

Supporting Experiments in Computational Epidemiology for Action and Decision Support

September 5th, 2024

Bryan Lewis, PhD MPH
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on behalf of



BIOCOMPLEXITY INSTITUTE

biocomplexity.virginia.edu

About Us

- Biocomplexity Institute at the University of Virginia
 - Using big data and simulations to understand massively interactive systems and solve societal problems
- Over 20 years of crafting and analyzing infectious disease models
 - Pandemic response for Influenza, Ebola, Zika, and others



Points of Contact

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EXCEADS – EpiHiper and PatchSim Development Teams

Bryan Lewis, Mandy Wilson,
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Henning Mortveit, Dawen Xie
Madhav Marathe, Chris Barrett



Overview

- **Goal:** Deliver decision advantaging tools for epidemiological threat planning and response.
- **Approach:**
 - ✓ Provide access to EXCEADS - novel computational epidemiology study platform
 - ✓ Training sessions on use of the new tool
 - ☐ Support of past RFIs
 - ☐ Support of active RFIs
 - ☐ Expansion to RFIs with expanded requirements
 - ☐ National scale simulations with dynamic interventions
 - ☐ Automated calibration

Philosophical Approach

People solve problems, not software: Simulations and interfaces are tools that empower people to function more efficiently in completing their mission

Teams are essential to addressing complex mission critical problems: Tools should help teams function better, e.g. share information, automate mundane

Models are important explanatory tools: Simulations provide an excellent way to estimate complex and unobservable outcomes, they are are also very important for understanding the problems and their possible solutions

Supporting DTRA Reachback

- **Long history of deep integration:**
 - Over 15 years of support
 - Real-time epidemic response (2009 pandemic flu, 2014 West Africa Ebola, 2020 COVID-19, etc.)
 - Scores of RFIs supported: Bioterror, planning exercises, tabletops, OCONUS partner support, real-time response updates
 - Development of multiple simulation capabilities, web-based delivery to analysts
- **Evolution of Tools**
 - Initial prototypes driven by RFI or project
 - Refined design and implementation of core features
 - Further hardening through additional support projects
 - Usable tools for routine support

Current DTRA Reachback Goals and Needs?

- **Rapid Response to Requests**

- Advantage gained through efficient tools, well trained analysts, and deep support on demand

- **Access to new techniques**

- Advantage gained through continued research and development integrated with operational response activities (new models, analytics, data elements)

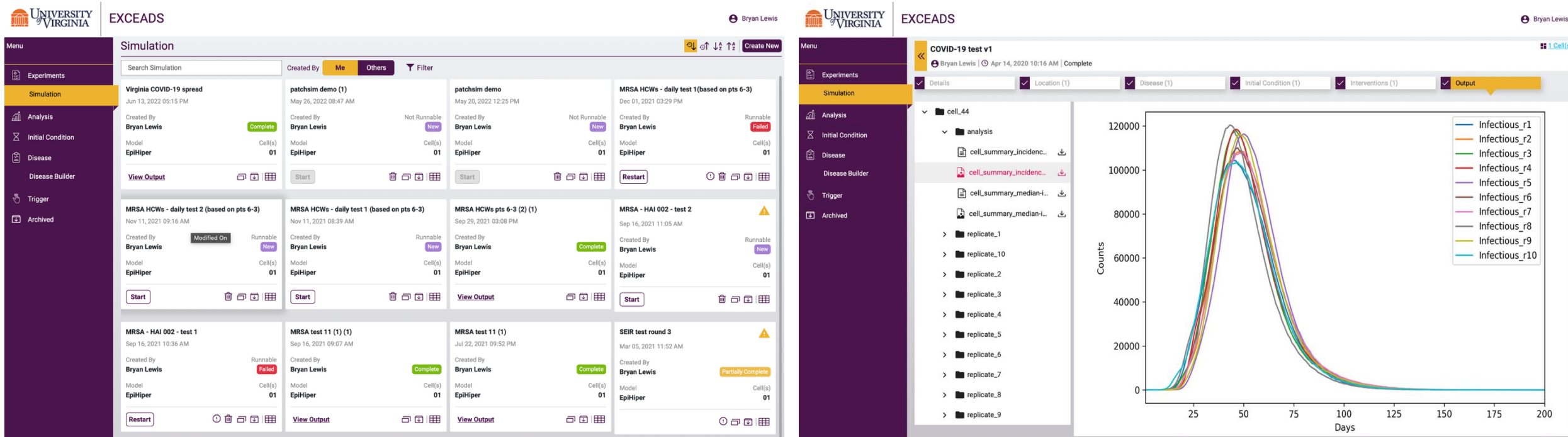
- **On-going Support and training**

- Training for new personnel / new tools
- Ability to troubleshoot and refine issues during routine RFI support

- **Ability to tackle work on classified problems**



Introducing EXCEEDS

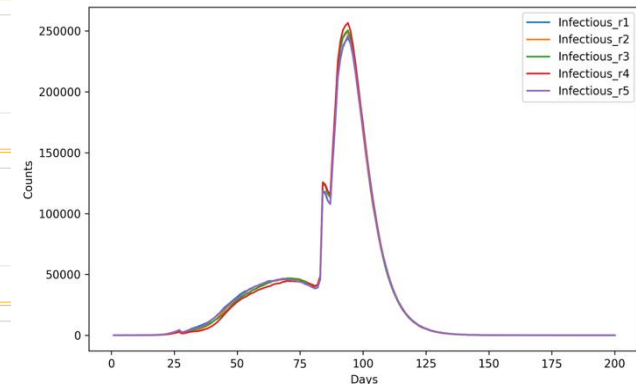
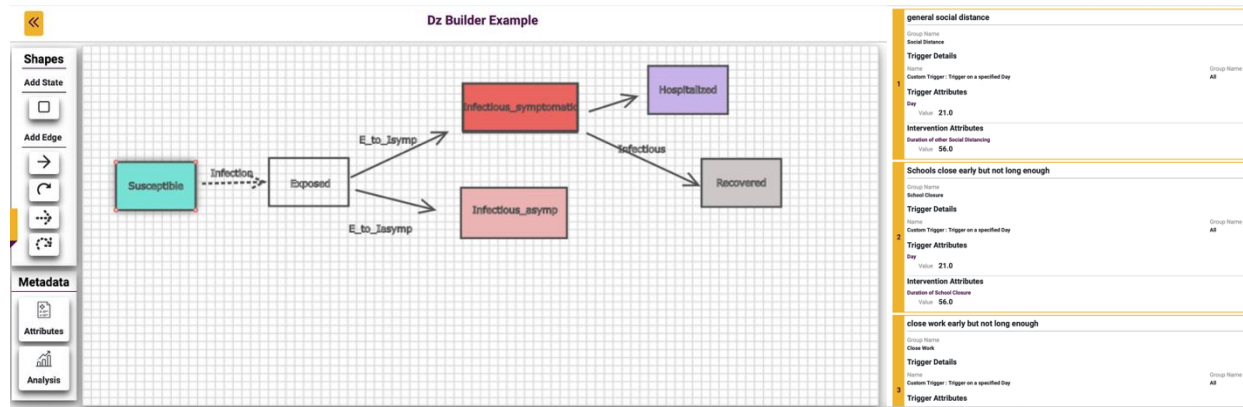


EXperiments in **C**omputational **E**pidemiology for **A**ction & **D**ecision **S**upport
Design, Execute, and Analyze Computational Epidemiology Studies

What is EXCEEDS?

