

# Intervention Research: Challenges and Opportunities

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# Gaps and Challenges in IR

**01** Key Priorities in SGM Health

**02** Sampling Considerations

**03** Theoretical Frameworks

**04** Intervention Strategies

**05** Analytic Opportunities

**06** Accelerating Impact

# Key Priority Areas

## Healthy People 2030 Targets

- 4 Improving
- 4 Little or No Change
- 1 Getting Worse
- 4 Baseline Only
- 3 Developmental

## NASEM Consensus Report Targets

- Access to Healthcare
- Economic Stability
- Education
- Families & Social Relationships
- Community & Civic Engagement
- Public Policy & Structural Stigma

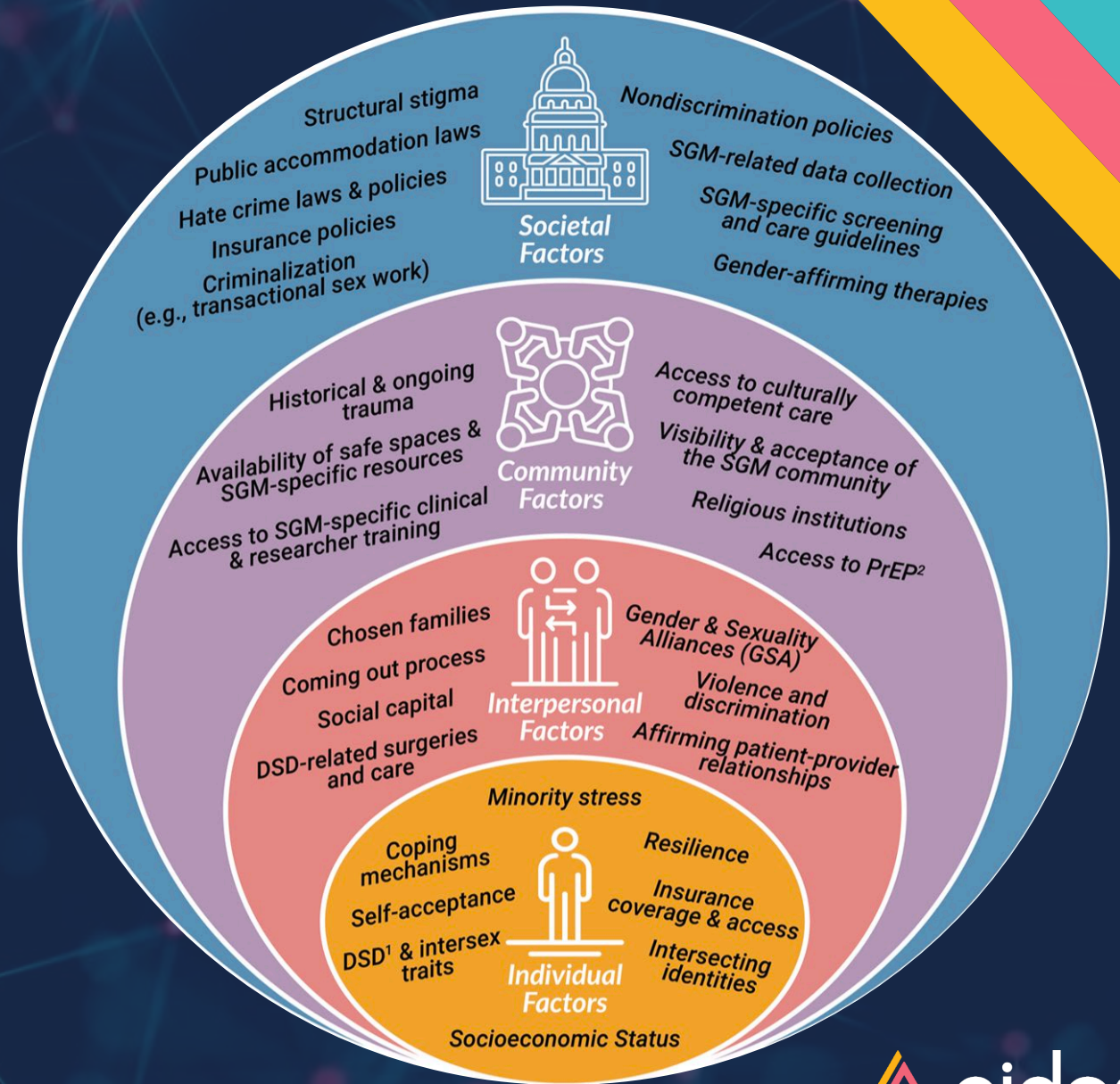




Figure 16. FY 2020, Proportion of SGM Projects, by Population (N = 529)

