WUSM Faculty Pay Equity Study
2018 (FY’16 data)

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Associate Dean for Faculty Affairs
Co-Project Manager
FSC March 2019
Past Faculty Pay Equity Studies - WUSM

• 1990
• 1995
• 2002: data 1999
• 2004: data 2003
• 2010: data 2006-08
• All demonstrated lower compensation for women as compared to men although various conclusions were reached as to significance of the differences
• Race & ethnic differences were considered starting in 2004 study: no significant differences
Key Project Steps & Study Methodology

• Central admin discussions began - late 2014
• Pilot comp analysis using Adult Cardiology Division -2015
• Consulting firms solicited – late 2016
• Willis Towers Watson (WTW) selected & contract finalized – spring 2017
• Central Finance Office built central data base for FY2014-16
• Study used compensation data from FY 2016
• Consulting Work Group and School Steering Committee formed – see next slide
• Leadership of both groups
  – Mary Corcoran
  – Diana Gray
  – Rick Stanton
Steering Committee for Gender Pay Equity Study
first meeting fall of 2017 – provided feedback and endorsed proposal for study

Administrators
Diana Gray – Project Manager
David Perlmutter
Rick Stanton
Mary Corcoran – Project Manager
Jenny Lodge

Dept Heads
Vicky Fraser
Tim Eberlein
Alex Evers
Dave Holtzman
Chuck Zorumski
Dave Piston
Todd Margolis

Program Director
Gammon Earhart – Program Director, Physical Therapy

Faculty Members
Gender Equity Committee – Dayna Early MD & Tammy Hershey
Arghavan Salles, MD, PhD (Surgery)
Amber Salter, PhD
AWN leadership – Tammy Hershey
ECFC – Paul Bridgman, Dayna Early
Faculty Diversity Committee – Will Ross & Chair – Yumi Turmelle

Office of General Counsel
John Powers
Joe Sklansky
Key Project Steps & Study Methodology - continued

• First draft report from WTW
  – Data problems & idiosyncrasies identified and reconciled eg:
    • VA faculty, FTE <10%, Partial year hires & departures, instructors

• 2008 methodology reconstructed

• Analysis comparing 2016 & 2008 methods

• Additional data provided by WTW – June 2018
Variables Selected for a well specified regression model to evaluate equity in compensation

- Should include faculty attributes commonly used to establish salaries
- Available in Central Database
- For faculty salary equity studies:
  - Educational attainment
  - Experience
  - Discipline or specialty
  - Academic rank
  - Merit
  - Productivity
- Centrally available variables have been significantly enhanced in recent years
Independent (predictor) Variables tested for inclusion in the model included:

- AAMC Sub-specialty
- Division
- Department
- Age
- Highest Degree
- Rank
- Admin Role
- Years since highest degree
- Years at WU
- Years in Rank
- Years Pre Faculty at WU
- Tenure
- FTE
- PI
- Track
- Collections

- AAMC Market
- RVU
- Awards New Money
- Patents
- Agreements
- Invention disclosures
- Number of Publications and Citations
- H Index
- M and V Values
- First, Sole and Last Authors
- Awarded Proposals
- Submitted Proposals
- Direct and Indirect Expenses
- Mandatory and Voluntary Cost Share
- Research MTDC
- Wet Lab
- Other Occupied Space
- Total Occupied Space
- Clinician RVU and Clinician Collections
- Non-clinician Other Performance Metrics
## Results

**Faculty Data: all employed faculty ≥ 0.5 FTE at rank of ≥ Assistant Professor**

<table>
<thead>
<tr>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,630</td>
<td>1,060</td>
<td>570</td>
</tr>
<tr>
<td></td>
<td>65%</td>
<td>35%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Faculty</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian/AK Native</td>
<td>2</td>
<td>0.1%</td>
</tr>
<tr>
<td>Asian</td>
<td>290</td>
<td>17.8%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>40</td>
<td>2.5%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>38</td>
<td>2.3%</td>
</tr>
<tr>
<td>Nat Hawaiian/Pacific Island</td>
<td>3</td>
<td>0.2%</td>
</tr>
<tr>
<td>Two or More Races</td>
<td>6</td>
<td>0.4%</td>
</tr>
<tr>
<td>Caucasian</td>
<td>1,251</td>
<td>76.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,630</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
DEFINITIONS:

