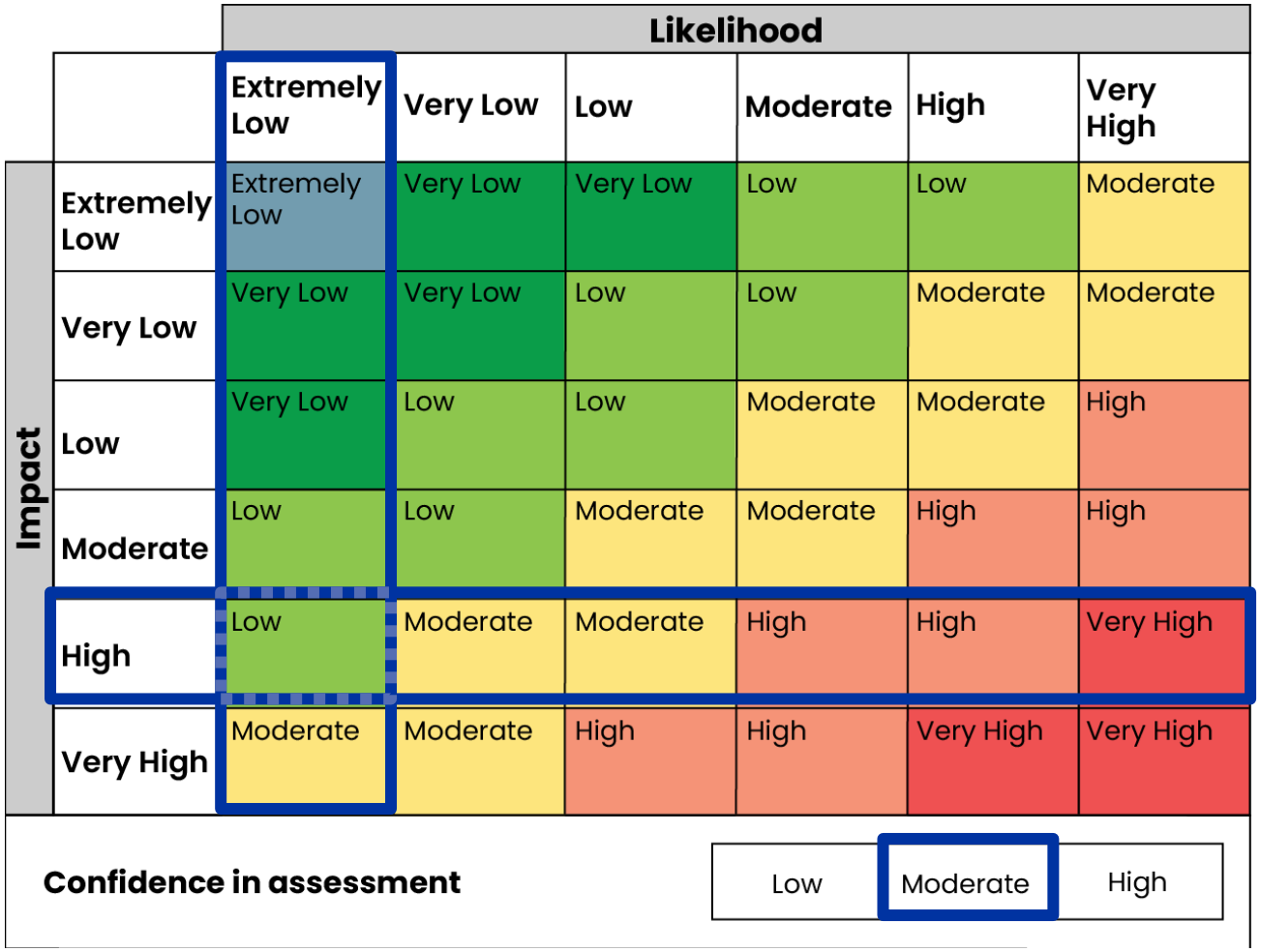
# Risk Assessments-Example

Practical Modeling Concepts for Public Health

# Risk assessments combine impact and likelihood

**Example:**
Risk of Marburg virus disease to the general US population = Low



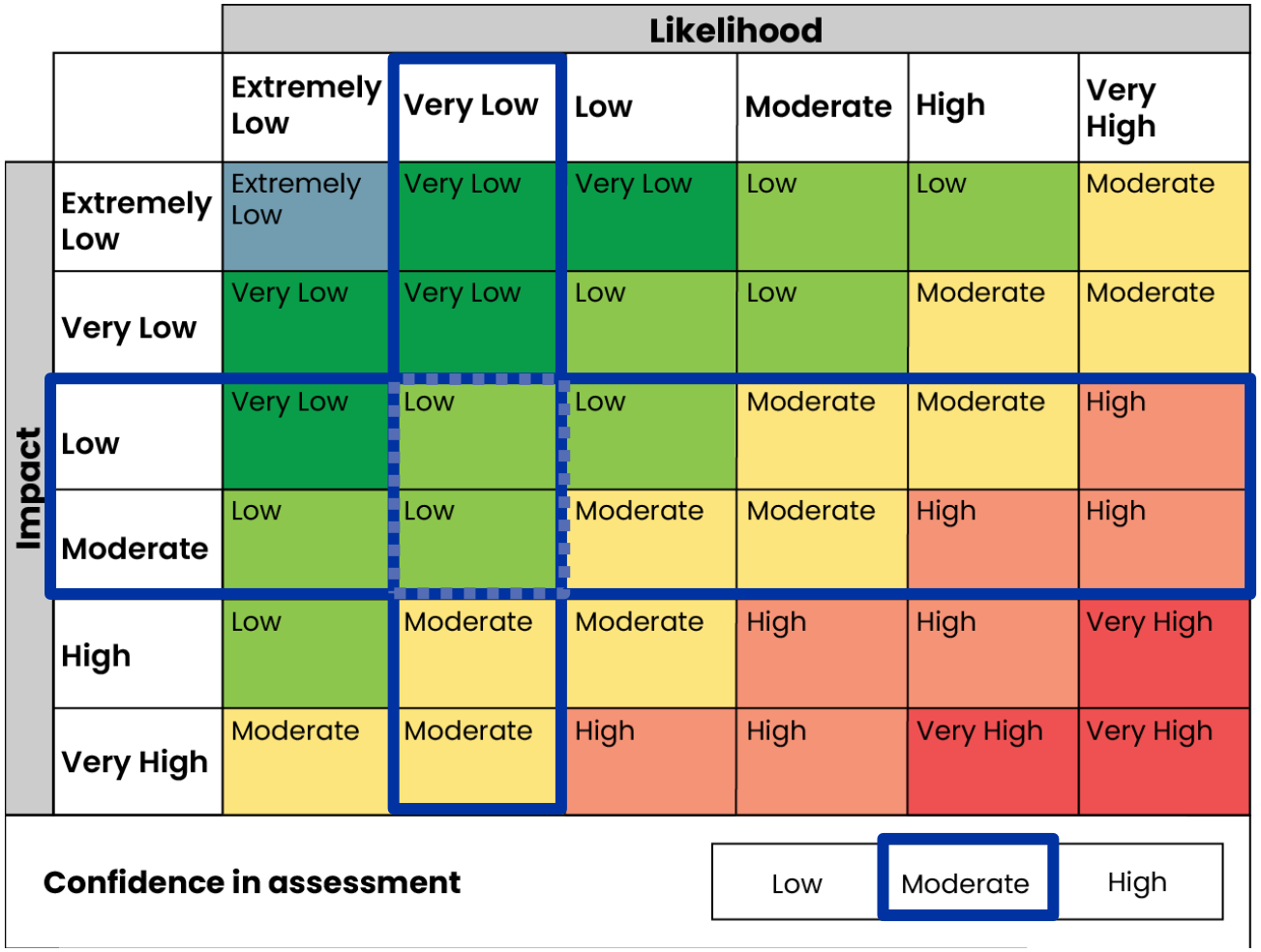
| Impact \ Likelihood | Extremely Low | Very Low | Low | Moderate | High | Very High |
|---|---|---|---|---|---|---|
| **Extremely Low** | Extremely Low | Very Low | Very Low | Low | Low | Moderate |
| **Very Low** | Very Low | Very Low | Low | Low | Moderate | Moderate |
| **Low** | Very Low | Low | Low | Moderate | Moderate | High |
| **Moderate** | Low | Low | Moderate | Moderate | High | High |
| **High** | Low | Moderate | Moderate | High | High | Very High |
| **Very High** | Moderate | Moderate | High | High | Very High | Very High |

**Confidence in assessment** — Low | Moderate | High

[Risk to the United States from the Marburg virus outbreak in Ethiopia | CFA: Qualitative Assessments | CDC]

