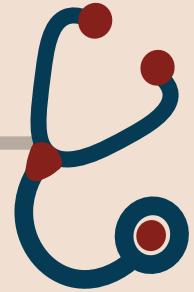




MEDICAL AND PREMEDICAL STUDENT DIVISIONS

# SEX AND GENDER HEALTH COLLABORATIVE



# What is the Sex and Gender Health Collaborative?

## Better Healthcare For All

We are an organization whose vision is to integrate sex and gender knowledge into medical education and clinical practice to improve healthcare for all. Our goals include increasing awareness about the importance of sex and gender specific medicine, providing evidence based sex and gender educational resources, and promoting sex and gender related collaborations.

# Definitions

## Sex

Refers to biological differences: e.g., chromosomes, reproductive, and hormonal differences between males and females.



## Gender

The socially constructed and enacted roles and behaviors for men and women which occur in a historical, social, and cultural context.

# Sex and Gender Specific Medicine



**Applies the science of biology,  
environmental, and social  
influences onto health and  
illness, and takes the whole  
person into account**

# What does Sex and Gender Specific Medicine look like?



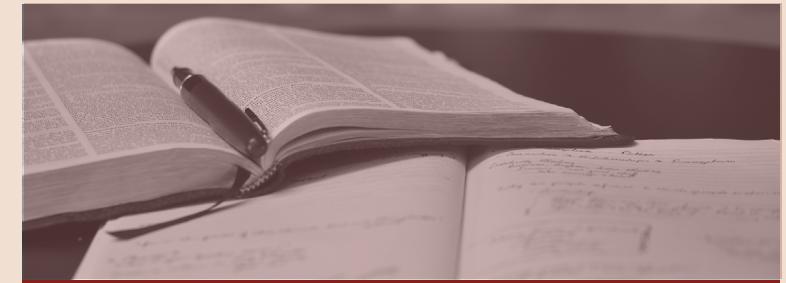
## BASIC SCIENCE AND CLINICAL RESEARCH

Sex and gender are integrated into research platforms. Data are analyzed and reported by sex and gender. The disaggregation of data by sex provides further evidence for sex and gender medicine.



## CLINICAL PRACTICE

Practitioners consider sex and gender when forming diagnoses and choosing treatment options.



## MEDICAL EDUCATION

Educate current and future generations of practitioners to view diagnosis and treatment from a sex and gender lens

# Relevance in Medical Education

**94%**

OF STUDENTS IN A 2015 U.S. NATIONAL SURVEY  
STATED THAT SEX AND GENDER SHOULD BE  
INCLUDED IN MEDICAL CURRICULUM

**70%**

DID NOT HAVE A FORMAL SEX AND GENDER  
INTEGRATED MEDICAL CURRICULUM



# Examples of Sex and Gender Discrepancies in Healthcare

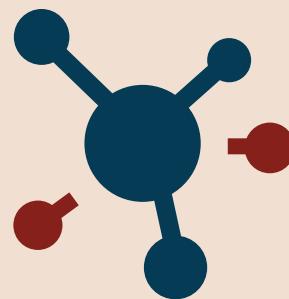
## + Bias in Research Models

80% of animal trials are done on male models

## + Drug Efficacy and Safety

In 8 of 10 FDA discontinued medications, women experienced the majority of side effects, including death

# Bias in Research Models

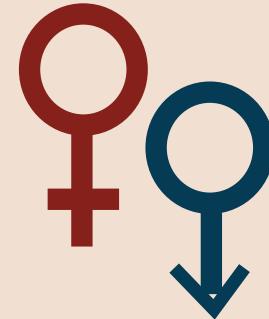


**Sex Unspecified**  
76%

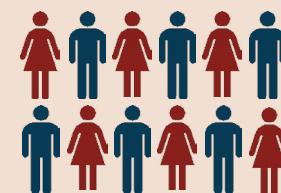
Song et al, J of WH (2015)