Please note that on the following slides and the subsequent analysis:

‘Base Pay’ means ‘X’ and ‘Y’ compensation

‘Total Compensation’ includes ‘Base Pay’ as well as ‘Z’ and any other compensation paid to faculty

The ‘unadjusted’ and ‘actual’ data indicate pay and compensation means, differences and/or other salary data for which all the variables that should legitimately determine compensation (ie. subspecialty, rank, productivity and experience metrics) have not yet been considered.

The term “adjusted” to modify salary data and differences indicates that all such appropriate compensation variables in the multivariate regression model have been utilized to account for differences in market forces, productivity and experience that should be taken into account in any valid pay equity study.

The term ‘unpredicted variation’ reflects the nonstandard variations between gender and/or ethnicity that are not explained by the legitimate compensation criteria reflected in the multivariate regression analysis.
Multivariate Logistic Regression Results

• For **Annual Salary** results: the variables in the regression equation accounted for 83% of the variation ($R^2 = 0.83$)

• For **Total Compensation**: the variables accounted for 84% of the variation ($R^2 = 0.84$)

• Unexplained pay gap for women compared to men = - 2.87%
• Unexplained pay gap for Asian compared to white = 0.95%
• Unexplained pay gap for URiM compared to white = - 1.7%
BASIC FINDINGS for 2016 data set

Willis Towers Watson does NOT do an analysis where the independent variable is gender or ethnicity. They believe that these are not measures that should be used to determine compensation and that to do so would be contrary to Generally Accepted Industry Practice.

The firm analyzed the variables that contribute to compensation, and examined the variation between actual and predicted results. The report describes the variations/differences by gender and ethnicity.

In the WTW slides, WTW presents those variations and concludes that the presented variations are within the predicted range.

The Working Group has examined the variation between actual and predicted compensation for the differing genders and ethnicities and identifies what it is classifying as the variation unexplained by specific variables contributing to compensation:

The Gender/Ethnicity gap:

<table>
<thead>
<tr>
<th>Unpredicted Variation</th>
<th>Base Pay</th>
<th>Total Cash Comp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male/Female</td>
<td>1.48%</td>
<td>2.87%</td>
</tr>
<tr>
<td>White/Asian</td>
<td>1.03%</td>
<td>0.95%</td>
</tr>
<tr>
<td>White to Underrepresented</td>
<td>0.67%</td>
<td>1.66%</td>
</tr>
</tbody>
</table>
Predictive Variables – statistically significant

**Experience**
- Highest Degree
- Rank
- Tenure
- Years Pre Faculty at WU
- Admin Role
- Part-time employment

**Market Forces**
- AAMC medical or scientific field
- Department/Division
- Faculty Track

**Performance metrics**
- RVU
- Collections
- Awards New Money
- Invention disclosures
- M and V Values
- Last Authors
- Awarded Proposals
- Submitted Proposals
- Mandatory Cost Share
- Total Occupied Space
Decomposition of Actual Mean Difference in Base Pay and Total Cash

Starting from the variation described earlier that Female Annual Salary, after accounting for measurable variables is 1.5% below Male on Base Pay; and 2.9% below on Total Cash compensation, the major measurable elements from the model that describe the differences include:

**For Average Pay:**
- Rank and Tenure: 42% of the difference
- Department/Division/AAMC subspecialty: 24% of the difference
- Administrative role: 13% of the difference
- Performance metrics: 23% of the difference

**For Total Cash Compensation**
- Rank and Tenure: 37% of the difference
- Department/Division/AAMC subspecialty: 23% of the difference
- Administrative role: 9% of the difference
- Performance metrics: 28% of the difference

*Other less significant elements contributing to or reducing the gap include Highest Degree, Part Time, Non- Clinician Track and Experience.*
### Actual Mean Compensation

