

Career Pathways and Diversity:

Licensed Practical Nurses and Registered Nurses

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Background

- Lack of diversity at the upper stratum of higher-level healthcare professions
- Diversity promotes cultural competence
 - Healthcare providers' ability to successfully deliver services that meet the economic, social, cultural, and linguistic needs of patients
- Associated with improved healthcare quality and access, greater patient choice and satisfaction, better patient–provider communication for minority patients, and better educational experiences for students in training



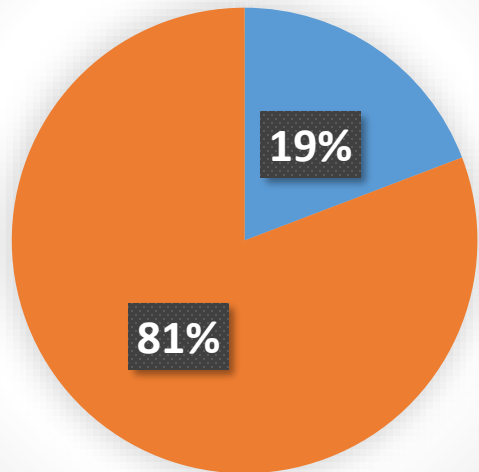
Diversity in Nursing

- Increasing racial/ethnic diversity among US population
- Nurses, the largest and over a quarter of the healthcare workforce, play an important role in primary healthcare
- Hence, best-positioned to contribute to minority health and reduce disparities (Travers, Smaldone, & Cohn 2015).



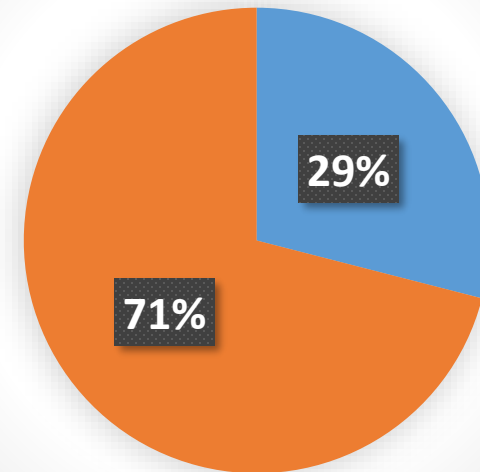
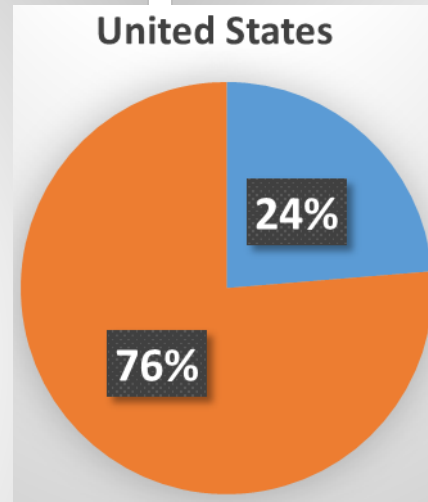
Nurses' Race/Ethnicity in the US