# Risk assessments combine impact and likelihood

**Example:**
Risk of clade I monkeypox to the general US population = Low



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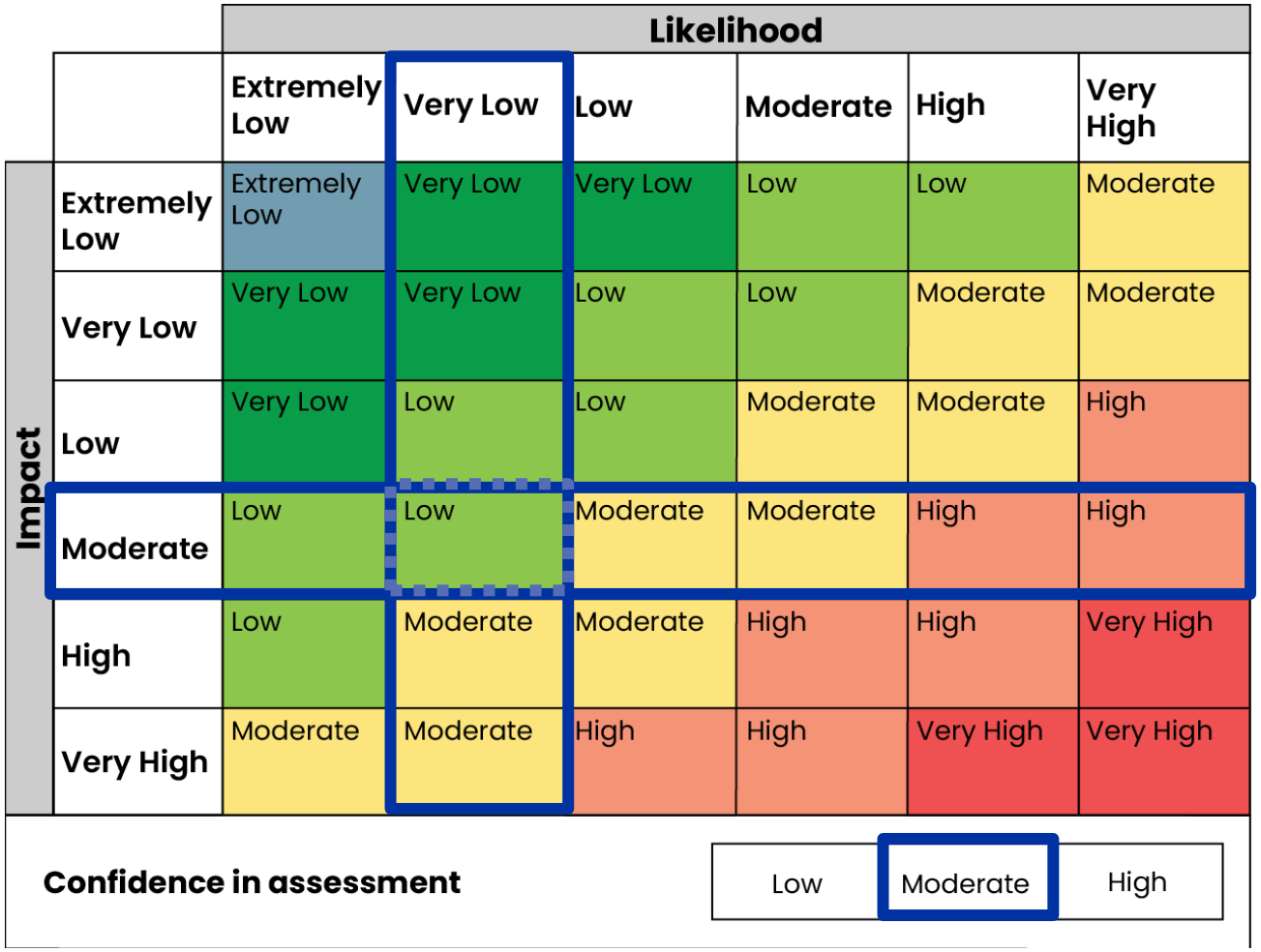
| **Low** | Very Low | Low | Low | Moderate | Moderate | High |
| **Moderate** | Low | Low | Moderate | Moderate | High | High |
| **High** | Low | Moderate | Moderate | High | High | Very High |
| **Very High** | Moderate | Moderate | High | High | Very High | Very High |

**Confidence in assessment** — Low | Moderate | High

[Risk to United States from clade I monkeypox outbreak in Central and Eastern Africa | CFA: Qualitative Assessments | CDC]

# Risk assessments can consider subpopulations

**Example:**
Risk of clade I monkeypox among children in the US (via household transmission or direct, non-sexual contact) = Low



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| **Extremely Low** | Extremely Low | Very Low | Very Low | Low | Low | Moderate |
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| **Low** | Very Low | Low | Low | Moderate | Moderate | High |
| **Moderate** | Low | Low | Moderate | Moderate | High | High |
| **High** | Low | Moderate | Moderate | High | High | Very High |
| **Very High** | Moderate | Moderate | High | High | Very High | Very High |

**Confidence in assessment** — Low | **Moderate** | High

[Risk to United States from clade I monkeypox outbreak in Central and Eastern Africa | CFA: Qualitative Assessments | CDC]

# A risk assessment requires several steps:

1. Assemble team of disease and risk assessment experts
2. Frame risk assessment
3. Perform rapid review of literature and available evidence
4. Identify populations at risk to include in assessment
5. Conduct an assessment for each population
6. Consider factors that could change assessment
7. Solicit feedback on and finalize assessment for publication and/or internal dissemination
8. Update assessment at pre-defined cadence if warranted, or if situation changes significantly

Risk assessments can rapidly characterize outbreak implications to support response decision-making and risk communication.

For more information, contact CDC
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