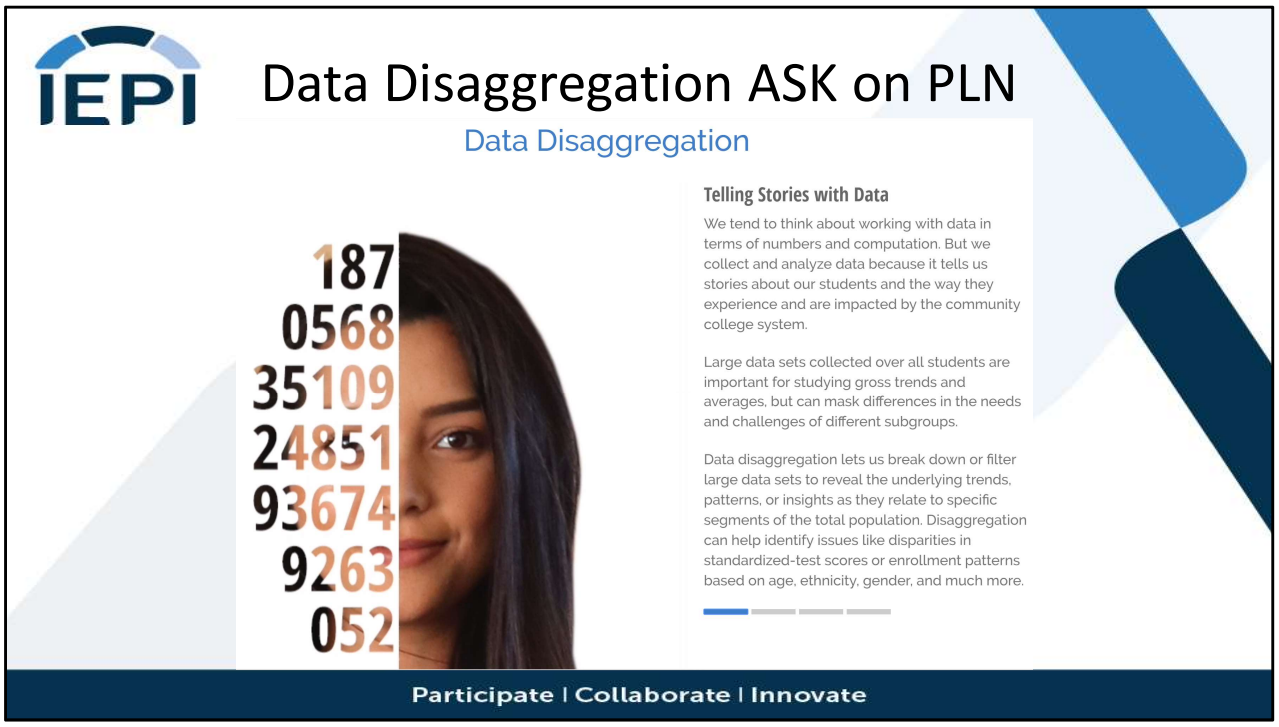
# Veterans Data Disaggregation:

## Age- And Gender-Adjusted Access to Community College

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The Data Disaggregation section of the Applied Solution Kit (ASK) has many resources that may be useful for Student Equity managers and project specialists, institutional researchers, and others.

https://prolearningnetwork.cccco.edu/ask/data-disaggregation

# Researcher Learning Outcomes:

- Virtually every CC in California found that veterans were not as likely to attend CC
  - Why?
- Why determining Veterans access to CC is not straightforward
- How to include gender and age (and other demographic characteristics) in access analyses for veterans.

# Overview of the Problem

- SB 860 added requirements to examine student academic progress by veterans status in SEP plans
- Most colleges that examined veterans access to community college found substantial disproportionate impacts in terms of access
  - Across 50 SEPs, PI ranged from .05 to .64
  - IVC: **1.6% Veterans vs Service Area: 5.5% Veterans (PI = .28)**
- **Why?**



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Why? There may be a lot of reasons at your specific college. However, across California and the nation, college students tend to be young, and veterans have an average age of over 60 years old. In addition, older students (lifelong-learners) are more likely to be female. At Irvine Valley College, for instance, 81% of students over the age of 55 are female. In contrast, 93% of veterans are male. Thus, what looks like a veterans access issue may be a mismatch between the young and more female college-going population and the older and overwhelmingly male veteran population.

# Overview of the Problem

- As noted in several SEPs, there is a large discrepancy between the age and gender of the typical veteran and the typical college student.
  - Veterans: **92.5% are male** and **89.8% are over the age of 34**
  - CCC students: **45.5% are male** and **20.7% are over the age of 34**