<table>
<thead>
<tr>
<th>Role</th>
<th>2016 Total Comp</th>
<th>2008 Total Comp</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>228,914</td>
<td>223,269</td>
<td></td>
</tr>
<tr>
<td>Assistant</td>
<td>181,944</td>
<td>179,168</td>
<td>159,672 27.4%</td>
</tr>
<tr>
<td>Associate</td>
<td>209,445</td>
<td>211,923</td>
<td>174,867 20.3%</td>
</tr>
<tr>
<td>Professor</td>
<td>274,692</td>
<td>275,457</td>
<td>198,981 23.2%</td>
</tr>
<tr>
<td>Chief</td>
<td>364,077</td>
<td></td>
<td>302,389 20.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Role</th>
<th>2016 Gap</th>
<th>2008 Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>179,692 27.4%</td>
<td>159,672 39.8%</td>
</tr>
<tr>
<td>Assistant</td>
<td>166,332 9.4%</td>
<td>141,137 26.9%</td>
</tr>
<tr>
<td>Associate</td>
<td>174,165 20.3%</td>
<td>174,867 21.2%</td>
</tr>
<tr>
<td>Professor</td>
<td>222,907 23.2%</td>
<td>198,981 38.4%</td>
</tr>
<tr>
<td>Chief</td>
<td>302,389 20.4%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race</th>
<th>2016 Total Comp</th>
<th>2008 Total Comp</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>217,547</td>
<td>209,264</td>
<td></td>
</tr>
<tr>
<td>URM</td>
<td>205,391</td>
<td>210,587</td>
<td>-0.6%</td>
</tr>
<tr>
<td>Asian</td>
<td>183,172</td>
<td>182,247</td>
<td>14.8%</td>
</tr>
</tbody>
</table>

**PLEASE NOTE DEFINITIONS ON SLIDE 6**
The study also identified the unadjusted differences in mean annual salary and total cash compensation:

### Differences in Actual Means

<table>
<thead>
<tr>
<th></th>
<th>Base Pay</th>
<th>Total Cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male/Female</td>
<td>21.69%</td>
<td>27.39%</td>
</tr>
<tr>
<td>White/Asian</td>
<td>6.00%</td>
<td>5.59%</td>
</tr>
<tr>
<td>White to Underrepresented</td>
<td>14.77%</td>
<td>15.80%</td>
</tr>
</tbody>
</table>

### Context: Total Compensation Gap by Gender after Applying a Payment Model

#### Unpredicted Variation Male/Female

- 1990 WUSM study 5.72%
- 2000 WUSM study 4.17%
- 2003 WUSM study 3.00%
- 2008 WUSM study 4.00%
- 2016 JAMA study* 8.70%
- 2016 WUSM study 2.87%

### Differences in Actual Means

- 32.6%
- 39.8%
- 27.3%
- 27.4%

**PLEASE NOTE DEFINITIONS ON SLIDE 6**
**Faculty Total Paid Compensation Per Month: All forms**  
*Data from HRMS*

**Calculated monthly: 12 month rolling averages**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>238,587</td>
<td>243,210</td>
<td>241,011</td>
<td>248,852</td>
<td>260,623</td>
<td>269,473</td>
</tr>
<tr>
<td>Female</td>
<td>166,992</td>
<td>173,055</td>
<td>175,554</td>
<td>182,335</td>
<td>191,848</td>
<td>204,427</td>
</tr>
<tr>
<td>Male/Female</td>
<td>42.9%</td>
<td>40.5%</td>
<td>37.3%</td>
<td>36.5%</td>
<td>35.8%</td>
<td>31.8%</td>
</tr>
</tbody>
</table>

**Yr/Yr Increases**

<table>
<thead>
<tr>
<th></th>
<th>1.9%</th>
<th>-0.9%</th>
<th>3.3%</th>
<th>4.7%</th>
<th>3.4%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>3.6%</td>
<td>1.4%</td>
<td>3.9%</td>
<td>5.2%</td>
<td>6.6%</td>
</tr>
</tbody>
</table>