Web-Interface for Sophisticated Epidemiological Simulations

- Provides intuitive factorial design to span high-dimensional questions
- Analyst friendly environment for sharing simulations and outputs amongst a team, and provide persistent "adaptable" platform for evolving problems
- Automates use of high-performance computing and organizes data input / output
- "Simplifies the Complex" - Facilitates interpretation of results
- Flexible analytics, BYOS (Bring Your Own Script), to automate production of briefing materials
- Access to synthetic population pipeline that covers the globe, including: people, infrastructure, mobility



What EXCEADS is not..

- **Enterprise level solution for all RFIs**
 - EXCEADS is a research level tool designed to support computational epidemiology experiments
 - Currently EXCEADS has reached a state of reasonable maturity and stability and thus is a ready-to-use piece of software
 - Iterative Spiral development will enhance tool's usefulness and capabilities, but this requires engagement with real problems
- **Replacement for analysts and supporting analyses**
 - People solve problems, good tools accelerate this process

Public Health Potential

Policy evaluation and intervention

- Public health decisions and policies often involve complex trade-offs
- Ability to simulate potential outcomes for different intervention strategies, helping policymakers evaluate their effectiveness, cost-effectiveness, and potential unintended consequences
- This allows policymakers to make informed decisions based on evidence, maximizing the impact of interventions while minimizing risks

Public Health Potential

Optimal resource allocation

- Assist in optimizing resource allocation by identifying high-risk areas and vulnerable populations.
- By considering various factors like population density, demographic characteristics, and healthcare infrastructure, these tools can help public health agencies target limited resources to where they are most needed.
- This ensures efficient utilization of resources and equitable distribution of healthcare services.

Public Health Potential

Public health education and communication

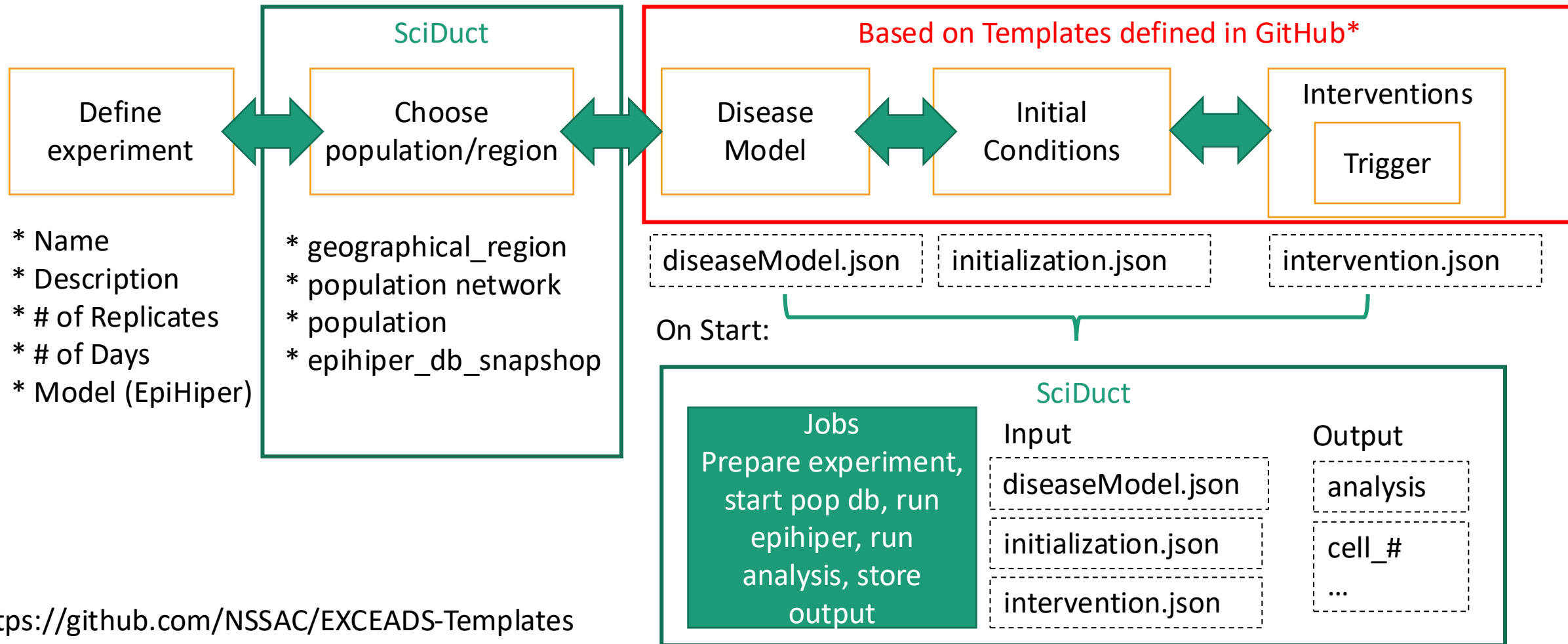
- Visualize and communicate complex public health concepts effectively
- By translating complex data into user-friendly formats such as maps, graphs, and interactive simulations, these tools enhance public understanding of disease transmission, risk factors, and the effectiveness of preventive measures
- Improved health literacy promotes better compliance with public health guidelines and empowers individuals to take proactive steps to protect themselves and their communities

Public Health Potential

Policy advocacy and preparedness

- Provides evidence-based insights into the potential impact of policy decisions, enabling public health professionals to advocate for preventive measures, health system strengthening, and investment in research and development
- By demonstrating the potential consequences of inaction or inadequate response, these tools can mobilize support for proactive public health measures and improve overall preparedness for future outbreaks

How EXCEADS is organized



* <https://github.com/NSSAC/EXCEADS-Templates>

EXCEADS Features

- **Multi-model support:** Design allows for multiple model to be harmonized under one interface, one view for multiple tools
- **Template Based Customization:** Proto—language for specifying inputs which allow for complex combinations of actions to be built without code updates to simulation engines
- **User Centric:** Status, message, warning and error system integrated to provide as much information as possible about the state of the system
- **Advanced User Support:** Use GitHub repositories to allow automatic updating of Analysis scripts. Support for animations, movies, and interactive plots