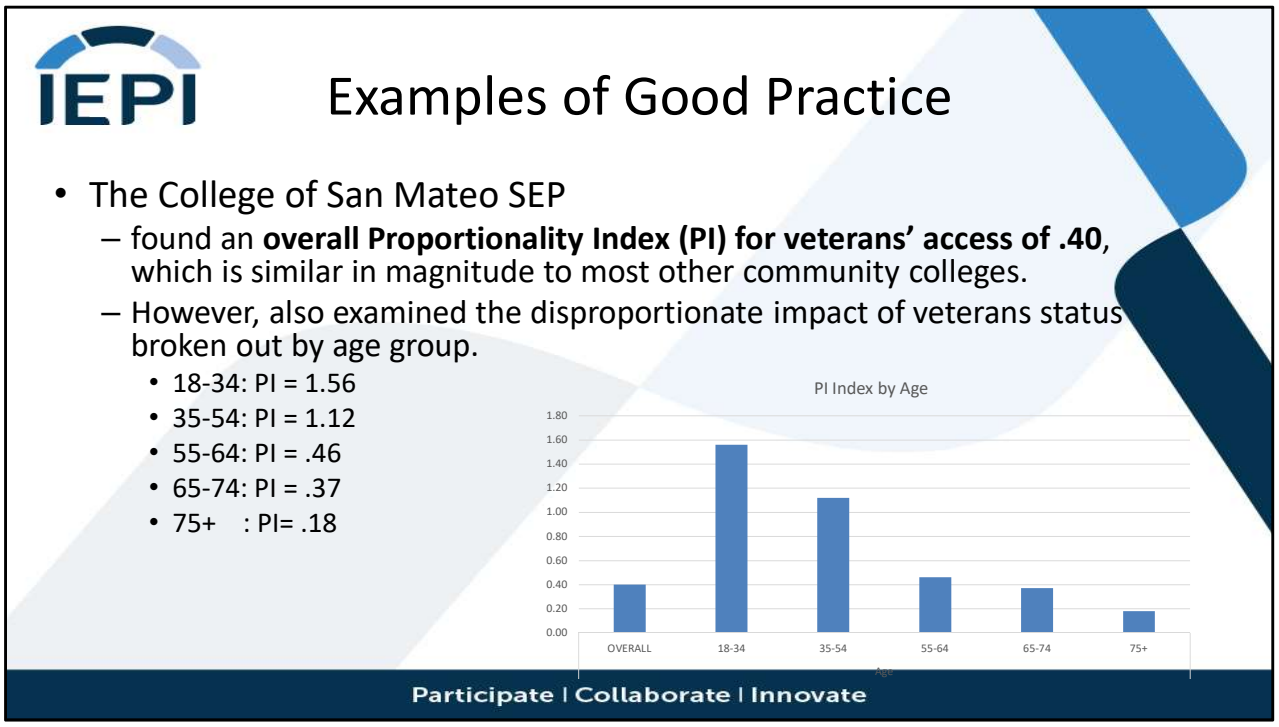


- How should these potentially confounding characteristics be taken into account?



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Although most CCCs used a overall veterans access metric comparing veterans as a proportion of the student population to veterans proportion of the overall population in their college's service area, several colleges have tried to account for these demographic characteristics in different ways.




Overall San Mateo found an overall PI of .40. However, they found that among 18-34 year olds, there was a PI of 1.56, meaning that there were 56% more 18-34 year old veterans as they would expect, given the proportion of veterans in the 18-34 year old population in San Mateo's service area. Similarly, the found that 35-54 year old veterans were also over-represented. However, they did find significant disproportionate impact in the 55-64, 65-74, and 75 and over age groups. Since the majority of veterans are in these age groups, this drives the overall disproportionate impact number. However, since the vast majority of San Mateo's students are under the age of 55, does this accurately reflect veterans access?

In addition to determining a more accurate picture of veterans access, disaggregating by age (and gender) may also allow resources to be more precisely targeted. It may be that, rather than outreach aimed at ALL veterans, it may be that an outreach effort geared towards enrolling older veterans in Emeritus, life-long learning classes may be more helpful.

*Note*. As of 11/2017, the chancellor's office has indicated that even PI values of 0.89 may be indicative of disproportionate impact (Ramirez-Faghih & Fuller, 2017). In addition, as of 11/2017, the chancellor's office as adopted the Percentage Point Gap

method as the standard method by which to examine disproportionate impact (CCCCO, 2017; Ramirez & Fuller, 2017), due to the passage of AB 504. For additional information, see the sources listed below and/or *Using Disproportionate Impact Methods to Identify Equity Gaps* (Sosa, 2017), posted on the Professional Learning Network's website.

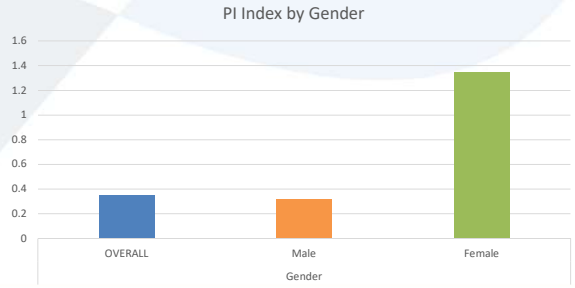
References

California Community Colleges Chancellor's Office (2017). *Percentage point gap method*. Retrieved from http://extranet.cccco.edu/Portals/1/TRIS/Research/Analysis/PercentagePointGapMethod2017.pdf

Ramirez-Faghih, C. & Fuller, R. (2017). *Gauging student equity: Methods for measuring disproportionate impact*. Presented at the annual meeting of the California Association for Institutional Research (CAIR), Concord, CA

# Examples of Good Practice

- Norco College SEP
  - found an **overall PI for veterans' access of .35**.
  - However, also examined the disproportionate impact of veterans status broken out by gender.
    - Male : PI = .32
    - Female: PI = 1.35



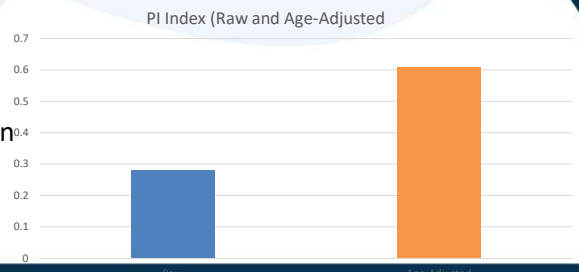

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At Norco College, instead of disaggregating by age, they disaggregated by gender. They found that whereas there was substantial disproportionate impact for male veterans, female veterans were actually more likely to be enrolled that expected.

Why? On average, veterans are significantly older than the typical college student. However, because of changes in the demographics of our armed services over the years, the average female veteran is likely to be much younger (and thus more likely to be in the peak college-going age range).

## Examples of Good Practice

- Irvine Valley College SEP
  - **found an overall PI for veterans' access of .28**.
    - IVC: 1.6% Veterans vs Service Area: 5.5% Veterans
    - But only 1% of 18-34 Year Olds are Veterans
    - 23% of those 75+ are Veterans
      - **51%** of males 75+
  - Adjusted for age: **PI = .61**
    - "If the age structure of the veteran population looked like that of our students, what would the PI be?"