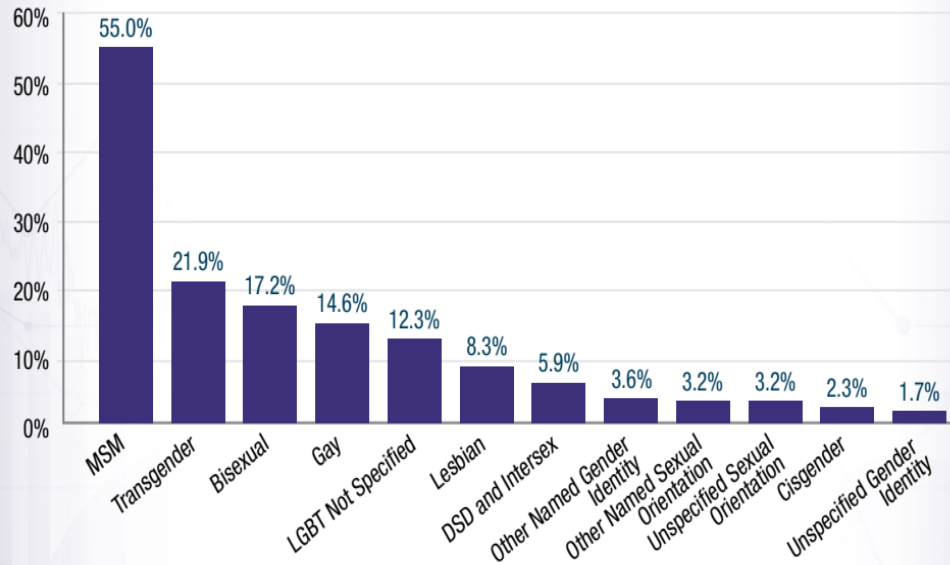


Figure 17. FY 2020, Proportion of SGM Projects, by Race and Ethnicity (N = 529)

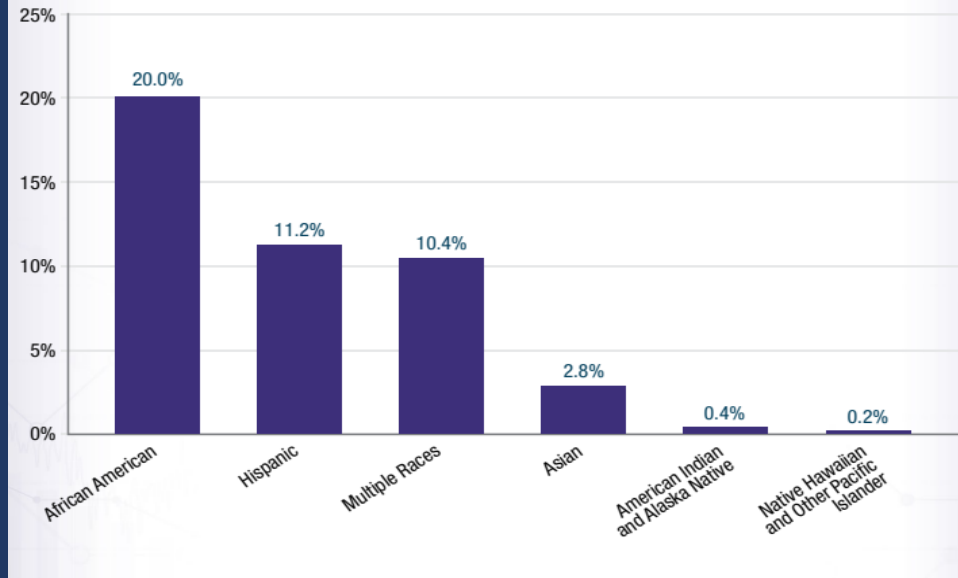


Figure 18. FY 2020, Proportion of SGM Projects, by Age Group (N = 529)