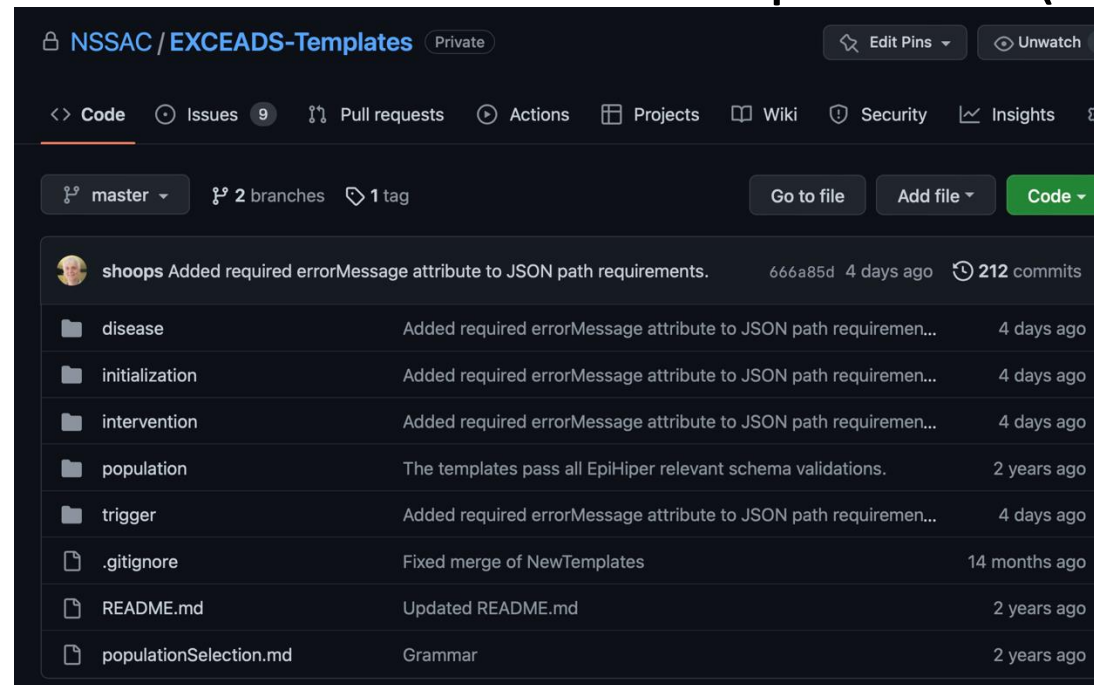
Multi-Model Support

- **EpiHiper**: Agent-based model for detailed individual level analyses
- **PatchSim**: Metapopulation model for population level analyses
- **Others**: Other classes of simulation possible (eg infrastructure)

The screenshot shows a web-based interface for configuring a simulation. At the top, there is a horizontal navigation bar with five tabs: 'Details' (active, highlighted in yellow), 'Location', 'Disease (1)', 'Initial Condition', and 'Interventions'. Below the tabs, the main content area is titled 'Influenza - age specific vaccinations'. A dropdown menu is open, showing the option to 'Select Model'. The menu lists two models: 'EpiHiper' (which is highlighted with a grey background) and 'PatchSim'. Below the model selection, there is a text input field labeled 'Simulation Name' containing the text 'Influenza - age specific vaccinations'. A small icon of a document is next to the label. At the bottom of the input field, it says 'Max 100 characters'.

Templatized Customization

- **Detailed Specifications:** Disease, triggers, initial conditions, and interventions
- **PatchSim:** Metapopulation model for population level analyses
- **Allows for :** Other classes of simulation possible (eg infrastructure)



User Centric

- **Enhanced Search and Filtering:** Finding previous results, exploring options
- **Step-by-Step Workflow:** Progression through required inputs until a simulation is runnable
- **Verbose Notifications, Warnings and Errors:** Keep user informed of what actions have happened, what might not work, and errors encountered

Simulation

Monkey

Created By Bryan Lewis

Monkey Pox - speculative scenario - no interventions v6 - retry
Sep 05, 2022 12:48 PM

Created By Bryan Lewis

Model EpiHiper

Cell(s) 01

Runnable Analyzing

Start

Filter By Apply

Attribute -Select-

Attribute Value

Add

Disease - Name flu

Success

✓ Initial Condition 'Flu Vaccination using CDC Age Groups' associated successfully

Warning!

⚠ The entities associated in the experiment are incompatible and may cause the experiment to fail. Click on the warning (triangle) icon to see the details.

Monkey Pox - speculative scenario - no interventions v6

Sep 02, 2022 09:53 AM

Created By Bryan Lewis

Model EpiHiper

Start

Runnable New

Monkey Pox

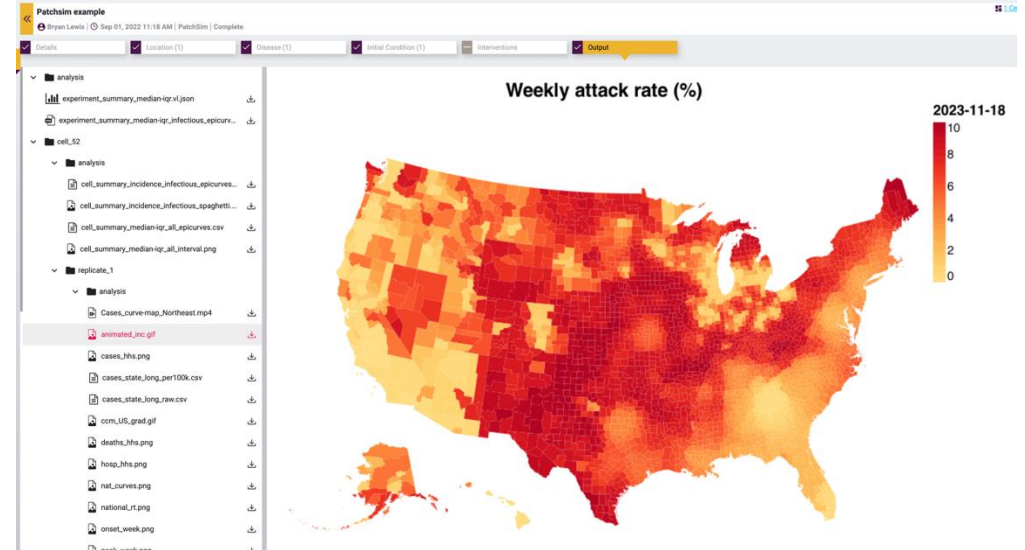
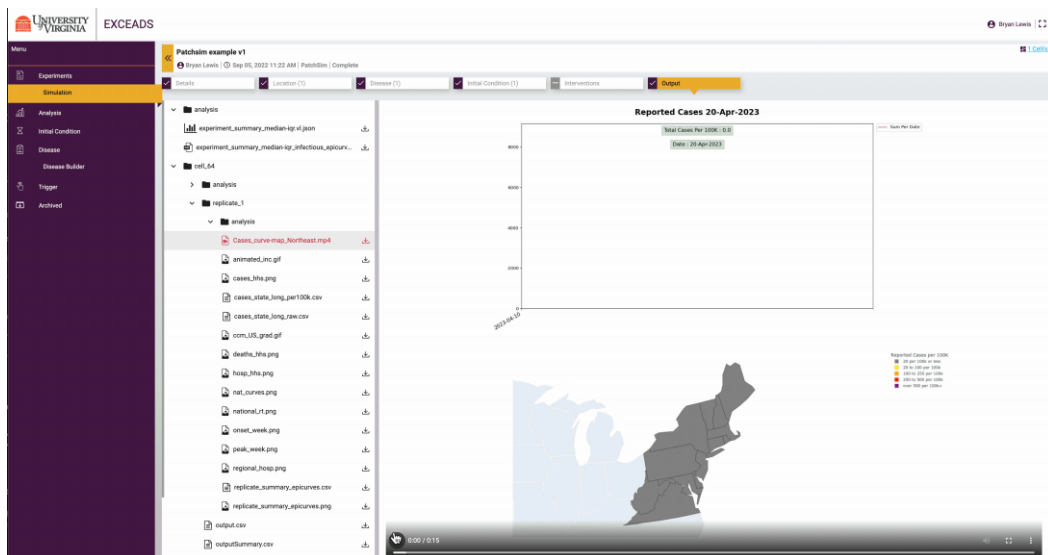
Sep 01, 2022