RN: Percent White and Non-White



■ Non-White
■ White

LPN: Percent White and Non-White

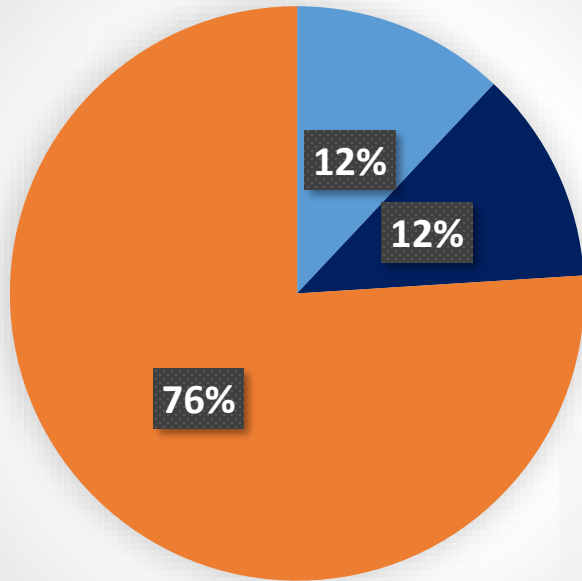


■ Non-White
■ White



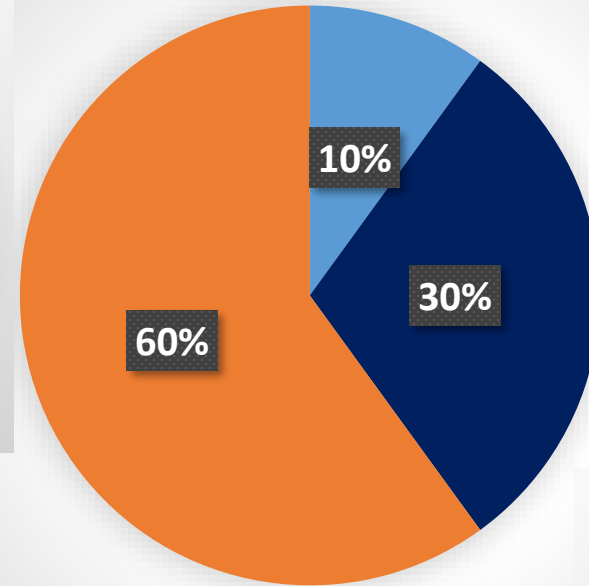
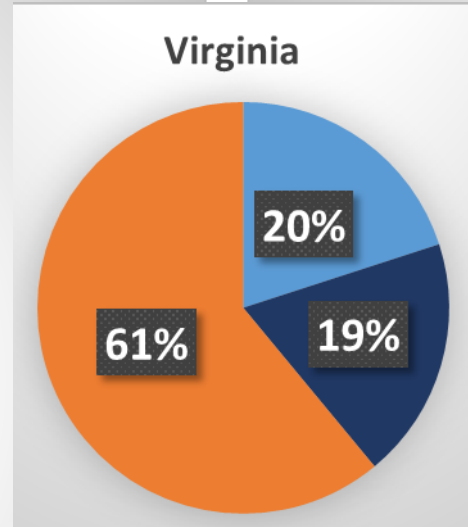
Nurses' Race/Ethnicity in Virginia

RN: Proportion White Race vs Non-White



■ Other Non-White
■ Black
■ White

LPN: Proportion White Race vs Non-White



■ Other Non-White
■ Black
■ White



Study Goal: Examine Two Pathways Used

- Career Technical Education (CTE): teaches career skills to 6-12th graders
 - CTE programs allow students to investigate careers and identify the classes needed
- Public versus Private Colleges
- Enrollment in either pathway may
 - Vary by racial/ethnic and economic backgrounds
 - Have implications for whether students become a RN versus a LPN



Research Questions

1. Do different racial/ethnic groups transition to RN rather than LPN differently through CTE and public versus private college pathways?
2. Do different economic groups transition to RN rather than LPN differently through CTE and public versus private college pathways?
3. Do different racial/ethnic groups participate differently in CTE programs and public college versus private pathways?
4. Do different economic groups participate differently in CTE programs and public versus private college pathways?
5. What are the implications of the pathways taken on the median income of the racial/ethnic groups?
6. What are the implications of the pathways taken on the median income of the economic groups?



Methods

- Data from the Virginia Longitudinal Data System (VLDS): 3,843 RNs and 466 LPNs licensed in Virginia
- Virginia Health Workforce Data Center RNs' and LPNs' survey data from 2014 linked to K-12 and higher education data from 2004
- The percentage in each nurse group, CTE, and college pathway will be provided and, when possible, z-score tests of whether the differences between categories are significant will be provided
 - Race/ethnicity: White, Black, Asian, Hispanic, Others
 - Economic disadvantage index: Free/Reduced Meals, Temporary Assistance for Needy Families (TANF), Medicaid, or migrant or homelessness
 - Unknown not shown but included in percentages