Percentage increases from June 2013 thru September 2019

<table>
<thead>
<tr>
<th></th>
<th>All Faculty</th>
<th>Female Faculty</th>
<th>Male Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headcount Compensation</td>
<td>25.5%</td>
<td>45.1%</td>
<td>16.5%</td>
</tr>
<tr>
<td>Average annual Compensation &lt;&gt;</td>
<td>14.1%</td>
<td>22.1%</td>
<td>13.2%</td>
</tr>
</tbody>
</table>
Annual Faculty Compensation Reviews

Since FY 2012, the Dean’s Office has comprehensively reviewed each department’s proposed annual salary increases every spring.

Data reviewed includes:

- Department
- Division
- Subspecialty
- Rank
- Track
- Degree
- Hire Date
- Years in Rank
- Gender
- Prior WUSM and VA pay
- Prior Bonuses
- Proposed Increase

Mid Year Increases for promotions, retention, market or equity are individually reviewed and approved by the Dean’s Office.

All bonus payments are reviewed and approved by the Dean’s Office for consistency with departmental compensation plans or extraordinary justifications.
Discussion

• Women & URM continue to lag Caucasian men in all sectors of the labor market

• Gender pay gap constant over past 15 years
  – 2017 – women/men = 82% (Pew Research Center)

• Much of the differential can be explained by measurable factors: educational attainment, occupational segregation & work experience

• Care-giving responsibilities also contribute for women (4/10 mothers having taken time away from work) Vs many fewer men

• Gender discrimination continues to play some role
  – contribution difficult to define
Physician salary differences by sex in 24 US public medical schools.
N = 10,241 (35% women)

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean sal</td>
<td>257,957 (SD=137,202)</td>
<td>206,641 (SD=88,238)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Assistant Prof</td>
<td>2516 (37.6%)</td>
<td>1963 (55.3%)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Associate Prof</td>
<td>1633 (24.4%)</td>
<td>869 (24.5%)</td>
<td>.93</td>
</tr>
<tr>
<td>Full Prof</td>
<td>2543 (38.0%)</td>
<td>717 (20.2%)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

**Age** – men significantly older at upper ranks

**Subspeciality** – significantly more men in higher paying specialties

**Publications** –

- first or last author: 17.1 vs. 8.6, <.001
- >1 NIH grant: 16.1% vs. 11.6%, <.001
- Medicare payments: $52,320 vs. $38,409, <.001

Women significantly younger at lower ranks

Significantly more women in many lower paying specialties

*JAMA Inter Med 2016;176(9):1294-1304*
Conclusions

• Findings of the current study are c/w most of WUSM’s past faculty pay equity studies:
  – Compensation for women < men
  – MV logistic regression reveals modest differences overall and improvement since study of 2010
  – Differences in comp between women & men explained in large part by variables in the study
  – URiM groups compared to majority -> minor differences (some + & some -)
• Also c/w results from other medical schools
  – JAMA Int Med 2016 – slide #19 in handout

• Many potential confounders for such a study
• No attempt to explain rationale behind differences, only to find if differences exist
• All legitimate predictors of comp can never be included
• Improved central data bases compared to past studies
Communication Plan
Pay Equity Steering Committee – December 12, 2018
Executive Faculty – 1.2.19
Key findings to Academic Women’s Network (AWN) – 1.25.19
Final report posted on OFA website publically viewable - 3.11.19
Executive Committee Faculty Council – 3.12.19
Faculty Senate Council – 3.26.19
AWN Board – 3.29.19
AWN Spring Dinner – 5.14.19
Other groups as requested

Next Steps
• Review departmental & individual residual differences with each dept/program chief
• Dean will continue addressing compensation equity with department and program chiefs to:
  – Correct or justify outliers
  – Develop & execute plans to eliminate unexplained variations around gender, race/ethnicity
• Update study with FY’18 data
  – Rerun regression with and without some of the variables that may be more biased or without merit in compensation setting
• Update study at the end of each academic year
  – Expectation that “unexplained” variations will not persist