Created By Bryan Lewis

EXCEEDS is unable to get hostname from DB Service job. Hence job is terminated, and experiment and cell(s) are marked as New. Please resubmit the job in sometime.

Advanced Analyses

- **Support for Animations and Movies:** Finding previous results, exploring options
- **Bring Your Own Script:** Github repository linked to EXCEEDS for providing analysis scripts to fold in custom scripts for easy automation



EXCEADS Recent Additions

- **Full PatchSim integration**

- Execution of simulations on large scale populations with interventions and analyses

- **Population Augmentation**

- Additions and modifications of population characteristics from other platforms (shapefiles or other queries)

- **Additional Populations:**

- Customized small populations (e.g., military bases)
- Multistate Metropolitan areas for EpiHiper (e.g., DC Metro)
- OCONUS nations with sub-national resolutions for PatchSim (were already used to support COVID-related RFIs)

EXCEADS Planned Features

- **Addition of independent analytic jobs**
 - Similar to analyses of Datasets, but independent jobs that provide analyses (eg COVID-19 variant tracking, Re estimation from hospital admissions or ED visits)
- **Additional Populations:**
 - Populations that fluctuate over time (e.g., transient population, weekday effects)
 - More OCONUS nations with sub-national resolutions
- **Calibration:**
 - Ability to specify target outcome (total attack rate, peak infections, etc.) and calibratable parameters (transmissibility, intervention strength).

Quick Demonstration

The screenshot shows the EXCEEDS web interface at exceeds.bil.virginia.edu. The left sidebar contains a menu with options: Menu, Experiments, Simulation (highlighted), Analysis, Initial Condition, Disease, Disease Builder, Trigger, and Archived. The main panel displays the 'Virginia COVID-19 spread (1)' experiment configuration. The 'Interventions (1)' tab is selected, showing a summary of the 'Close school at 4 to 8 weeks' intervention. The intervention details include: Group Name: School Closure, Trigger Details: Custom Trigger: Trigger on a specified Day, Trigger Attributes: Day 28,35,42,49,56, and Intervention Attributes: Duration of School Closure 14.0.

Virginia COVID-19 spread

Jun 13, 2022 04:39 PM

Created By
Bryan Lewis

Model
EpiHiper

Runnable
Preparing

Cell(s)
01

Virginia COVID-19 spread

Jun 13, 2022 04:46 PM

Created By
Bryan Lewis

Model
EpiHiper

Runnable
Running

Cell(s)
01

Virginia COVID-19 spread (1)

