

STATISTICAL

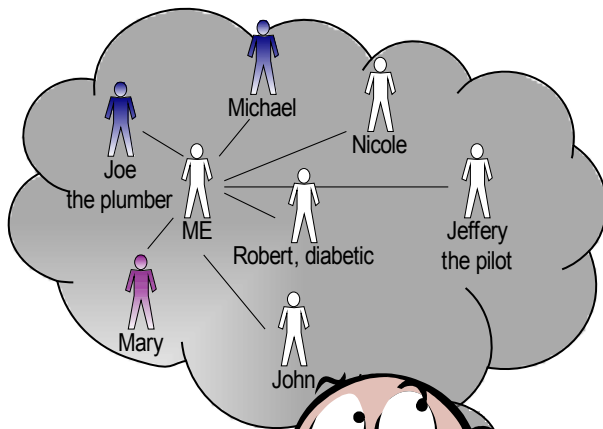
SIGNIFICANCE

Statisticians have developed novel techniques to learn about at-risk populations. These developments improve understanding of these groups and help public health professionals develop more efficient, targeted intervention programs.

Social Structure and Health Intervention



AT-RISK POPULATIONS: At-risk populations can be hard to access (eg. homeless) or reluctant to admit their status for fear of others finding out (eg. HIV/AIDS, drug abusers, sex workers). Statisticians learn about these populations through their friends and acquaintances. Instead of asking if a person uses IV drugs, ask “How many IV drug users do you know?” and use social structure to learn about the person using IV drugs.



Question: how many people who are HIV positive do you know?

Question: how many people with first name Nicole do you know?



TARGETING AID: Statistical models can predict the size of at-risk populations. Knowing how many people have HIV in a country helps UNAIDS and other aid agencies decide how to allocate their limited resources.

IMPROVING PUBLIC HEALTH: Public health officials can use this information to develop more effective intervention programs targeted to the needs of at-risk groups. Epidemiologists can look at trends over time to estimate the spread of a disease and adjust interventions accordingly.

DEVELOPING UNDERSTANDING: Statisticians can describe characteristics of individuals in at-risk groups without ever observing them! They can also describe how individuals and groups relate to one another, deepening our understanding of relationships in our society.