**Male Models**  
80%



**Men**  
67%



**Women**  
51% of  
Population

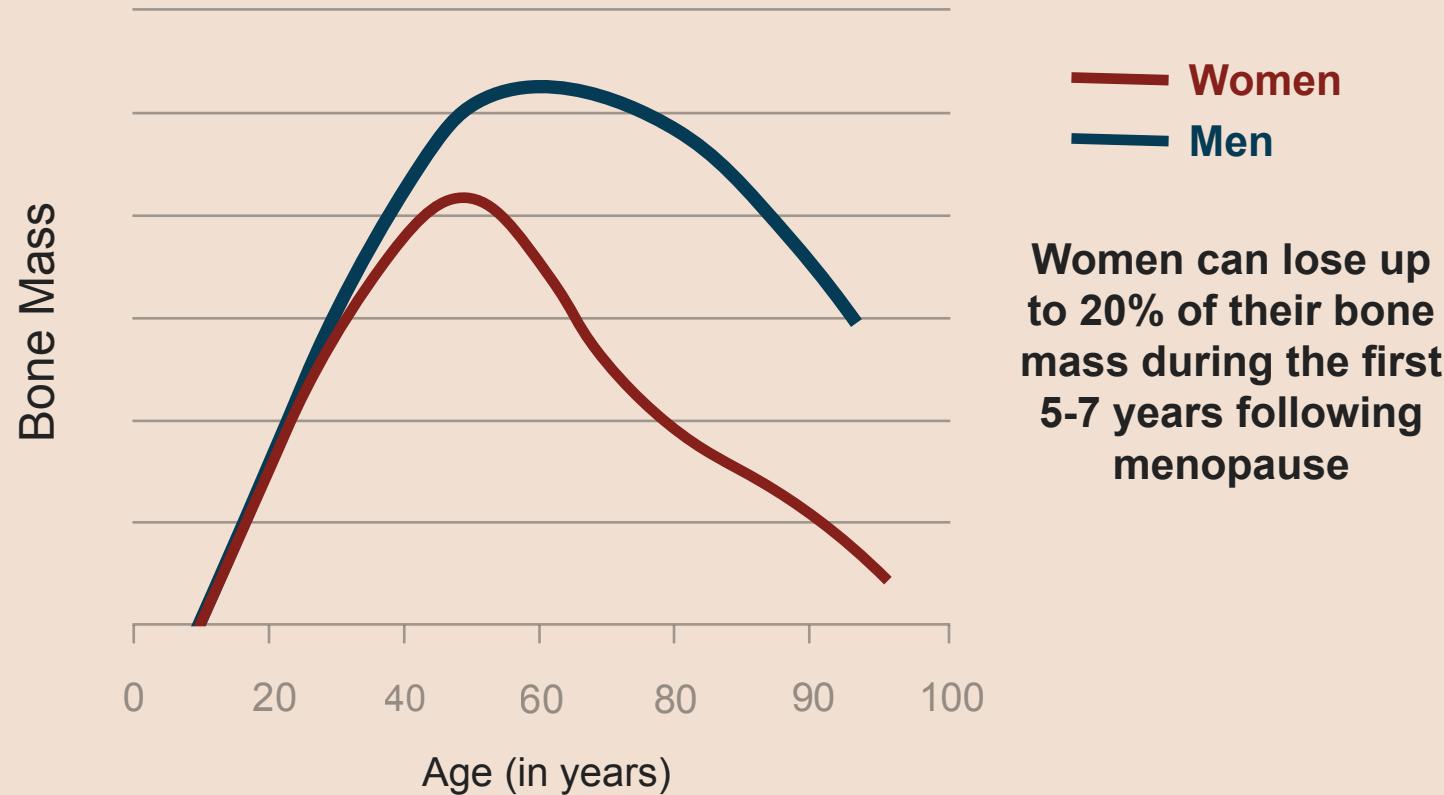


**Women**  
80% of Healthcare  
Decisions

# Osteoporosis

## Not just a women's health problem

### Rapid Bone Loss at Menopause



**Women can lose up to 20% of their bone mass during the first 5-7 years following menopause**

### Sex Differences

- » After age 30, bone resorption exceeds bone formation in men and women

- » Females lose bone mass earlier than males

- » Females lose bone mass at a higher rate than males



- » Males have a higher peak bone mass than females

# Osteoporosis Screening Guidelines

## Sex Gender-Based Guidelines

### Women

All women age 65 and older should be screened for osteoporosis

Postmenopausal women <65 with 1 or more risk factors should be screened

### Age

### Risk Factors

#### Risk Factors Include

Family history of osteoporosis  
Low calcium or vitamin D  
Lack of exercise  
Smoking  
Certain medications

### Men

All men age 70 and older should be screened for osteoporosis

Men aged 50-70 with 1 or more risk factors should be screened

### Outcome Differences

» The Dubbo Osteoporosis Epidemiology study demonstrated that even though the risk of fracture may be higher in women compared to men, the mortality rate for men was higher than for women after osteoporotic fracture

- » Mortality after osteoporotic fracture
  - » 48.4% in women
  - » 57.4% in men

# COVID-19

## Sex and Gender Differences



### Sex Differences

- » Less likely to develop severe disease
- » Less likely to die due to Covid-19 complications
- » Fatality rate 1.7%
  
- » More likely to develop severe disease
- » More likely to die due to Covid-19 complications
- » Fatality rate 2.8%
- » 50-80% more likely to die than females after being diagnosed in most countries

### Gender Differences

- » More likely to work in healthcare
- » More likely to be caregivers at home
- » More likely to take precautions against Covid-19
  
- » Higher rates of smoking and tobacco use
- » Higher incidence of chronic illnesses and co-morbidities
- » Take longer to seek help when severely ill

# WHY SHOULD YOU CARE?

HOW DOES  
THIS AFFECT  
MEDICAL,  
PREMEDICAL &  
HEALTH CARE  
PROFESSIONAL  
STUDENTS?