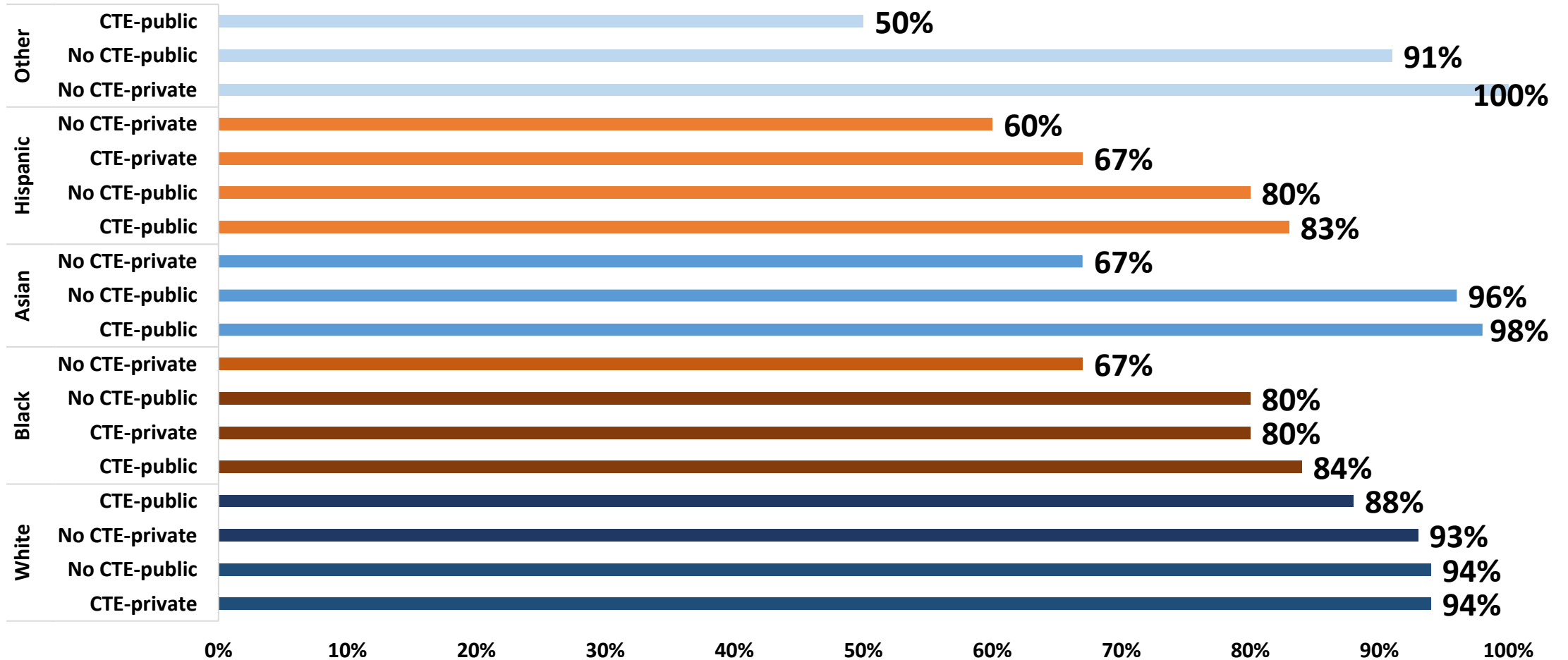
Summary Statistics

	RN	LPN
% Female	93	94
% Under age 30	99	99
% White	81	66
% Black	9	24
% Asian	6	2
% Hispanic	3	7
% Other	1	1
% LVN/LPN	0	98
% Hospital RN	4	0
% At least BSN	66	0
% Career technical education	24	36
% Economically disadvantaged in K-12	10	25
% Enrollment in Public College	94	91
Mean SAT (Max=1,600)	1,077	957
Median Income	\$45,000	\$35,000



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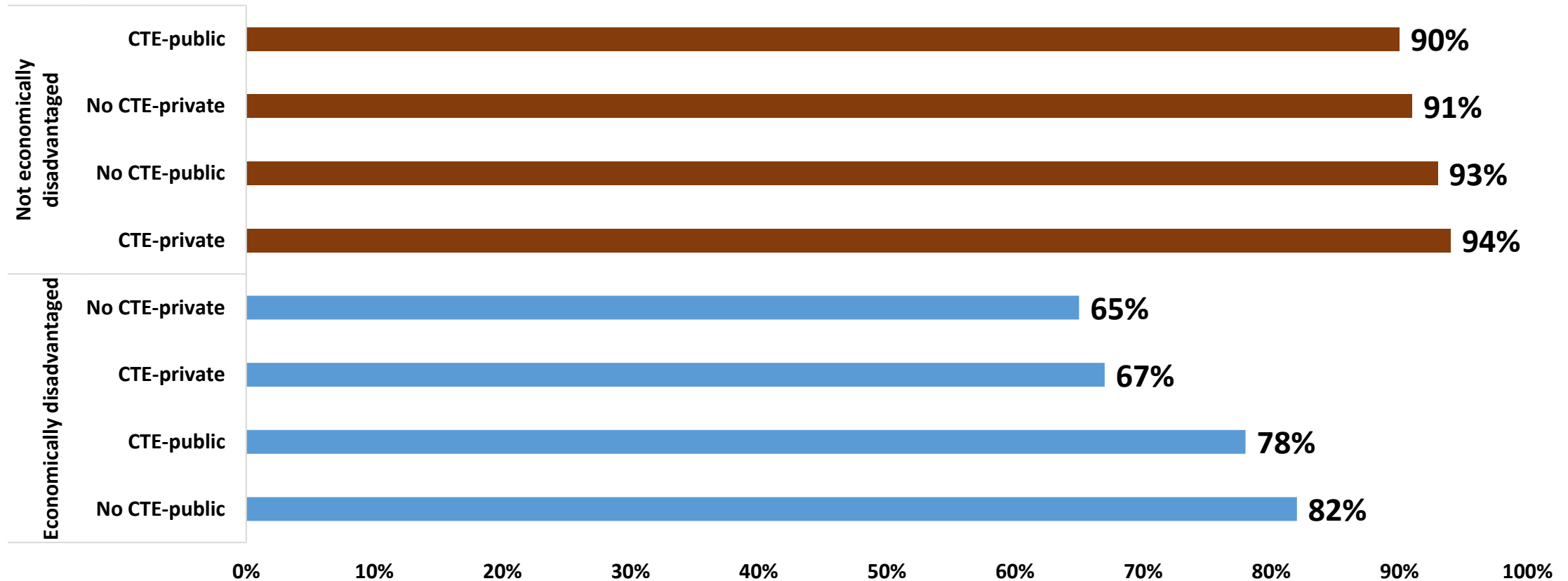
RQ1: Percent Becoming RN Rather than LPN in Each Pathway by Race\Ethnicity





