Sampling People, Records, & Networks
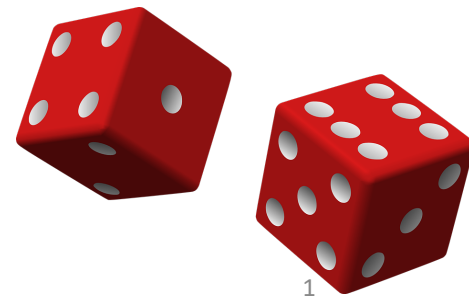
Jim Lepkowski, PhD

Professor & Research Professor *Emeritus*

Institute for Social Research, University of Michigan
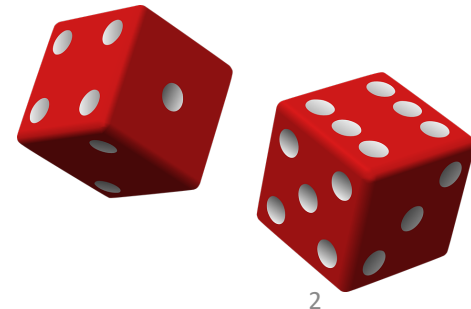
Research Professor,

Joint Program in Survey Methodology, University of Maryland

Unit 6

1. Stratified multistage sampling
2. Weights for over/under sampling
3. Nonresponse & noncoverage weighting
4. Variance estimation and software
5. Statistical software for sample selection
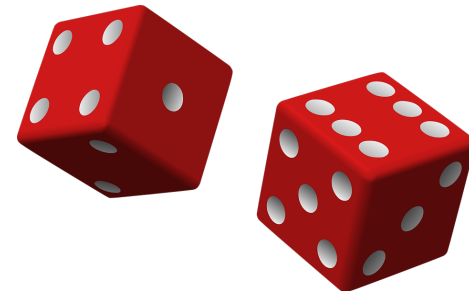6. Sampling networks: multiplicity weighting

- Unit 1: Sampling as a research tool
- Unit 2: Mere randomization
- Unit 3: Saving money
- Unit 4: Being more efficient
- Unit 5: Simplifying sampling
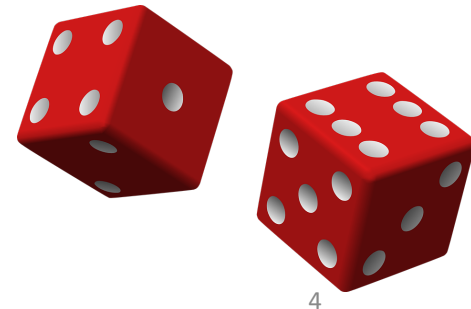- Unit 6: Some extensions & applications

Unit 6

1. Stratified multistage sampling
2. Weights for over/under sampling
3. Nonresponse & noncoverage weighting
4. Variance estimation and software
5. Statistical software for sample selection
6. Sampling networks: multiplicity weighting

- Unit 1: Sampling as a research tool
- Unit 2: Mere randomization
- Unit 3: Saving money
- Unit 4: Being more efficient
- Unit 5: Simplifying sampling
- **Unit 6: Some extensions & applications**
  1. Statistical software for sample selection
  2. Stratified multistage sampling
  3. Weights for over/under sampling
  4. Nonresponse & noncoverage weighting
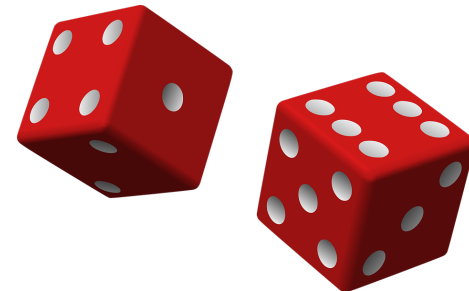 5. Sampling networks: multiplicity weighting
 6. Non-probability sampling

Unit 6

1. Statistical software for sample selection
2. Stratified multistage sampling
3. Weights for over/under sampling
4. Nonresponse & noncoverage weighting
5. **Sampling networks: multiplicity weighting**
6. Non-probability sampling