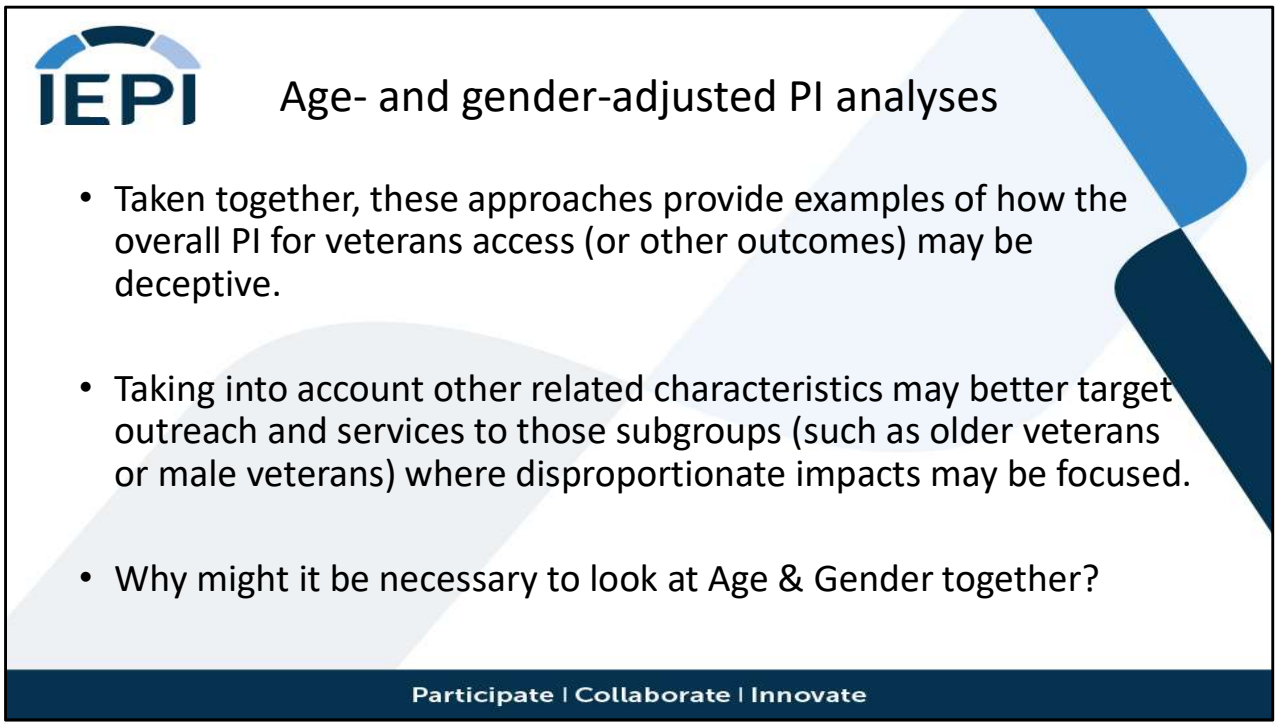



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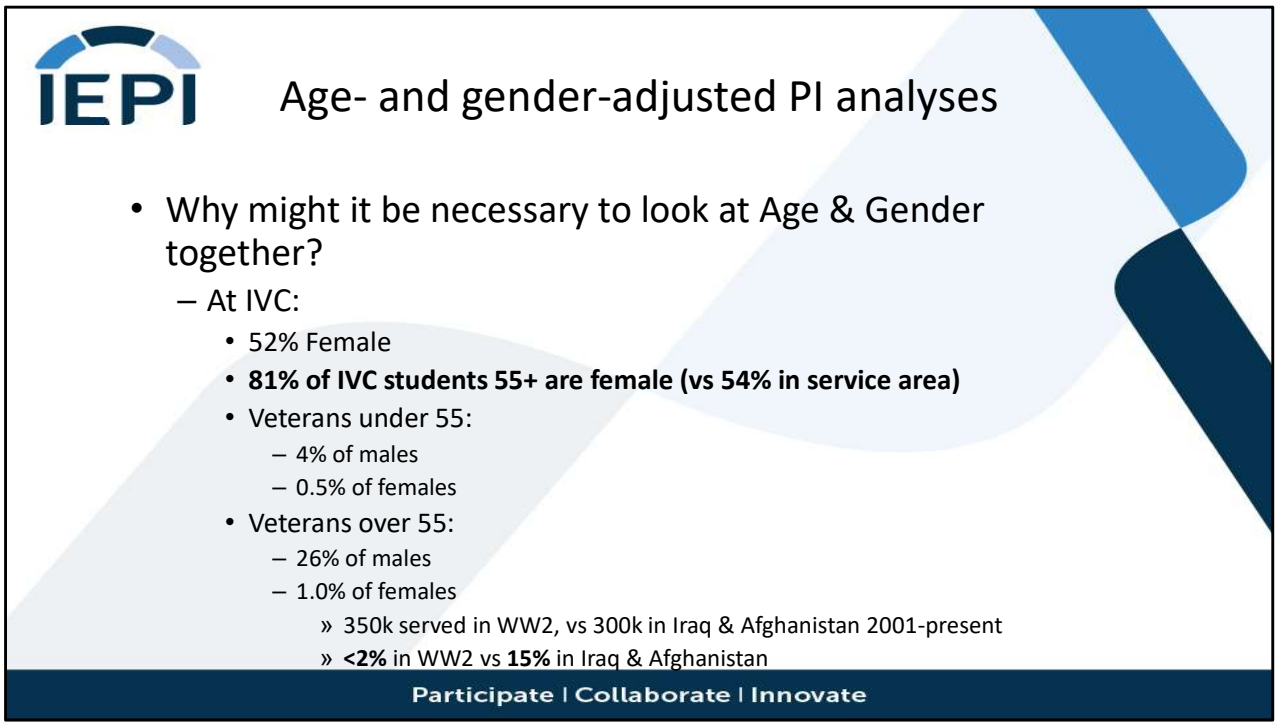
Similar the San Mateo, in their Student Equity Plan, Irvine Valley College disaggregated by age. However, IVC then "adjusted for age" to create a single measure of disproportionate impact, rather than several measures of DI for each age group. What does this mean? Adjusting for age means to answer the question: "if the age structure of the veteran population looked like that of our students, what would the PI be?" This creates a single metric that gives an overall picture of what veterans access looks like, taking into account the very different age structures of the veteran and college-going populations.

