

Additional file 13. SAGER-informed educational framework for curriculum development and delivery

SAGER domain	Key considerations (original guideline)	Application in Summer Institute curriculum (educational adaptation)	Associated teaching and learning strategies
1. Study design	Consider sex and gender in framing research questions, conceptualization, and study design	Used to guide discussion on how sex, gender, and intersectionality shape research questions across four pillars of health research	Case-based learning; structured morning discussions; guided critique of presented research
2. Data collection and measurement	Ensure appropriate, inclusive, and clearly defined sex and gender measures	Applied to teaching on operationalization of sex, gender, and related constructs, including limitations of binary classifications and measurement challenges	Interactive workshops; applied measurement exercises; small group activities
3. Analysis	Encourage disaggregated and intersectional analyses	Used to prompt discussion on analytic strategies, including stratification, interaction, and intersectional approaches to health data	Hands-on data interpretation exercises; facilitated analytic walkthroughs; peer discussion
4. Interpretation	Avoid generalization; consider biological and social explanations through diversity lens and who contributed data to research	Integrated into critique of interpretation of sex/gender findings within broader structural and social determinants frameworks	Morning sessions sessions; facilitated group critique; reflective exercises; critical thinking
5. Knowledge Translation	Ensure inclusive and non-stereotypical communication of findings; transparency in authorship, clarity on contributing roles	Applied to development of inclusive approach to reporting research, emphasizing inclusive, equity-informed dissemination strategies	KT product; peer feedback; applied communication exercises