- Unit 1: Sampling as a research tool
- Unit 2: Mere randomization
- Unit 3: Saving money
- Unit 4: Being more efficient
- Unit 5: Simplifying sampling

- **Unit 6: Some extensions & applications**
  1. Statistical software for sample selection
  2. Stratified multistage sampling
  3. Weights for over/under sampling
  4. Nonresponse & noncoverage weighting
  5. **Sampling networks: multiplicity weighting**
 6. Non-probability sampling

4

- **Networks**
- **Sibling network & disease prevalence**
- **Insurance carrier & clients**

- Unit 1: Sampling as a research tool
- Unit 2: Mere randomization
- Unit 3: Saving money
- Unit 4: Being more efficient
- Unit 5: Simplifying sampling
- Unit 6: Some extensions & applications
    1. Statistical software for sample selection
    2. Stratified multistage sampling
    3. Weights for over/under sampling
    4. Nonresponse & noncoverage weighting
    5. **Sampling networks: multiplicity weighting**
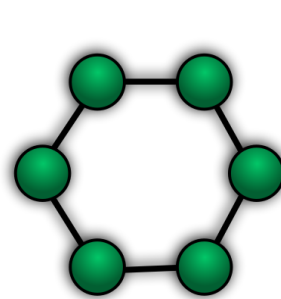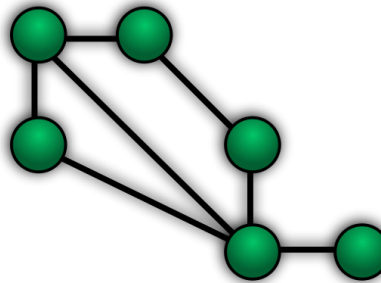   6. Non-probability sampling

- **Networks**

- Sibling network & disease prevalence
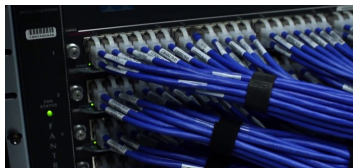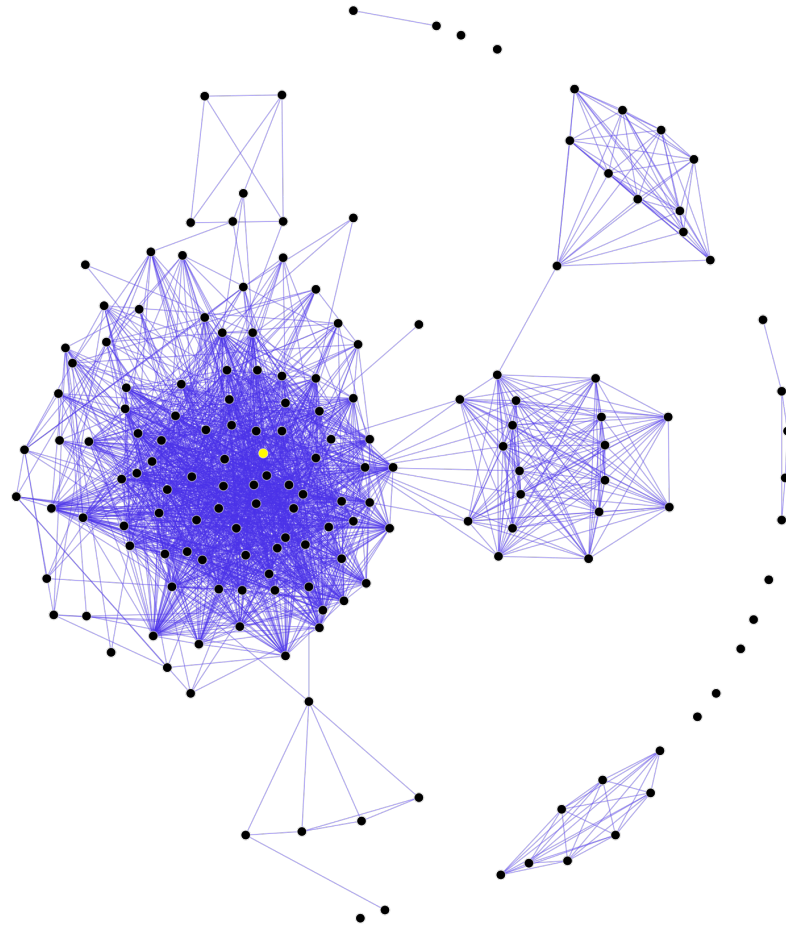
- Insurance carrier & clients