Adjusting for age leads to a significantly reduced disproportionate impact gap, from .28 to .61. Although this still was below the DI cut-off in the SEP plan of .70, it is a significantly smaller gap than the raw number would suggest.

*Note*. As of 11/2017, the chancellor's office has indicated that even PI values of 0.89 may be indicative of disproportionate impact (Ramirez-Faghih & Fuller, 2017). For additional information, see the sources list

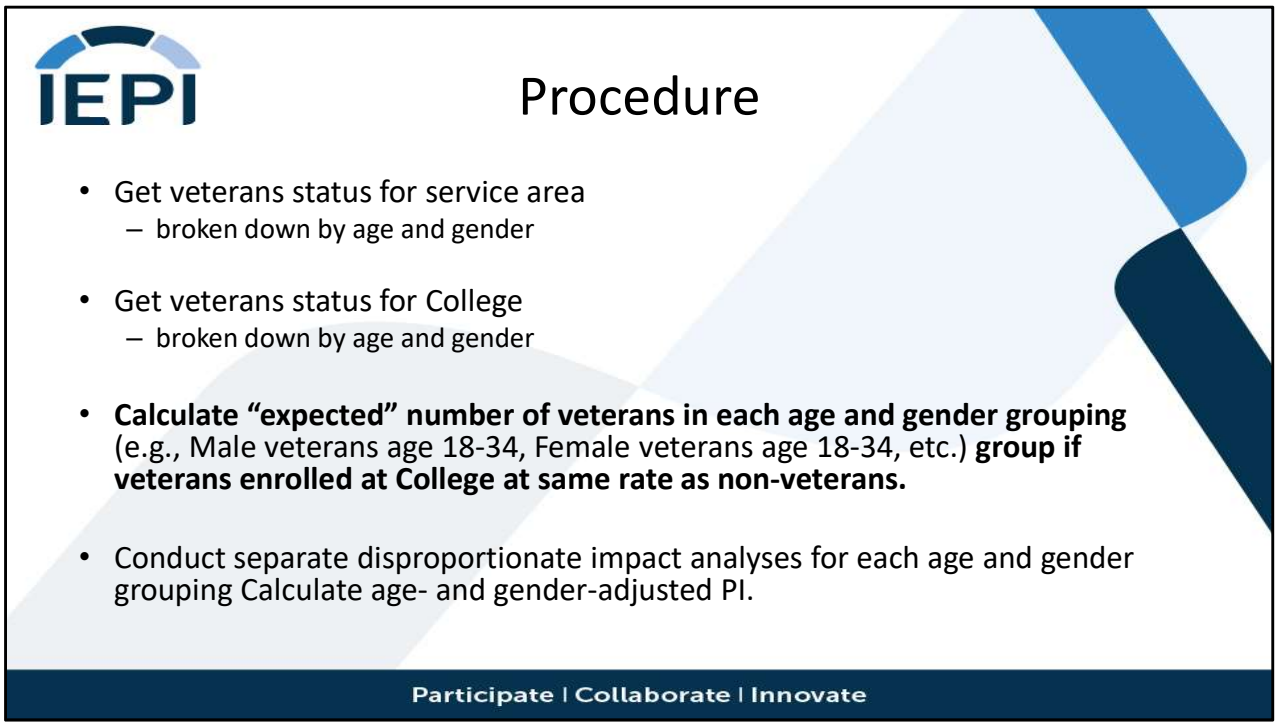



Why might it be necessary to look at Age and Gender together? Veterans are not just older than the college students, on average. They are also much more likely to be male, whereas college students are more likely to be female, and older college students in particular are more likely to be female.




As an example, at IVC, 52% of students are female, but 81% of students 55 and older are female (versus 54% of the 55 and older population in the area). Among veterans under 55, there are 1/8$^{th}$ as many females as males. However, among veterans 55 and older, there are only 1/26th as many females as males. Thus, whereas 81% of college students 55 and older are female, only 4% of veterans 55 and older are veterans. Not taking this into account may lead to a skewed perspective of veterans access, especially among the population of life-long learners.

Fun fact: Although the percentage of female veterans have been increasing over time, in absolute numbers there were more women in the armed services in WW2 than in Iraq and Afghanistan combined. But there were over 16 million people in the military in WW 2, versus 2 million in Iraq and Afghanistan, so their proportion of all members of the military has increased substantially over time.