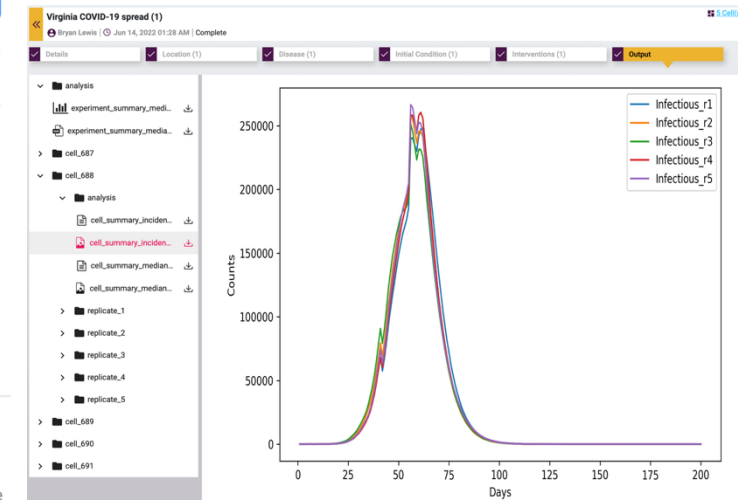
Jun 14, 2022 01:23 AM

Created By
Bryan Lewis

Model
EpiHiper

Runnable
Analyzing

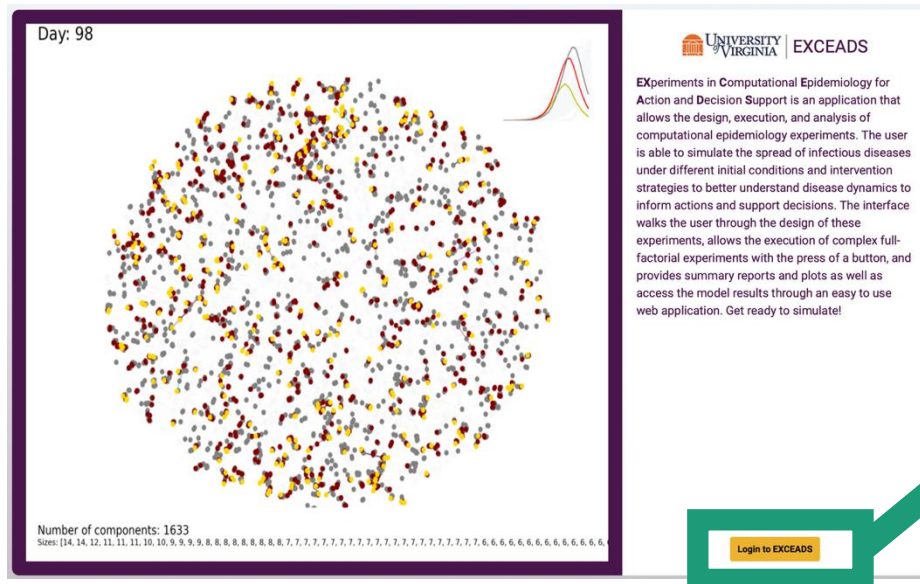
Cell(s)
05



EXCEEDS Account Registration

<https://sciduct.bii.virginia.edu/usersvc/register>

<https://exceeds.bii.virginia.edu/>



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Email Or Username

E-mail or Username

Password

Password

Login

 **Forgot Password?**
[Reset](#)

 **New User?**
[Signup Now!](#)

UNIVERSITY
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User Name

First Name

Last Name

Email

Organization

Register

EXCEADS Walkthrough: Overview



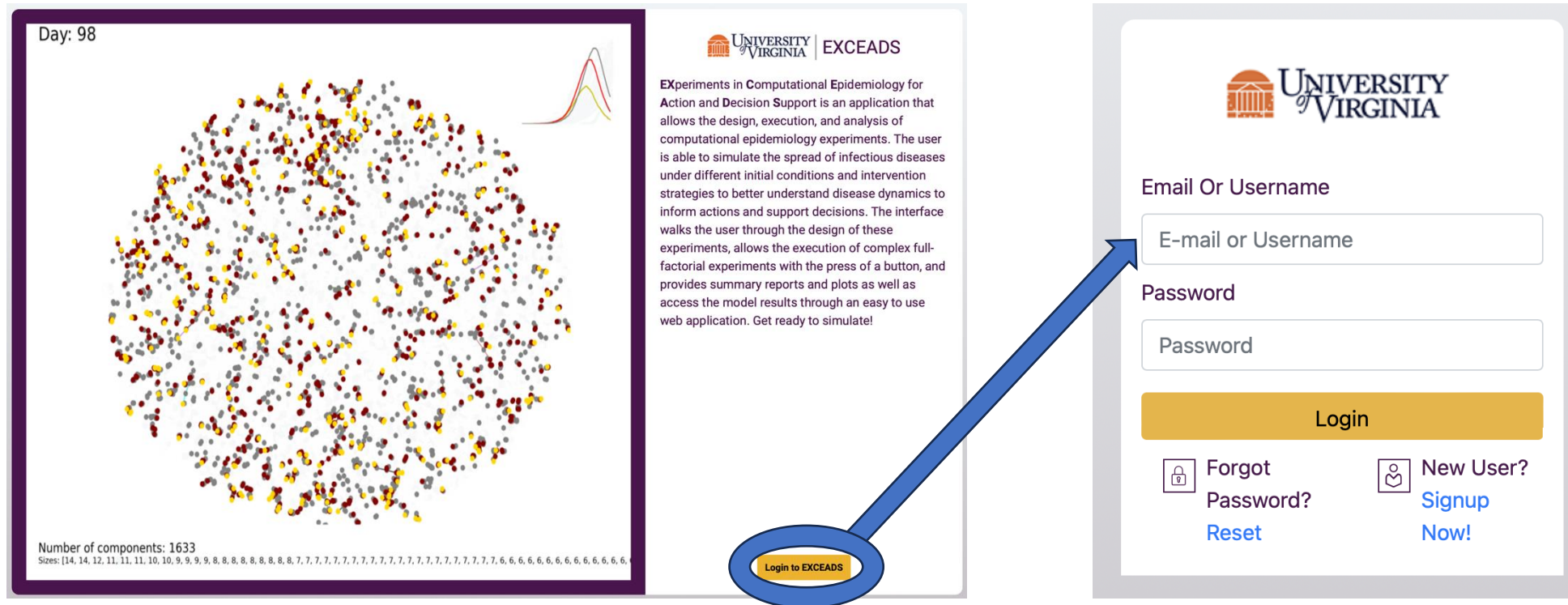
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Welcome to EXCEEDS

<https://exceeds.bii.virginia.edu>



Home page

UNIVERSITY OF VIRGINIA EXCEEDS

Lacey Critchley

Menu

- Experiments
- Simulation**
- Analysis
- Simulation Outputs
- Datasets
- Initial Condition
- Disease
- Disease Builder
- Trigger
- Archived

Simulation

Search Simulation

Created By Mine Shared Filter

Create New

Simulation Title	Created By	Model	Status	Cell(s)	Actions
PneumonicPlague_DCmetroarea_Interventions_2...	Lacey Critchley	EpiHiper	Complete	01	View Output
PneumonicPlague_DCmetroarea_20230620	Lacey Critchley	EpiHiper	Complete	01	View Output
PneumonicPlague_NoInterventions_TuningTrans...	Lacey Critchley	EpiHiper	Complete	01	View Output
PneumonicPlague_SocialDistancing_SchoolWork...	Lacey Critchley	EpiHiper	Failed	01	Restart
PneumonicPlague_SocialDistancing_SchoolWork...	Lacey Critchley	EpiHiper	Complete	01	View Output
PneumonicPlague_NoInterventions_20230617	Lacey Critchley	EpiHiper	Complete	01	View Output
PneumonicPlague_InterventionsTest_SocialDista...	Lacey Critchley	EpiHiper	Complete	01	View Output
PneumonicPlague_InterventionsTest_MaxCombo...	Lacey Critchley	EpiHiper	Not Runnable	01	Start
PneumonicPlague_InterventionsTest_CloseWork...	Lacey Critchley	EpiHiper	Complete	01	View Output
PneumonicPlague_InterventionsTest_Quarantine...	Lacey Critchley	EpiHiper	Failed	01	Restart
PneumonicPlague_InterventionsTest_Prophylax...	Lacey Critchley	EpiHiper	Failed	01	Restart
Pneumonic Plague - LC interventions test - 20230...	Lacey Critchley	EpiHiper	Complete	01	View Output
Pneumonic Plague - LC Stress Test (Safari dupe)	Lacey Critchley	EpiHiper	Complete	01	View Output
Pneumonic Plague - LC Stress Test	Lacey Critchley	EpiHiper	Complete	01	View Output
Pneumonic Plague - LC Test - 20230621	Lacey Critchley	EpiHiper	Complete	01	View Output
Pneumonic Plague - LC test - 20230614 - Seed 1...	Lacey Critchley	EpiHiper	Complete	01	View Output

Full screen shortcut.

Your main navigation menu is in the left-hand sidebar.

Main dashboard of experiments. Each tile is a simulation.