- **Networks**

- Sibling network & disease prevalence
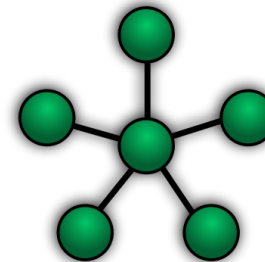
- Insurance carrier & clients
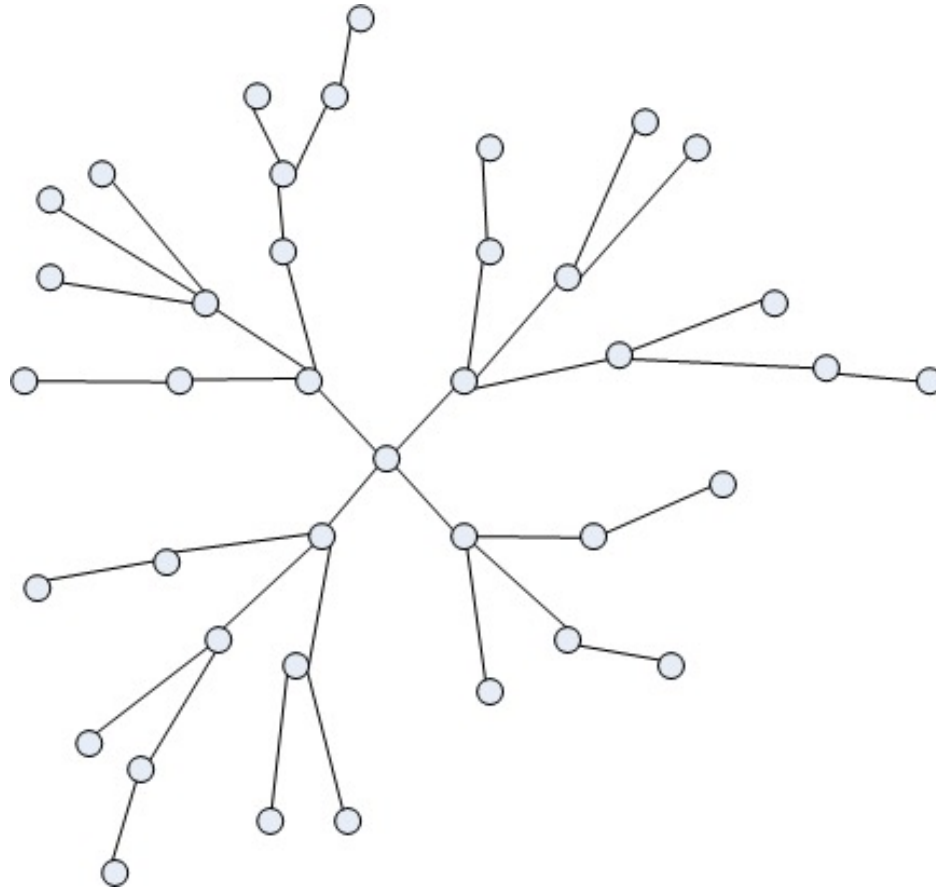
- **Networks**