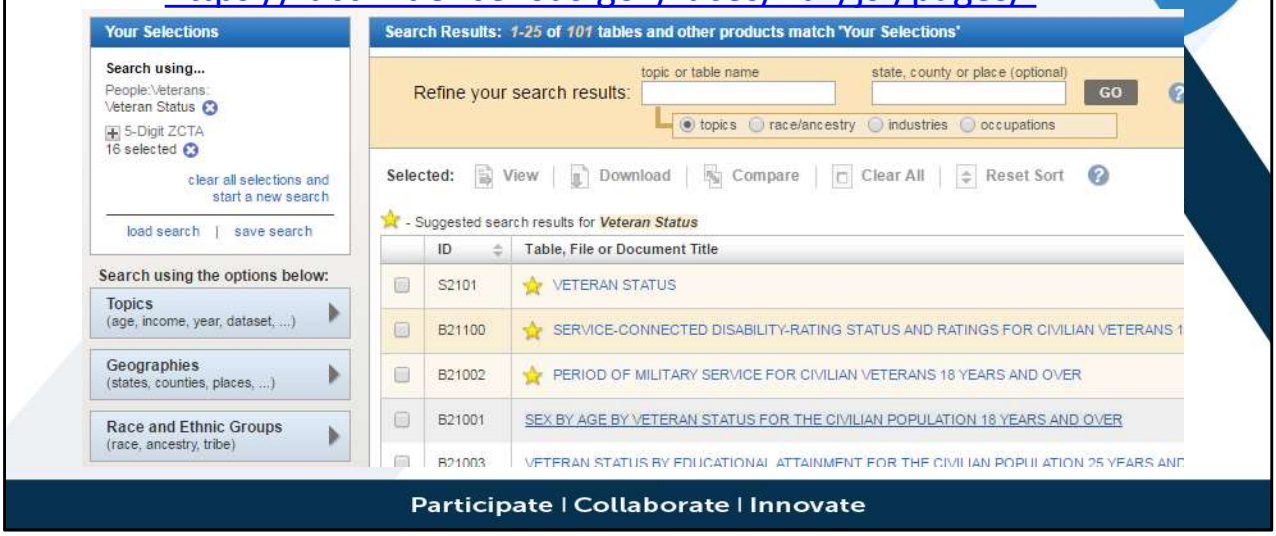



This procedure for determining age- and gender-adjusted disproportionate impact in veterans access will be broken down over the next few slides.

Although these slides show how to determine proportionality index, the same procedures can be used to determine the Percentage Point Gap.

# American Factfinder

- https://factfinder.census.gov/faces/nav/jsf/pages/i




First, go to the American Factfinder advanced search. This has data from the Census and from the yearly American Community Survey that is conducted by the Census Bureau.

Under the American Factfinder Advanced Search:

Select **Data**
Select **Data Tools and Apps**
Select **American FactFinder**
Select **Advanced Search**

Then select the geographic areas that make up your service area:

Select **Geographies**
Select **Name** tab
Under the Geography Filter Options, select "**ZipCode/ZCTA**" under the Geographic type category
Under the Geography Filter Options, select "**Within State**" California
Under the Geography Filter Options, select "Within County" your *County*
Manually select the zip codes for your *Community College Service Area*

Close out the **Geographies** window

Then select the Veteran Status topic:

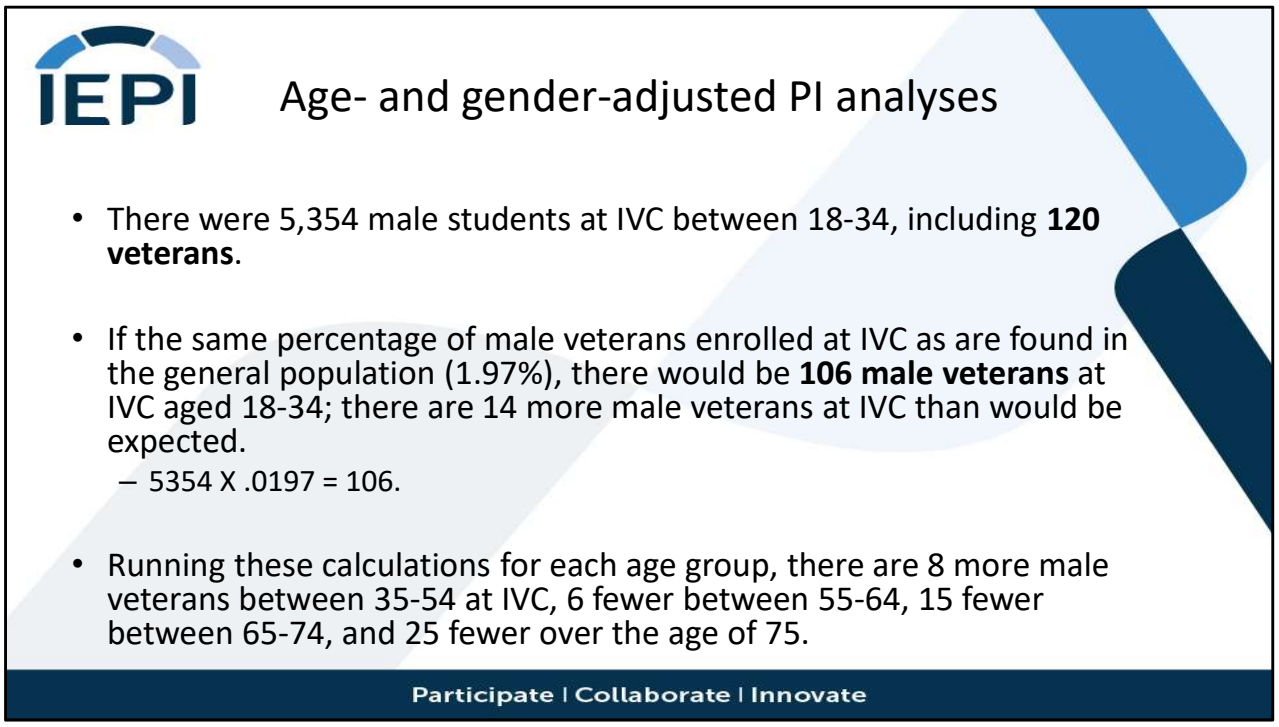
Select **Topics**
Select **People**
Select **Veterans**
Select **Veteran Status**

