

# Disease Transmission Events Analysis

## Single-Facility Analysis

2025-10-29

### Data Summary

Total transmission events: 5959

Unique source patients: 3935

Unique recipient patients: 5625

Total unique patients involved: 7528

Simulation period: Day 22 to Day 5275

Total days: 5254

Effective reproductive rate (Re): 1.514

### Descriptive Statistics

#### Daily Transmission Events Summary

Table 1: Descriptive Statistics for Daily Transmission Events

Mean	Median	SD	Min	Max	Q1	Q3	IQR
1.67	1	0.89	1	7	1	2	1

### Effective Reproductive Rate Analysis

Table 2: Effective Reproductive Rate Statistics

	Value
Mean Re per source	1.514
Median Re per source	1.000
SD Re per source	0.868
Min Re per source	1.000
Max Re per source	9.000

	Value
Overall Re	1.514

### Patient Transmission Activity

Table 3: Distribution of Transmissions Caused per Source Patient (Top 10)

Transmissions Caused	Number of Patients	Percentage
1	2569	65.3
2	924	23.5
3	302	7.7
4	92	2.3
5	27	0.7
6	17	0.4
7	2	0.1
8	1	0.0
9	1	0.0

Table 4: Distribution of Infections Received per Recipient Patient (Top 10)

Infections Received	Number of Patients	Percentage
1	5346	95.0
2	239	4.2
3	29	0.5
4	7	0.1
5	4	0.1