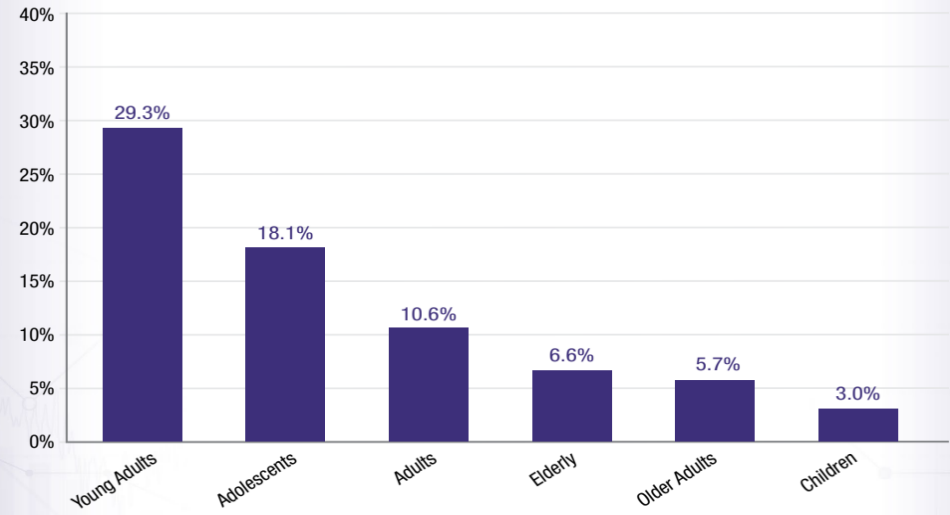


Table 2. FY 2020, Social Factor Categories in the SGM Portfolio (N = 529)

Other Research Categories	Number of Projects
People identified as low socioeconomic status	19 (+1)
People who live in rural areas	14 (+3)
People involved with the criminal justice system	10 (+1)
People who have immigrated from other countries	6 (+4)
People experiencing homelessness	4 (-5)
People living with disabilities	3 (0)
People who have served in the U.S. Armed Forces	3 (0)

# Sampling Considerations

How are we designing our disparities research interventions?