Simulations

UNIVERSITY of VIRGINIA

EXCEEDS

Menu

Experiments

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Simulation Outputs

Datasets

Initial Condition

Disease

Disease Builder

Trigger

Archived

Simulation

Search Simulation

Created By

Mine

Shared

Filter

PneumonicPlague_DCmetroarea_Interventions_2... Jun 20, 2023 12:55 PM Created By Lacey Critchley Complete Model EpiHiper Status Shared Cell(s) 01 View Output	PneumonicPlague_DCmetroarea_20230620 Jun 20, 2023 11:43 AM Created By Lacey Critchley Complete Model EpiHiper Status Shared Cell(s) 01 View Output	PneumonicPlague_NoInterventions_TuningTrans... Jun 20, 2023 10:49 AM Created By Lacey Critchley Complete Model EpiHiper Status Shared Cell(s) 01 View Output	PneumonicPlague_Social Jun 20, 2023 10:02 AM Created By Lacey Critchley Model EpiHiper Status Shared Cell(s) 01 Restart
PneumonicPlague_SocialDistancing_SchoolWork... Jun 19, 2023 04:24 PM Created By Lacey Critchley Complete Model EpiHiper Status Shared Cell(s) 01 View Output	PneumonicPlague_NoInterventions_20230617 Jun 17, 2023 09:52 PM Created By Lacey Critchley Complete Model EpiHiper Status Shared Cell(s) 01 View Output	PneumonicPlague_InterventionsTest_SocialDista... Jun 17, 2023 09:50 PM Created By Lacey Critchley Complete Model EpiHiper Status Shared Cell(s) 01 View Output	PneumonicPlague_InterventionsTest_SocialDista... Jun 17, 2023 09:43 PM Created By Lacey Critchley Not Runnable New Model EpiHiper Status Shared Cell(s) 01 Start
PneumonicPlague_InterventionsTest_CloseWork... Jun 17, 2023 09:40 PM Created By Lacey Critchley Complete Model EpiHiper Status Shared Cell(s) 01 View Output	PneumonicPlague_InterventionsTest_Quarantine... Jun 17, 2023 09:38 PM Created By Lacey Critchley Runnable Failed Model EpiHiper Status Shared Cell(s) 01 Restart	PneumonicPlague_InterventionsTest_Prophylax... Jun 17, 2023 09:27 PM Created By Lacey Critchley Runnable Failed Model EpiHiper Status Shared Cell(s) 01 Restart	Pneumonic Plague - LC interventions test - 20230... Jun 17, 2023 03:36 PM Created By Lacey Critchley Complete Model EpiHiper Status Private Cell(s) 01 View Output
Pneumonic Plague - LC Stress Test (Safari dupe) Jun 15, 2023 12:01 PM Created By Lacey Critchley Complete Model EpiHiper Status Shared Cell(s) 01 View Output	Pneumonic Plague - LC Stress Test Jun 15, 2023 11:47 AM Created By Lacey Critchley Complete Model EpiHiper Status Shared Cell(s) 01 View Output	Pneumonic Plague - LC Test - 20230621 Jun 14, 2023 06:14 PM Created By Lacey Critchley Complete Model EpiHiper Status Shared Cell(s) 01 View Output	Pneumonic Plague - LC test - 20230614 - Seed 1... Jun 14, 2023 02:52 PM Created By Lacey Critchley Complete Model EpiHiper Status Shared Cell(s) 01 View Output

PneumonicPlague_DCmetroarea_Interventions...

Jun 20, 2023 12:55 PM

Created By
Lacey Critchley

Model
EpiHiper

Status
Shared

Cell(s)
01

Complete

Job
status

[View Output](#)



Share, duplicate, archive, view cells

Shared simulations

Click “Shared”
to view
simulations
shared within
your team.

UNIVERSITY OF VIRGINIA | EXCEEDS

Menu

- Experiments
- Simulation**
- Analysis
- Simulation Outputs
- Datasets
- Initial Condition
- Disease
- Disease Builder
- Trigger
- Archived

Simulation

Search Simulation

Created By: Mine | **Shared** | Filter

USA Patchsim Flu
Jun 20, 2023 01:15 PM
Created By: Mandy Wilson
Model: PatchSim
Status: Shared
Cell(s): 01
Runnable: Running
[View Output](#)

PneumonicPlague_SocialDistancing_wSchoolWor...
Jun 20, 2023 12:29 PM
Created By: Mandy Wilson
Model: EpiHiper
Status: Shared
Cell(s): 01
Complete
[View Output](#)

PneumonicPlague_SocialDistancing_SchoolWork...
Jun 20, 2023 12:28 PM
Created By: Mandy Wilson
Model: EpiHiper
Status: Shared
Cell(s): 01
Complete
[View Output](#)

PneumonicPlague_SocialDistancing_SchoolWork...
Jun 20, 2023 10:56 AM
Created By: Mandy Wilson
Model: EpiHiper
Status: Shared
Cell(s): 01
Complete
[View Output](#)

PneumonicPlague_SocialDistancing_SchoolWork...
Jun 20, 2023 10:41 AM
Created By: Mandy Wilson
Model: EpiHiper
Status: Shared
Cell(s): 01
Complete
[View Output](#)

PneumonicPlague_InterventionsTest_SocialDisa...
Jun 19, 2023 02:50 PM
Created By: Mandy Wilson
Model: EpiHiper
Status: Shared
Cell(s): 01
Complete
[View Output](#)

PneumonicPlague_InterventionsTest_Prophylax...
Jun 19, 2023 02:35 PM
Created By: Mandy Wilson
Model: EpiHiper
Status: Shared
Cell(s): 01
Complete
[View Output](#)

Washington DC Metro Pneumonic Plague
Jun 16, 2023 10:43 AM
Created By: Mandy Wilson
Model: EpiHiper
Status: Shared
Cell(s): 03
Complete
[View Output](#)

Test Pneumonic Plague (1) (1) (1)
Jun 15, 2023 04:46 PM
Created By: Gotha Barnes
Model: EpiHiper
Status: Shared
Cell(s): 01
Complete
[View Output](#)

Test Pneumonic Plague (1) (1) (2)
Jun 15, 2023 04:46 PM
Created By: Gotha Barnes
Model: EpiHiper
Status: Shared
Cell(s): 01
Runnable: New
[View Output](#)

Nevada Ebola on Microsoft Edge (1)
Jun 15, 2023 02:30 PM
Created By: PJ Wilson
Model: EpiHiper
Status: Shared
Cell(s): 03
Complete
[View Output](#)

Srini's test Pneumonic Plague
Jun 15, 2023 11:48 AM
Created By: Srini Venkatramanan
Model: EpiHiper
Status: Shared
Cell(s): 06
Complete
[View Output](#)

Test Pneumonic Plague (3)
Jun 15, 2023 11:47 AM
Created By: Przemek Porebski
Model: EpiHiper
Status: Shared
Cell(s): 01
Complete
[View Output](#)

Test Pneumonic Plague
Jun 15, 2023 11:47 AM
Created By: PI Wilson
Model: EpiHiper
Status: Shared
Cell(s): 01
Complete
[View Output](#)

Test Pneumonic Plague (1) (1)
Jun 15, 2023 11:47 AM
Created By: Gotha Barnes
Model: EpiHiper
Status: Shared
Cell(s): 01
Complete
[View Output](#)

Test Pneumonic Plague (2)
Jun 15, 2023 11:47 AM
Created By: Dustin Machi
Model: EpiHiper
Status: Shared
Cell(s): 01
Complete
[View Output](#)

Lacey Critchley

Sort

UNIVERSITY of VIRGINIA

EXCEEDS

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Datasets

Initial Condition

Disease

Disease Builder

Trigger

Archived

Simulation

Search Simulation

Created By

Mine

Shared

Filter

Sort

Create New

PneumonicPlague_DCmetroarea_SocialDistClose...