## Visualizations

### Reproductive Rate Distribution

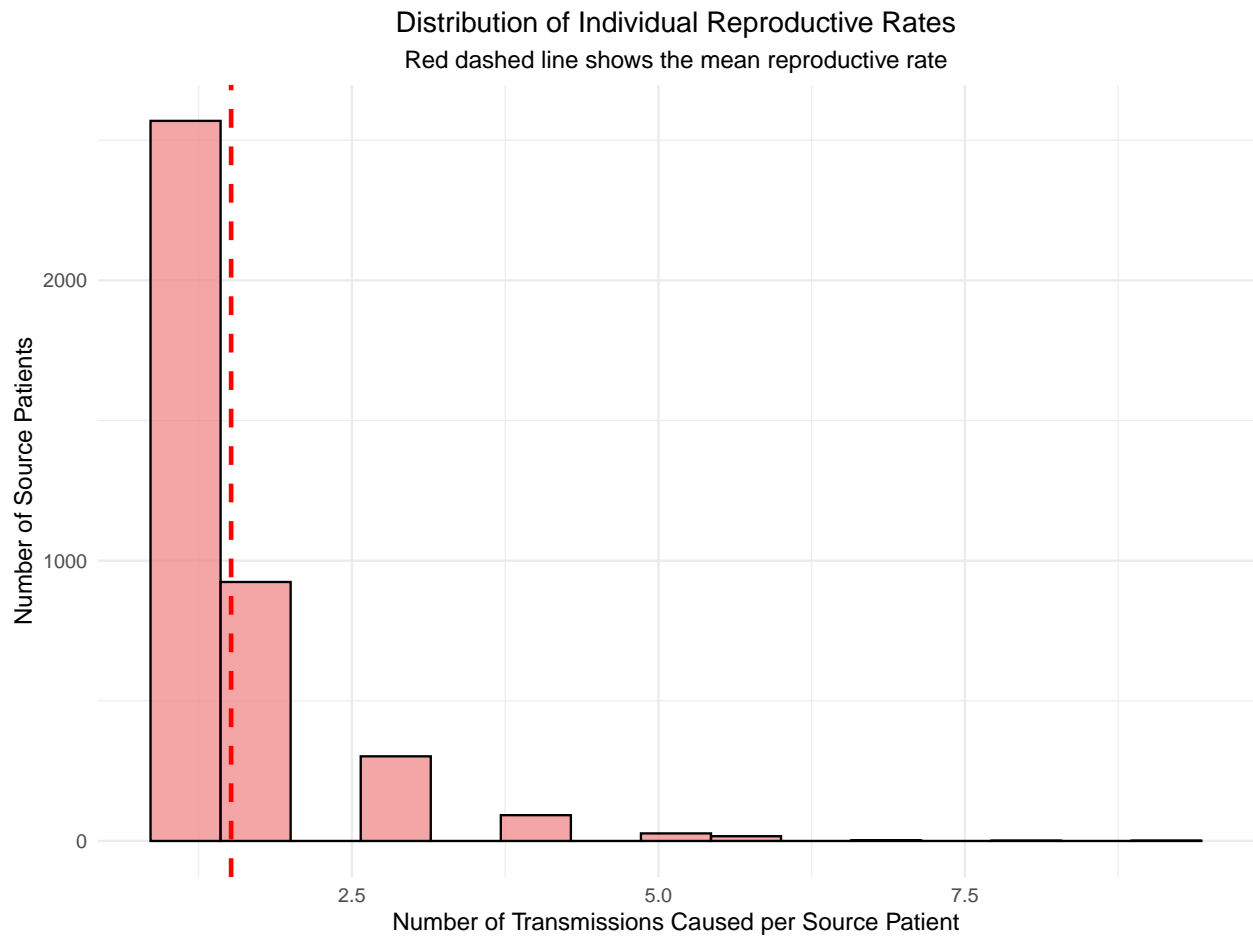


Figure 1: Distribution of Individual Reproductive Rates

## Distribution of Daily Transmission Events

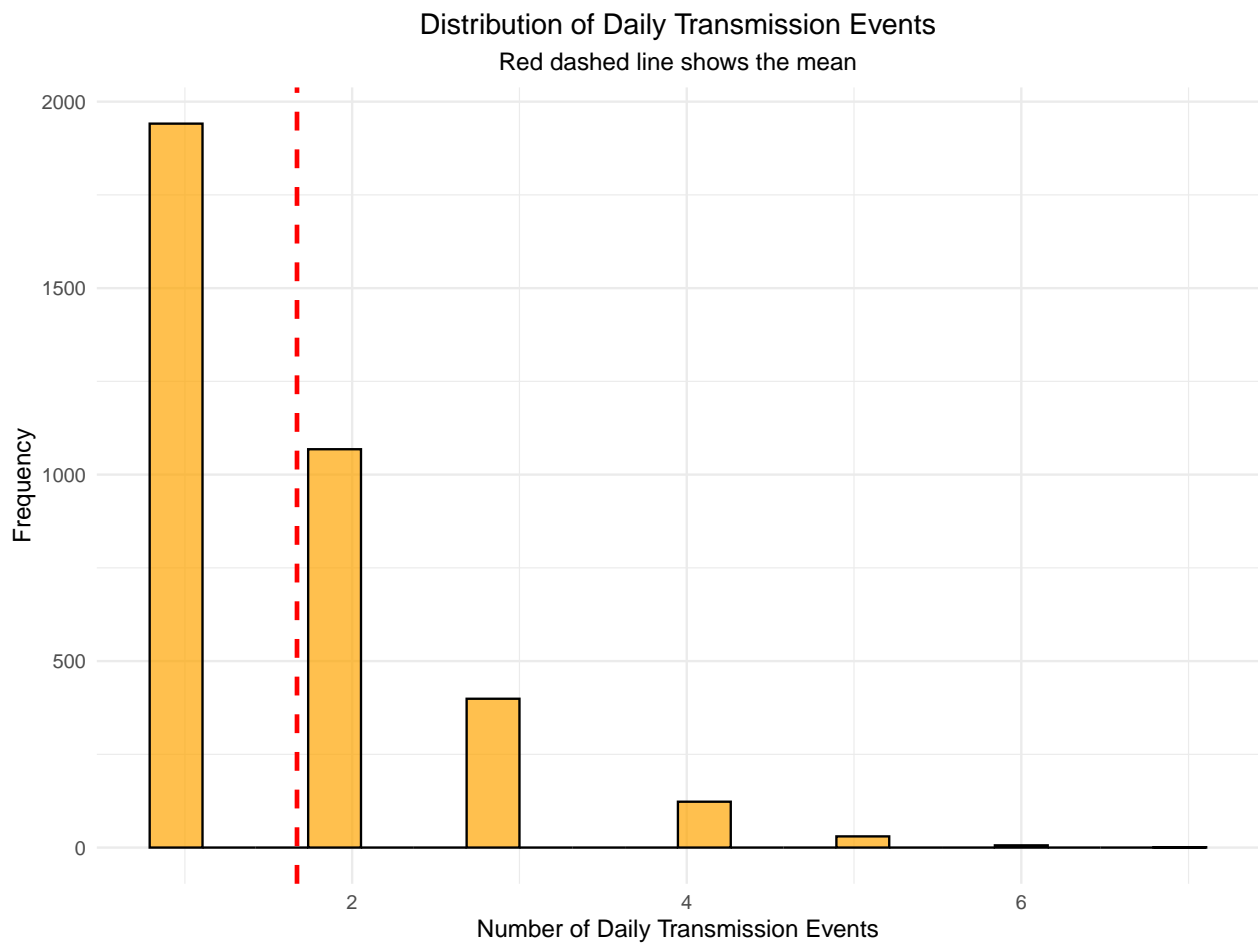