- Sibling network & disease prevalence

- Insurance carrier & clients

Ring

Mesh

Star

Fully Connected

Line
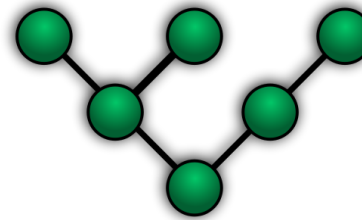
Tree

Bus
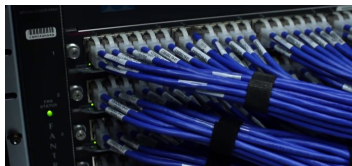
- Networks

- **Sibling network & disease prevalence**

- Insurance carrier & clients

- Networks

- **Sibling network & disease prevalence**
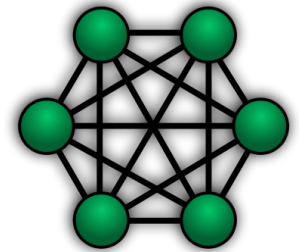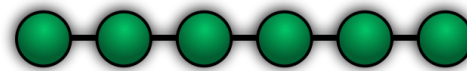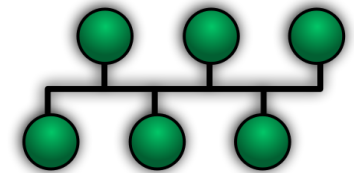
- Insurance carrier & clients