Close out the **Topics** window

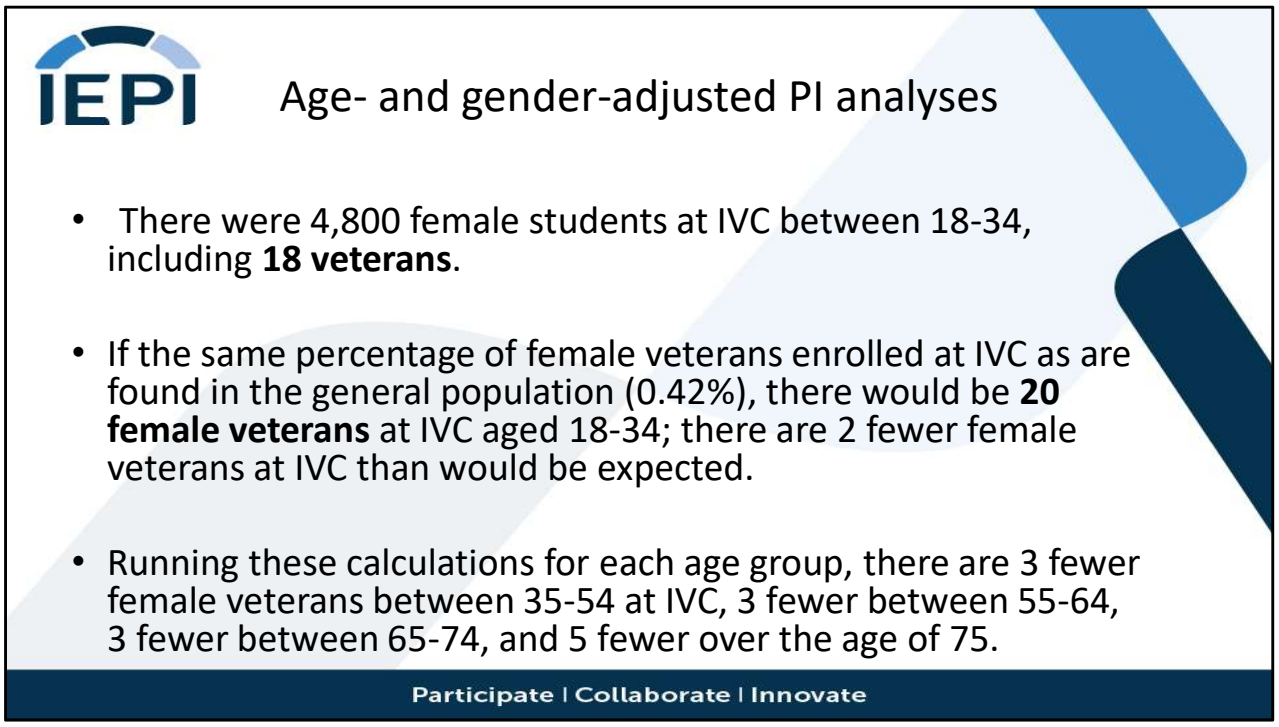
Then select table and download data:

Select **B21001** (most recent 5 year estimate)
Select **Download**

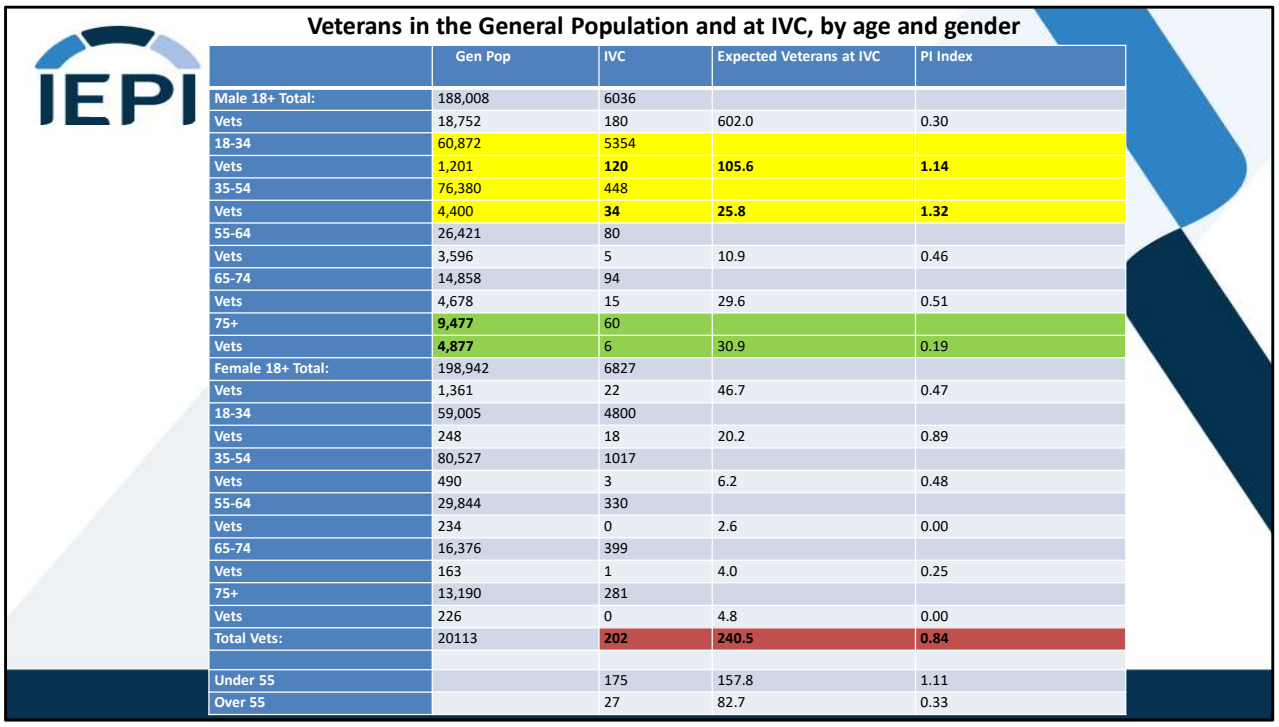
Each report pulled from Fact Finder has to be condensed, cleaned and manipulated by a campus institutional researcher. Also, the estimates for each population (age, gender, veteran status) had to be summed across for each zip code.




There were 1,201 male veterans between 18-34 in the IVC service area (according to the American Community Survey data), out of a total population of 60,872 males 18-34. Male veterans are 1,201/60,872, or 1.97%, of the total population of 18-34 year old males.




There were 248 female veterans between 18-34 in the IVC service area (according to the American Community Survey data), out of a total population of 59,005 females 18-34. Female veterans are 248/59,005, or 0.42%, of the total population of 18-34 year old females.