Within-SGM Groups

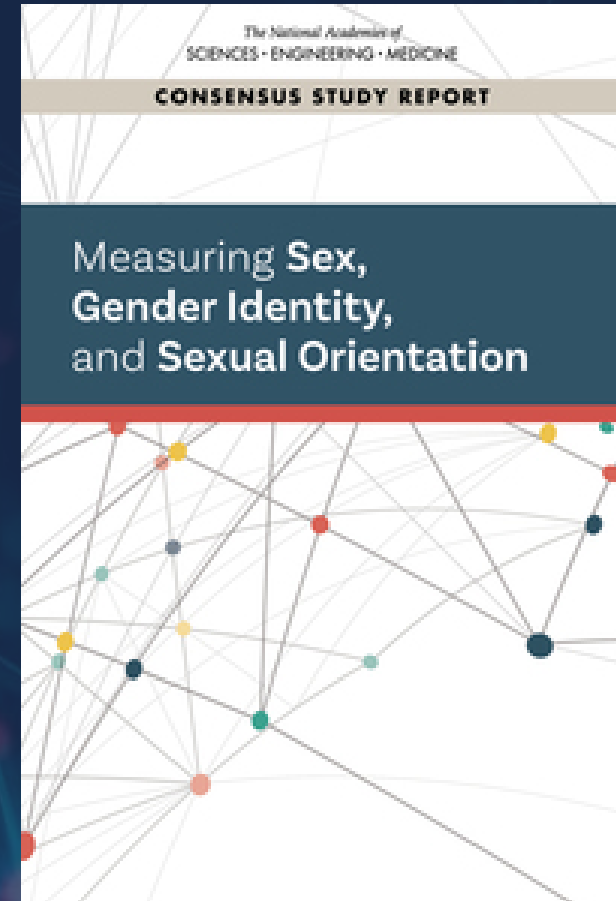
Between-SGM Groups

Between Majority/Minority Comparators

Community Partners and Implementation Actors

# Sampling Considerations

- Harmonized measures for cross-protocol comparisons
  - People deserve to count and be counted (inclusiveness)
  - Use precise terminology that reflects the constructs of interest (precision).
  - Respect identity and autonomy (autonomy).
  - Use data in a manner that benefits respondents and respects their privacy and confidentiality (privacy)



# Theoretical Frameworks

## Determinant Frameworks

- Minority Stress
- Intersectionality
- Life course
- Syndemics
- Empowerment
- Resilience

## Intervention Theories

- Cognitive Behavioral Theories
- Social Influence Theories
- Community Mobilization Theories
- Implementation Science Theories
- Health Communication Theories
- Policy Advocacy & Change

# Intervention Strategies

## Digital Interventions

Digital apps; Biosensors; Telehealth



## Biomedical Interventions

PrEP/PEP, Gender affirming care, SGM competent prevention and care



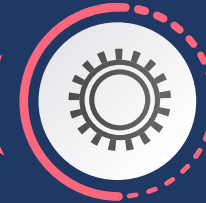
## Ecological Interventions

School-based interventions, Policy change interventions



## Multilevel Interventions

Dyadic interventions; Family-based programs



## Community Interventions

Social media campaigns; Community mobilization



## Implementation Science

Dissemination of EBPs in Practice; Scaling and Sustaining Programs





# Analytic Opportunities

## Adaptive Design

- Just In Time (JIT)
- Multiphase Optimization Strategy (MOST)
- Sequential Multiple Assignment Randomized Trials (SMART)

## Big Data & Informatics

- QI/QC Methods in EHR Monitoring
- Stepped-wedge designs
- Natural Language Processing

## Multilevel Approaches

- Nested mixed-methods designs
- Geospatial comparisons
- Hybrid Implementation Designs

## Constrained Analyses

- Superiority & Noninferiority comparisons
- Difference in differences
- Simulation-based inference estimation

# Accelerating impact

Sponsored NIH research  
networks on SGM Health

Pipeline development  
programs

Multisectoral Partnerships  
with Private Sector

Collaborations across  
Federal, State and Local  
Agencies

Research, Condition, and Disease	Number of SGM Projects	Total Number of Projects at NIH	SGM as a Percentage of All NIH Projects
Sexually Transmitted Infections	82	798	10.3%
Violence Research	36	392	9.2%
HIV/AIDS	299	3,832	7.8%
Suicide	17	281	6.0%
Mental Health	208	7,389	2.8%
Substance Abuse (Use)	115	4,588	2.5%
Alcoholism, Alcohol Use, and Health	39	1,592	2.4%
Teenage Pregnancy	1	42	2.4%
Contraception/Reproduction	33	1,387	2.4%
Eating Disorders	3	132	2.3%
Depression	15	1,221	1.2%
Tobacco Smoke and Health	7	714	1.0%
Obesity	9	2,635	0.3%
Aging	34	10,086	0.3%
Cancer	34	14,896	0.2%
Dementia	9	4,464	0.2%
Opioids	2	1,155	0.2%

What disparities and inequities have yet to be discovered and addressed?

<https://dpcpsi.nih.gov/sites/default/files/SGMRO-FY2020-PortfolioAnalysis-508.pdf>

# Takeaways

■ The field is ripe for innovative, interdisciplinary intervention research

■ Harmonized SOGI data across NIH protocols may help accelerate the state of the science in intervention research

■ Intervention research should be inclusive of all populations, yet tailored as needed across the SGM continua

■ Mapping determinant and intervention constructs are needed to strengthen program development and replicability

■ Methodological and analytic innovations may advance the field and circumvent existing structural barriers

■ Multisectoral partnerships are needed to accelerate impact in developing, testing, and scaling SGM health solutions



# THANK YOU

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