- Networks

- **Sibling network & disease prevalence**

- Insurance carrier & clients

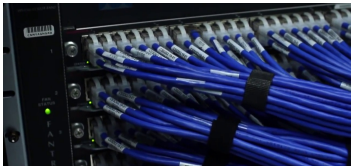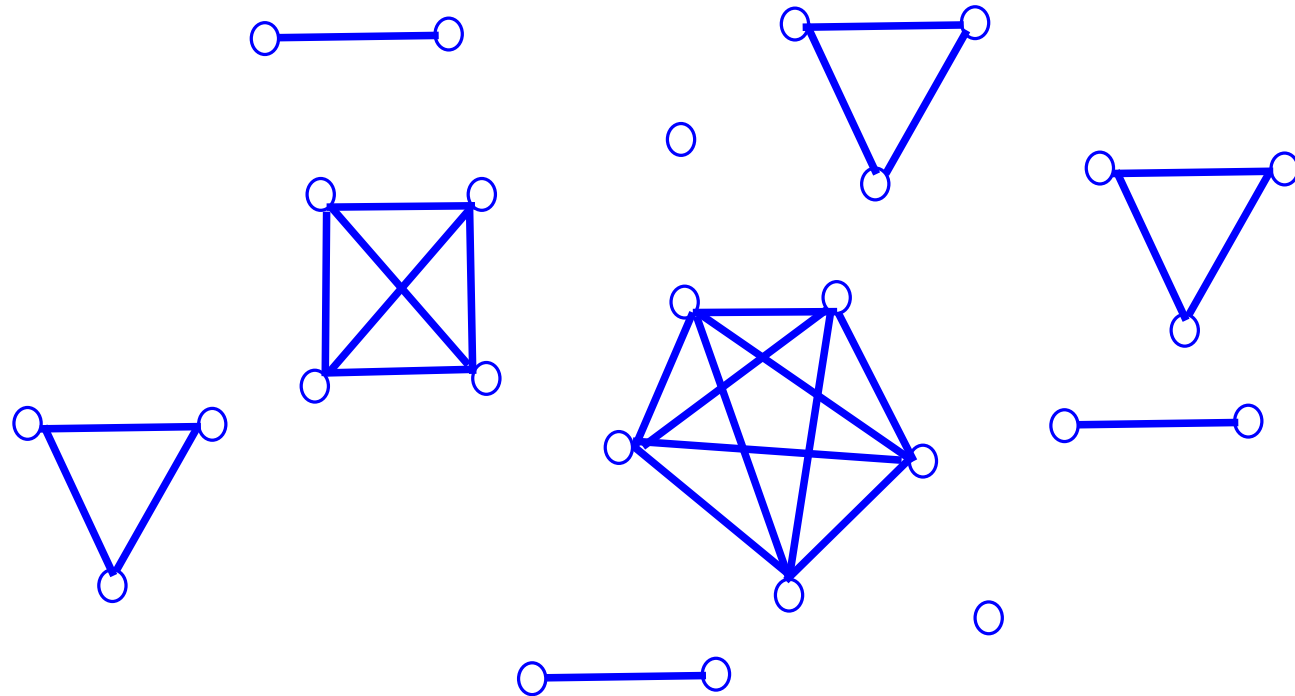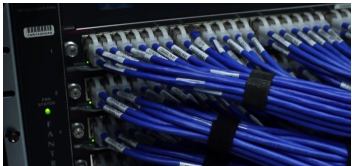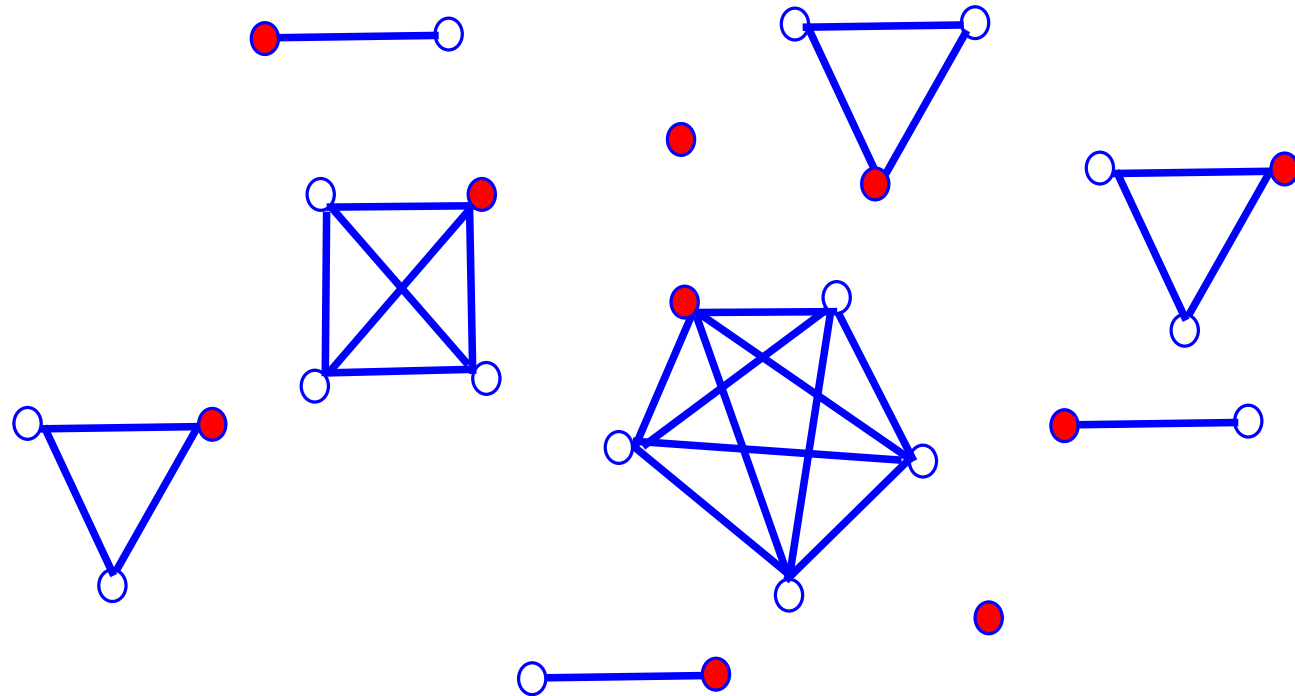| Sample person	Number of living siblings	Ever been told by MD have diabetes?	Number of cases of diabetes in network	Total number of cases	Person weight	Network size	Network adjusted person weight
1	0	0	0	0	100	1	100.0
2	2	0	0	0	100	3	33.3
3	3	0	1	1	200	4	50.0
4	1	0	1	1	200	2	100.0
5	5	0	1	1	100	6	16.7
6	0	1	0	1	100	1	100.0
7	1	0	0	0	200	2	100.0
8	2	0	0	0	100	3	33.3
9	2	1	1	2	100	3	33.3
10	1	0	0	0	100	2	50.0
	17	2	4	6	1300	27	616.7

11

- Networks

- **Sibling network & disease prevalence**

- Insurance carrier & clients

Number of cases of diabetes among sample persons	2
Number of cases of diabetes among living siblings	4
Number of sample persons	10
Number of persons in network (including sample person	27
Unweighted prevalence among sample persons	0.200
Unweighted prevalence among networks	0.148
Weighted prevalence	0.154
Network adjusted weight prevalence	0.256