**Veterans in the General Population and at IVC, by age and gender**

| | Gen Pop | IVC | Expected Veterans at IVC | PI Index |
|---|---|---|---|---|
| Male 18+ Total: | 188,008 | 6036 | | |
| Vets | 18,752 | 180 | 602.0 | 0.30 |
| 18-34 | 60,872 | 5354 | | |
| Vets | 1,201 | **120** | **105.6** | **1.14** |
| 35-54 | 76,380 | 448 | | |
| Vets | 4,400 | **34** | **25.8** | **1.32** |
| 55-64 | 26,421 | 80 | | |
| Vets | 3,596 | 5 | 10.9 | 0.46 |
| 65-74 | 14,858 | 94 | | |
| Vets | 4,678 | 15 | 29.6 | 0.51 |
| 75+ | **9,477** | 60 | | |
| Vets | **4,877** | 6 | 30.9 | 0.19 |
| Female 18+ Total: | 198,942 | 6827 | | |
| Vets | 1,361 | 22 | 46.7 | 0.47 |
| 18-34 | 59,005 | 4800 | | |
| Vets | 248 | 18 | 20.2 | 0.89 |
| 35-54 | 80,527 | 1017 | | |
| Vets | 490 | 3 | 6.2 | 0.48 |
| 55-64 | 29,844 | 330 | | |
| Vets | 234 | 0 | 2.6 | 0.00 |
| 65-74 | 16,376 | 399 | | |
| Vets | 163 | 1 | 4.0 | 0.25 |
| 75+ | 13,190 | 281 | | |
| Vets | 226 | 0 | 4.8 | 0.00 |
| Total Vets: | 20113 | **202** | **240.5** | **0.84** |
| | | | | |
| Under 55 | | 175 | 157.8 | 1.11 |
| Over 55 | | 27 | 82.7 | 0.33 |

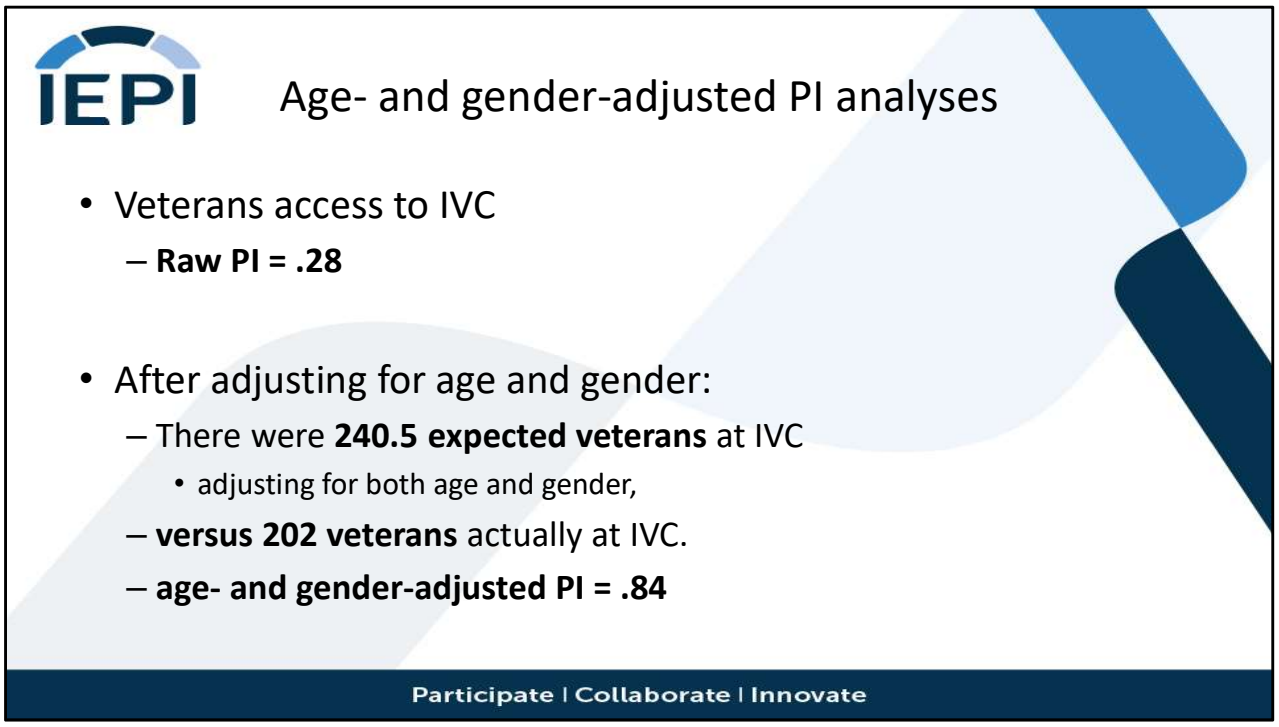
This is what the complete table used would look like.

*Note*. As of 11/2017, the chancellor's office as adopted the Percentage Point Gap method as the standard method by which to examine disproportionate impact (CCCCO, 2017; Ramirez & Fuller, 2017), due to the passage of AB 504. For additional information, see the sources listed below and/or *Using Disproportionate Impact Methods to Identify Equity Gaps* (Sosa, 2017), posted on the Professional Learning Network's website.