Jun 20, 2023 01:43 PM

Created By

Lacey Critchley

Runnable

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_DCmetroarea_Interventions_2...

Jun 20, 2023 12:55 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_DCmetroarea_20230620

Jun 20, 2023 11:43 AM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_NoInterventions_TuningTrans...

Jun 20, 2023 10:49 AM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_SocialDistancing_SchoolWork...

Jun 20, 2023 10:02 AM

Created By

Lacey Critchley

Failed

Model

EpiHiper

Status

Shared

Cell(s)

01

Restart

View Output

PneumonicPlague_SocialDistancing_SchoolWork...

Jun 19, 2023 04:24 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_NoInterventions_20230617

Jun 17, 2023 09:52 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_InterventionsTest_SocialDista...

Jun 17, 2023 09:50 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_InterventionsTest_MaxCombo...

Jun 17, 2023 09:43 PM

Created By

Lacey Critchley

Not Runnable

Model

EpiHiper

Status

Shared

Cell(s)

01

Start

View Output

PneumonicPlague_InterventionsTest_CloseWork...

Jun 17, 2023 09:40 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_InterventionsTest_Quarantine...

Jun 17, 2023 09:38 PM

Created By

Lacey Critchley

Failed

Model

EpiHiper

Status

Shared

Cell(s)

01

Restart

View Output

PneumonicPlague_InterventionsTest_Prophylax...

Jun 17, 2023 09:27 PM

Created By

Lacey Critchley

Failed

Model

EpiHiper

Status

Shared

Cell(s)

01

Restart

View Output

Pneumonic Plague - LC interventions test - 20230...

Jun 17, 2023 03:36 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

Pneumonic Plague - LC Stress Test (Safari dupe)

Jun 15, 2023 12:01 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

Pneumonic Plague - LC Stress Test

Jun 15, 2023 11:47 AM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

Pneumonic Plague - LC Test - 20230621

Jun 14, 2023 06:14 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

Sorting options:
chronological
and
alphabetical.

Search

Search field for rapid
auto search.

EXCEEDS

Menu

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Disease

Disease Builder

Trigger

Archived

Simulation

Search Simulation

Created By

Mine

Shared

Filter

PneumonicPlague_DCmetroarea_SocialDistClose...

Jun 20, 2023 01:43 PM

Created By

Lacey Critchley

Runnable

Running

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_DCmetroarea_Interventions_2...

Jun 20, 2023 12:55 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_DCmetroarea_20230620

Jun 20, 2023 11:43 AM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_NoInterventions_TuningTrans...

Jun 20, 2023 10:49 AM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_SocialDistancing_SchoolWork...

Jun 20, 2023 10:02 AM

Created By

Lacey Critchley

Runnable

Failed

Model

EpiHiper

Status

Shared

Cell(s)

01

Restart

View Output

PneumonicPlague_SocialDistancing_SchoolWork...

Jun 19, 2023 04:24 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_SocialDistancing_SchoolWork...

Jun 17, 2023 09:43 PM

Created By

Lacey Critchley

Not Runnable

New

Model

EpiHiper

Status

Shared

Cell(s)

01

Start

View Output

PneumonicPlague_SocialDistancing_SchoolWork...

Jun 17, 2023 09:40 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_InterventionsTest_MaxCombo...

Jun 17, 2023 03:36 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_InterventionsTest_MaxCombo...

Jun 15, 2023 12:01 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

Simulation

Washington

Created By

Mine

Shared

All

Filter

Washington DC Metro Pneumonic Plague

Jun 16, 2023 10:43 AM

Created By

Mandy Wilson

Complete

Model

EpiHiper

Status

Shared

Cell(s)

03

View Output

Washington DC -- Infection starts at school

May 19, 2023 03:25 PM

Created By

Pi Wilson

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

Washington SEIR -- Infection starts at school (1)

May 19, 2023 03:22 PM

Created By

Pi Wilson

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

Filter



EXCEEDS

Menu

Experiments

Simulation

Analysis

Simulation Outputs

Datasets

Initial Condition

Disease

Disease Builder

Trigger

Archived

Simulation

Search Simulation

Created By Mine Shared

Filter

PneumonicPlague_DCMetroarea_SocialDistClose...

Jun 20, 2023 01:43 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Runnable Running

View Output

PneumonicPlague_DCMetroarea_Interventions_2...

Jun 20, 2023 12:55 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

PneumonicPlague_DCMetroarea_20230620

Jun 20, 2023 11:43 AM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

PneumonicPlague_NoInterventions_TuningTrans...

Jun 20, 2023 10:49 AM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

PneumonicPlague_SocialDistancing_SchoolWork...

Jun 20, 2023 10:02 AM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Runnable Failed

Restart

View Output

PneumonicPlague_SocialDistancing_SchoolWork...

Jun 19, 2023 04:24 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

PneumonicPlague_InterventionsTest_MaxCombo...

Jun 17, 2023 09:43 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Not Runnable New

Start

View Output

PneumonicPlague_InterventionsTest_CloseWork...

Jun 17, 2023 09:40 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

Pneumonic Plague - LC interventions test - 20230...

Jun 17, 2023 03:36 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

Pneumonic Plague - LC Stress Test (Safari dupe)

Jun 15, 2023 12:01 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

Filter based on attributes

Choose your filter options, then click "Apply".

Simulation

Search Simulation

Created By Mine Shared

Filter

PneumonicPlague_DCMetroarea_SocialDistClose...

Jun 20, 2023 01:43 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Runnable Analyzing

View Output

PneumonicPlague_DCMetroarea_Interventions_2...

Jun 20, 2023 12:55 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

PneumonicPlague_DCMetroarea_20230620

Jun 20, 2023 11:43 AM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

PneumonicPlague_NoInterventions_20230617

Jun 17, 2023 09:52 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

PneumonicPlague_SocialDistancing_SchoolWork...

Jun 20, 2023 10:02 AM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Runnable Failed

Restart

View Output

PneumonicPlague_SocialDistancing_SchoolWork...

Jun 19, 2023 04:24 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

PneumonicPlague_InterventionsTest_MaxCombo...

