where responsive individuals nourish each other’s learning in the context of authentic, supportive relationships by being open and honest with one another (Bunker, 2004).
Research on LC

- Support positive influence in promoting student integration and engagement, as well as academic success (Tinto, 2000)
- Models with concentrated faculty involvement more effective in enhancing students’ experience and improving student outcomes (Lenning & Ebbers, 1999; Lindblad, 2000).
Bandura’s social learning theory (1983)
“authentic learning can only take place if students are fully engaged in thinking about what that content means to their own practice” (Key, 2009)
Foundation for Nursing

- Science
- Mathematics
- Critical thinking
- Ethical comportment
- Relationships

In addition to traditional high school requirements
## Demographics 2013

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
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<tbody>
<tr>
<td>Hispanic/Latino</td>
<td>67</td>
<td>156</td>
<td>223</td>
</tr>
<tr>
<td>Black</td>
<td>45</td>
<td>113</td>
<td>158</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>1</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>White</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>American Indian</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>Not self identified</td>
<td>10</td>
<td>13</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
<td>291</td>
<td>416</td>
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</table>
9th Grade Academy

- Reading
- Writing
- Math
- Critical thinking
- Introduction to careers in nursing
Sophomores

- English
- Geometry
- US history
- Biology
- World language
- Art or PE or both
- CAPT prep with capstone component
- Health if needed
Junior Year

- English
- International studies
- Algebra II
- Chemistry with lab
- *World language*
- Art or PE or both
- Options: anatomy and physiology, environmental science, *current issues in health care*, foundations in health and technology, psychology, sociology, developmental psychology
Senior year

- English
- Pre-calculus or statistics,
- Options:
  - AP bio, anatomy and physiology, environmental science, *current issues in health care, psychology, developmental psychology, sociology*, public speaking, *world language*, art, PE, *physics*
## Describe by grade

<table>
<thead>
<tr>
<th>Summer</th>
<th>9th</th>
<th>10th</th>
<th>11th</th>
<th>12th</th>
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<tbody>
<tr>
<td>CPR</td>
<td>x</td>
<td></td>
<td></td>
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<tr>
<td>Visits</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Museum</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Simulation</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>CNA</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Embedded activities</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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</tbody>
</table>
Embedded learning activities

- English: protagonist persuasion
- History: current information with textbook
- Social studies: policy
- Technology: history of nursing and critical thinking
- Math: surface area
- Health: Self management and nursing process
- Internships: AIDS, AETNA, hospitals
## Mastery tests (CAPT)

<table>
<thead>
<tr>
<th>Subject</th>
<th>2009</th>
<th>2010</th>
</tr>
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<tbody>
<tr>
<td>Math</td>
<td>26.2%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Science</td>
<td>18.4%</td>
<td>31.6%</td>
</tr>
<tr>
<td>Reading</td>
<td>44.1%</td>
<td>62%</td>
</tr>
<tr>
<td>Writing</td>
<td>48.2%</td>
<td>62.6%</td>
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</table>
## CAPT (% at or above goal)

<table>
<thead>
<tr>
<th>Year/Area</th>
<th>Math</th>
<th>Science</th>
<th>Read</th>
<th>Write</th>
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<tbody>
<tr>
<td>2009</td>
<td>48</td>
<td>43</td>
<td>47.5</td>
<td>55</td>
</tr>
<tr>
<td>NA</td>
<td>26.2</td>
<td>18.4</td>
<td>44</td>
<td>48.2</td>
</tr>
<tr>
<td>2010</td>
<td>48.9</td>
<td>45.5</td>
<td>45.9</td>
<td>59.6</td>
</tr>
<tr>
<td>NA</td>
<td>33.3</td>
<td>31.6</td>
<td>45</td>
<td>52.6</td>
</tr>
<tr>
<td>2011</td>
<td>49.6</td>
<td>47.2</td>
<td>44.8</td>
<td>61.3</td>
</tr>
<tr>
<td>NA</td>
<td>35</td>
<td>30</td>
<td>45</td>
<td>53</td>
</tr>
<tr>
<td>2012</td>
<td>49.3</td>
<td>47.3</td>
<td>47.5</td>
<td>63.1</td>
</tr>
<tr>
<td>NAF</td>
<td>41</td>
<td>39</td>
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<td>49</td>
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<td>62.5</td>
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<tr>
<td>NAF</td>
<td>40</td>
<td>44</td>
<td>49</td>
<td>60.1</td>
</tr>
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</table>
2013 CT Graduation rates

- 84.8% statewide
  - Top 18 states
- 62% economically disadvantaged
  - Bottom 8 (7 worse)
- 68.6% Hispanics
- 73% Black

- Eligible for free lunch = 66% graduated
- Reduce price lunch eligibility = 83.5% graduated
- No lunch eligibility = 93% graduated

22.8 point gap...#3 in nation!
Graduation rates at HPHS

- 2007: 17%
- 2008: 26%
- 2009: 43%
- 2010: 74%
- 2011: 80%
- 2012: 89%
- 2013*: 95%
## Accepted to College (AN&HS)

<table>
<thead>
<tr>
<th>Year</th>
<th>% accepted/enrolled</th>
</tr>
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<tbody>
<tr>
<td>2009</td>
<td>59/unknown</td>
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<td>2010</td>
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<tr>
<td>2011</td>
<td>70/37</td>
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<tr>
<td>2012</td>
<td>71.1/42</td>
</tr>
<tr>
<td>2013*</td>
<td>66/unknown</td>
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Partnerships

- Saint Joseph College
- Capital Community College
- Saint Francis Hospital & Medical Center
- Hartford Hospital
- Jerome Home
- Hebrew Home & Hospital
- Aetna
- Workforce Policy Board
- Department of Public Health
- Department of Labor
Appropriateness & Ramifications/Challenges

- Diverse population underserved
- Political climate of school choice
- Socioeconomic issue of parental involvement
- Timing of intervention
- Resource allocation
- Engaged or distant
- Standards and discipline
- Resources
Work in progress
Start earlier

- Anna Norris Elementary school
- Charles Barrows STEM Academy (K–8)
- James Hillhouse 9th grade academy
Next steps

- Research on success factors of nurses of diversity
- Research on resiliency
- Utilize success factors to design intervention programs at:
  - Academy of Nursing & Health Sciences
  - Anna Norris
  - Charles Barrows
  - Jame HillHouse
  - Your local school
bhpr.hrsa.gov/healthworkforce/reports/nursingworkforce/

http://www.ehow.com/about_5154350_definition-workplace-diversity.html#ixzz2gDvQ6DEP

http://quickfacts.census.gov/qfd/states/09000.html

Elders, J. 2013 Connecticut Health Forum.

Contact information

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- 860-486-0511
Acknowledgements

- **HRSA:**
  - D19HP22227–01–01
  - T08HP22349–01–00

- **Academy of Nursing & Health Sciences**
  - Advisory Board
  - David Chambers
  - Deb Blazys
  - Students

- **Department of Public Health**
- **Nurses at health care agencies**

- **UCCONN graduate students**
  - Amy D’Agata
  - Stephanie Greaney
  - Heather Morrison

- **Kaplan**
  - Jane Berkowitz

- **Catapult**
  - Robert Callan

- **New partners**
  - Barrows
  - James Hillhouse
  - ScholarCentric