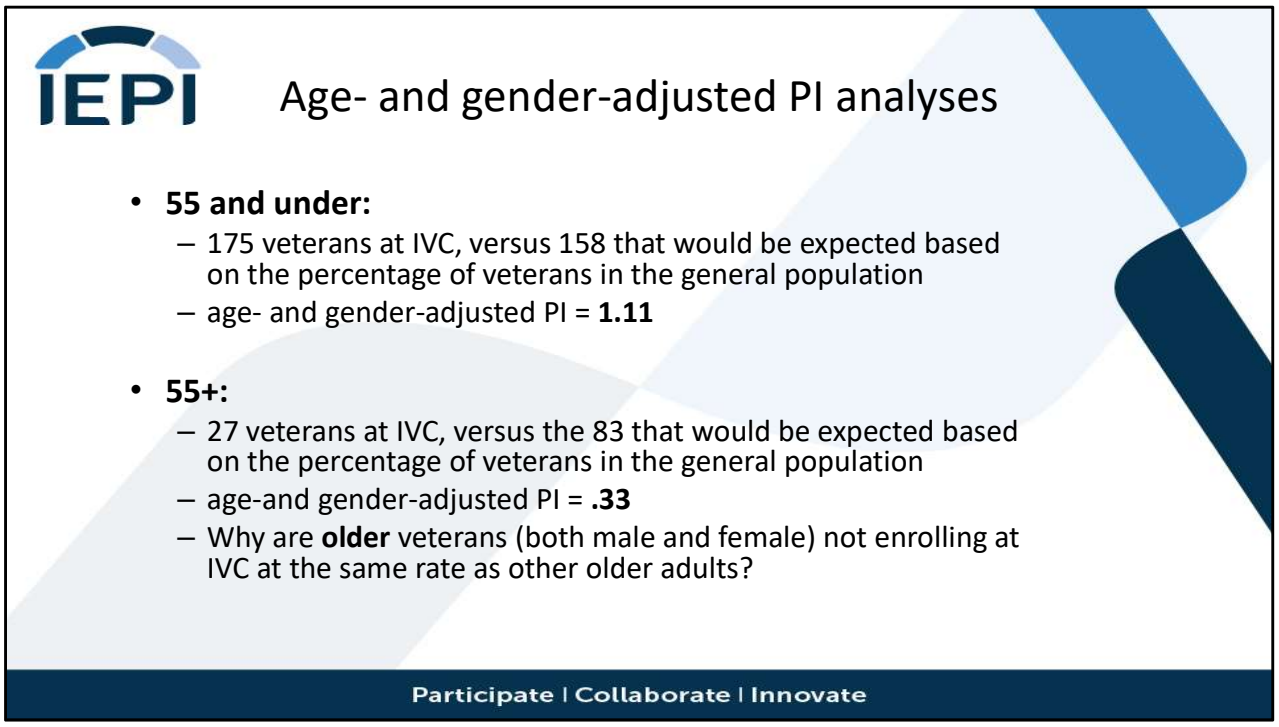
References

California Community Colleges Chancellor's Office (2017). *Percentage point gap method*. Retrieved from http://extranet.cccco.edu/Portals/1/TRIS/Research/Analysis/PercentagePointGapMethod2017.pdf

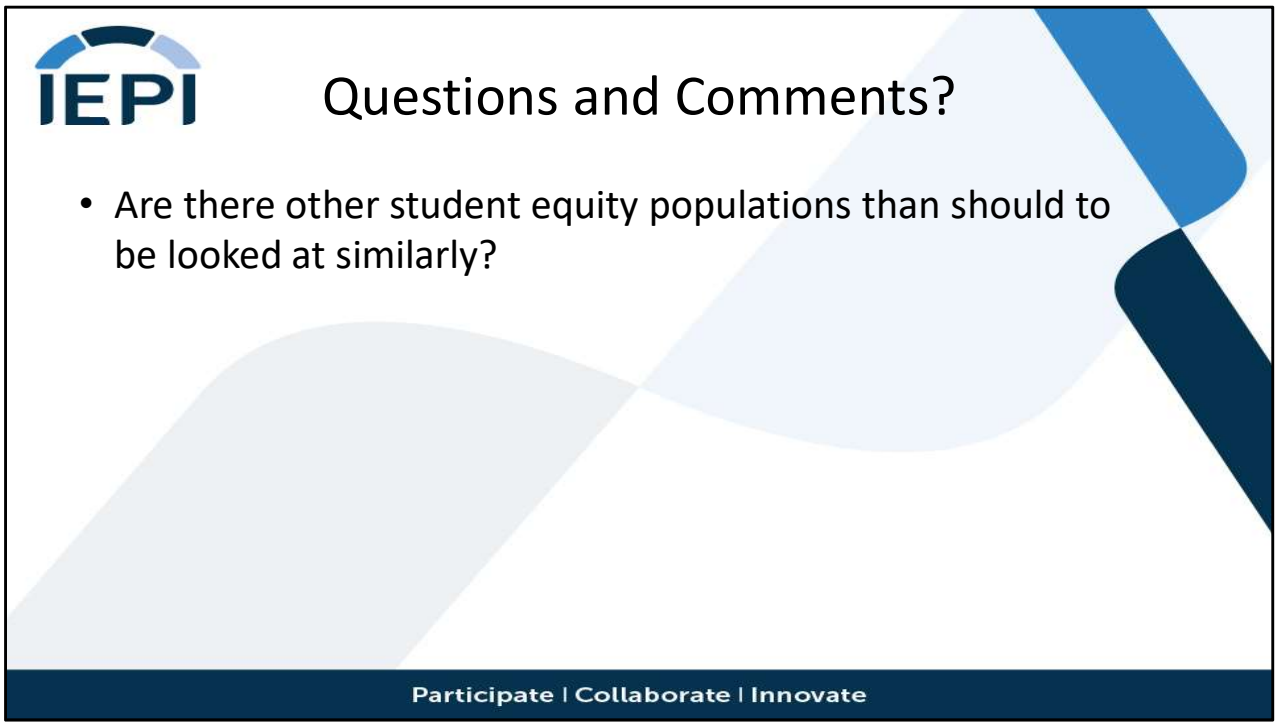
Ramirez-Faghih, C. & Fuller, R. (2017). *Gauging student equity: Methods for measuring disproportionate impact*. Presented at the annual meeting of the California Association for Institutional Research (CAIR), Concord, CA.




After adjusting for age and gender, the proportionality index is .84, which is above the cut-off for severe disproportionate impact (but still indicates moderate disproportionate impact).




Importantly, disaggregating in this way allows us to "re-aggregate" in other ways. For instance, we can re-combine the number of veterans under 55, versus the expected number of veterans in each of the cells that make up this group (males 18-34, males 35-54, females 18-34, females 35-54). By doing this, we can see that veterans under 55 are actually slightly overrepresented in the population. However, there are still substantially fewer veterans 55 and older than we would expect. However, this would suggest a very different type of outreach effort (geared towards Emeritus/life-long learning) than the overall raw DI would have led us to believe.




For questions or follow-up please contact Jared Lessard (gilgamesh80@gmail.com).