- Networks
- Sibling network & disease prevalence
- **Insurance carrier & clients**
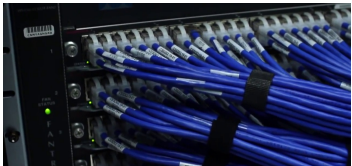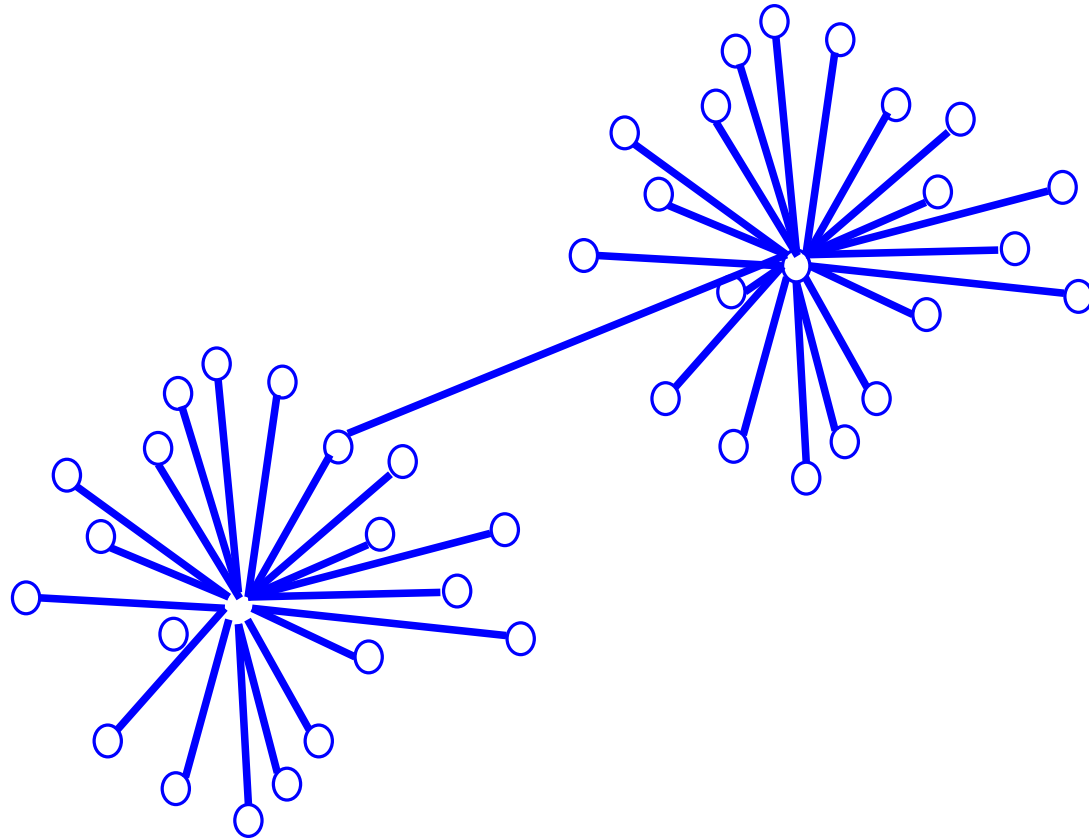
- Networks
- Sibling network & disease prevalence
- **Insurance carrier & clients**

Unit 6

1. Statistical software for sample selection
2. Stratified multistage sampling
3. Weights for over/under sampling
4. Nonresponse & noncoverage weighting
5. Sampling networks: multiplicity weighting
6. **Non-probability sampling**

- Unit 1: Sampling as a research tool

- Unit 2: Mere randomization

- Unit 3: Saving money

- Unit 4: Being more efficient

- Unit 5: Simplifying sampling

- **Unit 6: Some extensions & applications**
  1. Statistical software for sample selection
  2. Stratified multistage sampling
  3. Weights for over/under sampling
  4. Nonresponse & noncoverage weighting
  5. Sampling networks: multiplicity weighting
  6. **Non-probability sampling**