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RQ2: Percent Becoming RN Rather than LPN in Each Pathway by Economic Group



No-CTE- and CTE-public college pathways important for becoming RN for economically disadvantaged but significantly lower rates of becoming RN rather than LPN compared to advantaged group.



RQ 3: Pathway Used by Race/Ethnicity

		CTE-Public College	CTE-Private College	No CTE-Public College	No CTE-Private College
RNs	White (n= 3,111)	22%	2%	68%	0.3%
	Black (n= 352)	24%	2%	73%	5%
	Asian (n= 227)	17%	0%	76%	2%
	Hispanic (n= 107)	19%	2%	64%	3%
	Other (n= 13)	8%	0%	92%	0%
LPN	White (n= 305)	29%***	1%	45%	3%
	Black (n= 112)	14%	2%	51%	8%
	Asian (n= 11)	9%	0%	64%	18%
	Hispanic (n= 31)	13%	3%	55%	6%
	Other (n=2)	50%	0%	50%	0%

- White LPNs were significantly more likely to use the CTE-public college pathway compared to other races/ethnicities.



RQ4: Pathway Used by Economic Group

		CTE-Public College	CTE-Private College	No CTE-Public College	No CTE-Private College
RNs	Economically-disadvantaged (n=377)	28%***	2%	60%	3%
	Not economically disadvantaged (n=3,466)	21%	2%	68%***	4%
PNs	Economically-disadvantaged (n=117)	26%	3%	42%	6%
	Not economically disadvantaged (n=349)	24%	1%	49%	5%

- Economically disadvantaged RNs were significantly more likely to use the CTE-public college pathway compared to those who were not disadvantaged



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RQ 5: Median Income By Pathway & Race/Ethnicity

Race/Ethnicity	College Attended	RN	LPN
White	CTE-Public	\$45,000	\$35,000
	CTE-Private	\$45,000	\$35,000
	No CTE-Public	\$45,000	\$35,000
	No CTE-Private	\$45,000	\$25,000
Black	CTE-Public	\$50,000	\$35,000
	CTE-Private	\$50,000	\$40,000
	No CTE-Public	\$55,000	\$35,000
	No CTE-Private	\$65,000	\$35,000
Asian	CTE-Public	\$45,000	\$35,000
	CTE-Private	--	N/A
	No CTE-Public	\$55,000	\$30,000
	No CTE-Private	\$55,000	\$35,000
Hispanic	CTE-Public	\$65,000	\$35,000
	CTE-Private	\$40,000	\$35,000
	No CTE-Public	\$45,000	\$25,000
	No CTE-Private	\$45,000	\$35,000
Other	CTE-Public	N/A	N/A
	No CTE-Public	\$45,000	N/A



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RQ 6: Median Income By Economic Group

Status in K-12	College Attended	RN	LPN
Economically disadvantaged	CTE-Public	\$45,000	\$25,000
	CTE-Private	\$45,000	\$35,000
	No CTE-Public	\$45,000	\$35,000
	No CTE-Private	\$35,000	\$35,000
Not economically disadvantaged	CTE-Public	\$45,000	\$35,000
	CTE-Private	\$45,000	\$35,000
	No CTE-Public	\$45,000	\$35,000
	No CTE-Private	\$55,000	\$35,000



Conclusion

- RNs not representative of overall racial/ethnic breakdown
- CTE-public college pathway played the most important role in Blacks, Hispanics, and Asians becoming a RN rather than a LPN
 - However, rates lower than Whites and Asians for all pathways
- The public college pathway is important for economically disadvantaged students becoming RNs
- Apart from Hispanics, the pathways with highest chance of becoming RN rather than LPN were not necessarily the most used or the most rewarded



Recommendations

- Increase enrollment of Black, Hispanic, and economically disadvantaged students in CTE programs and public colleges
- Target recruitment and financial college support for under-represented groups to pursue RN profession
- More research
 - Lower RN rates among minority and disadvantaged students
 - Income differences by race/ethnicity and economic group
 - Other indicators of diversity



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Questions?

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