# National Survey of Medical School Faculty and Students



In 2010, 46 Allopathic and Osteopathic U.S. Schools Responded:

**83.1%**  
did not have an integrated women's health curriculum outside of traditional Ob/Gyn

In 2014, 1097 Medical Students Representing 153 Medical Institutions Responded:

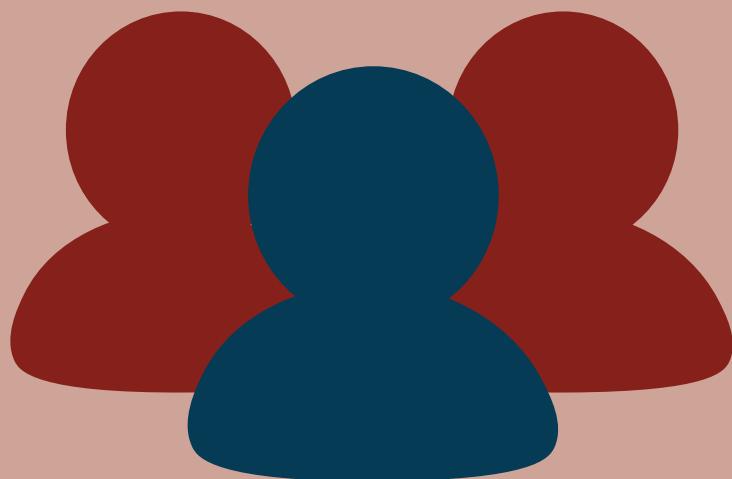
**85.5%**  
were aware of sex and gender differences in medicine

**96%**  
indicated that knowledge of gender differences improved one's ability to manage patients

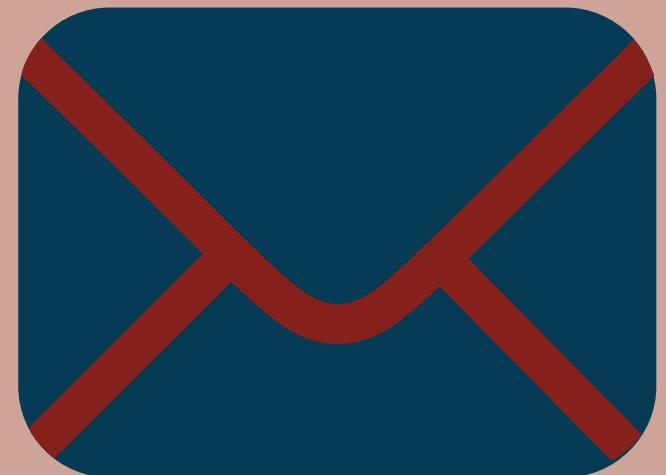
# How to Get Involved as a Premedical or Medical Student



**Visit our Website**  
[amwa-doc.org/sghc/](http://amwa-doc.org/sghc/)



**JOIN US TODAY!**  
[Sign up sheet](#)



**Contact us via E-mail  
with any questions**  
[sghcstudents@amwa-doc.org](mailto:sghcstudents@amwa-doc.org)

# How can I become more informed about evidence based sex and gender differences in medicine?

## National Institute of Health



## TED TALK

## Earn your Certificate in Sex and Gender Health



## Bench to Bedside Learning Modules

[orwh.od.nih.gov/career-development-education/e-learning](http://orwh.od.nih.gov/career-development-education/e-learning)

## Dr. Alyson McGregor on “Why Medicine Often has Dangerous Side Effects for Women”

[youtube.com/watch?v=sJCBM9ajA5s](https://youtube.com/watch?v=sJCBM9ajA5s)

Laura W. Bush Institute for Women's Health offers FREE learning modules in osteoporosis, diabetes, cardiovascular disorders, alcohol use disorder and infectious disease

[sexandgenderhealth.org/menu.html](http://sexandgenderhealth.org/menu.html)

# Where to learn more?

## WEBSITES

### Sex and Gender Health Collaborative

[amwa-doc.org/sghc](http://amwa-doc.org/sghc)

### National Institute of Health Office of Research on Women's Health

[orwh.od.nih.gov/](http://orwh.od.nih.gov/)

### European Society of Gender Health and Medicine

[www.gendermedicine.org](http://www.gendermedicine.org)

### Society for Women's Health Research

[swhr.org](http://swhr.org)

To Learn More or Get Involved  
Visit us at [amwa-doc.org/sghc](http://amwa-doc.org/sghc) or email us at  
[sghcstudents@amwa-doc.org](mailto:sghcstudents@amwa-doc.org)

Source: Laura W. Bush Institute for Women's Health,  
Sex & Gender Specific Health Learning Module  
[sexandgenderhealth.org](http://sexandgenderhealth.org)