Figure 2: Distribution of Daily Transmission Events

## Transmission Network Degree Distribution

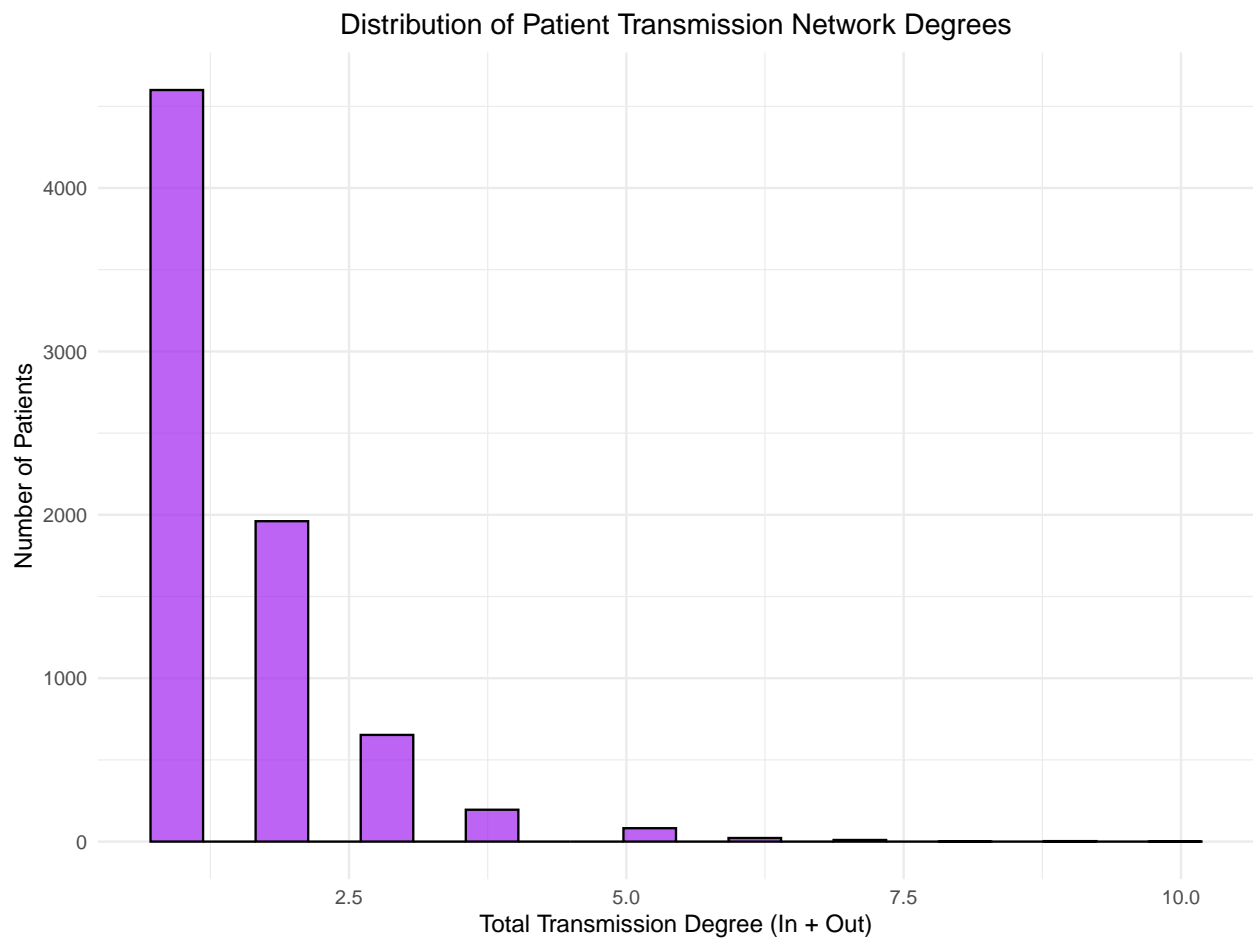


Figure 3: Distribution of Patient Transmission Degrees