Jun 17, 2023 09:43 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Not Runnable New

Start

View Output

PneumonicPlague_InterventionsTest_CloseWork...

Jun 17, 2023 09:40 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

Pneumonic Plague - LC interventions test - 20230...

Jun 17, 2023 03:36 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

Pneumonic Plague - LC Stress Test (Safari dupe)

Jun 15, 2023 12:01 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

Pneumonic Plague - LC Stress Test

Jun 15, 2023 11:47 AM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

Pneumonic Plague - LC Stress Test

Jun 14, 2023 09:00 PM

Created By Lacey Critchley

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

Filter By

Apply

Attribute

--Select--

Attribute Value

Add

--Select--

Status

Disease - Name

Model

Initial Condition - Name

Location

Analysis

UNIVERSITY OF VIRGINIA EXCEEDS

Menu

- Experiments
- Simulation
- Analysis**
- Simulation Outputs
- Datasets
- Initial Condition
- Disease
- Disease Builder
- Trigger
- Archived

Analysis

Search Analysis

Created By **Mine** **Shared** Filter

Pneumonic Plague - Wyoming -- W and WO interventi... Jun 20, 2023 11:37 AM Created By Mandy Wilson Complete Job Type development/epihiper... Status Shared Cell(s) 02 View Output	Hospital inflection point from Analysis tab rerun Jun 16, 2023 01:02 PM Created By Pi Wilson Complete Job Type exceeds_dev/us_infle... Status Shared View Output	Hospital inflection point from Analysis tab (1) Jun 16, 2023 11:25 AM Created By Pi Wilson Complete Job Type exceeds_dev/us_infle... Status Shared View Output	Test version (1) (1) Jun 16, 2023 11:24 AM Created By Pi Wilson Runnable New Job Type exceeds_dev/us_infle... Status Shared View Output
Test Wyoming filter Jun 15, 2023 02:36 PM Created By Gotha Barnes Complete Job Type development/epihiper... Status Shared Cell(s) 02 View Output	Wyoming Pneumonic Jun 15, 2023 02:34 PM Created By Gotha Barnes Complete Job Type development/epihiper... Status Shared Cell(s) 02 View Output	Hospital Inflection Point Age 56 Threshold .7 Jun 15, 2023 02:14 PM Created By Pi Wilson Complete Job Type exceeds_dev/us_infle... Status Shared View Output	Test Analysis -- Pi Jun 15, 2023 01:23 PM Created By Pi Wilson Not Runnable New Job Type exceeds_dev/us_infle... Status Shared View Output
Test analysis -- not stress test Jun 15, 2023 01:22 PM Created By Pi Wilson Not Runnable New Job Type exceeds_dev/us_infle... Status Shared View Output	Stress test inflection point Pi (1) Jun 15, 2023 12:02 PM Created By Mandy Wilson Complete Job Type exceeds_dev/us_infle... Status Shared View Output	Stress test inflection point / Przemek / Chrome Jun 15, 2023 11:56 AM Created By Przemek Porebski Complete Job Type exceeds_dev/us_infle... Status Shared View Output	Stress Test Inflection Point briandk Jun 15, 2023 11:55 AM Created By Gotha Barnes Not Runnable New Job Type exceeds_dev/us_infle... Status Shared View Output
Srini's HHS inflection point Jun 15, 2023 11:53 AM Created By Srini Venkatramanan Complete Job Type exceeds_dev/us_infle... Status Shared View Output	Stress test inflection point Pi Jun 15, 2023 11:52 AM Created By Pi Wilson Not Runnable New Job Type exceeds_dev/us_infle... Status Shared View Output	Compare Wyoming and South Dakota SEIR Jun 14, 2023 11:07 AM Created By Pi Wilson Complete Job Type exceeds_dev/us_infle... Status Shared Cell(s) 02 View Output	Test with latest version Jun 13, 2023 12:24 PM Created By Gotha Barnes Complete Job Type exceeds_dev/us_infle... Status Shared View Output

Also features a "shared" function to view analyses shared within your team.

Dashboard of analyses.

Simulation outputs

UNIVERSITY OF VIRGINIA EXCEEDS

Menu

- Experiments
- Simulation
- Analysis
- Simulation Outputs**
- Datasets
- Initial Condition
- Disease
- Disease Builder
- Trigger
- Archived

Simulation Outputs

Search Simulation Outputs

Created By **Mine** **Shared** Filter

PneumonicPlague_DCmetroarea_Interventions_2... Jun 20, 2023 12:55 PM Created By Lacey Critchley Model EpiHiper Status Shared Cell(s) 01 Complete View Output	PneumonicPlague_DCmetroarea_20230620 Jun 20, 2023 11:43 AM Created By Lacey Critchley Model EpiHiper Status Shared Cell(s) 01 Complete View Output	PneumonicPlague_NoInterventions_TuningTrans... Jun 20, 2023 10:49 AM Created By Lacey Critchley Model EpiHiper Status Shared Cell(s) 01 Complete View Output	PneumonicPlague_SocialDistancing_SchoolWork... Jun 19, 2023 04:24 PM Created By Lacey Critchley Model EpiHiper Status Shared Cell(s) 01 Complete View Output
PneumonicPlague_NoInterventions_20230617 Jun 17, 2023 09:52 PM Created By Lacey Critchley Model EpiHiper Status Shared Cell(s) 01 Complete View Output	PneumonicPlague_InterventionsTest_SocialDista... Jun 17, 2023 09:50 PM Created By Lacey Critchley Model EpiHiper Status Shared Cell(s) 01 Complete View Output	PneumonicPlague_InterventionsTest_CloseWork... Jun 17, 2023 09:40 PM Created By Lacey Critchley Model EpiHiper Status Shared Cell(s) 01 Complete View Output	Pneumonic Plague - LC interventions test - 20230... Jun 17, 2023 03:36 PM Created By Lacey Critchley Model EpiHiper Status Private Cell(s) 01 Complete View Output
Pneumonic Plague - LC Stress Test (Safari dupe) Jun 15, 2023 12:01 PM Created By Lacey Critchley Model EpiHiper Status Shared Cell(s) 01 Complete View Output	Pneumonic Plague - LC Stress Test Jun 15, 2023 11:47 AM Created By Lacey Critchley Model EpiHiper Status Shared Cell(s) 01 Complete View Output	Pneumonic Plague - LC Test - 20230621 Jun 14, 2023 06:14 PM Created By Lacey Critchley Model EpiHiper Status Private Cell(s) 03 Complete View Output	Pneumonic Plague - LC test - 20230614 - Seed 1... Jun 14, 2023 02:52 PM Created By Lacey Critchley Model EpiHiper Status Shared Cell(s) 03 Complete View Output
Test Jun 13, 2023 04:57 PM Created By Lacey Critchley Complete	DC-Baltimore Metro SEIR -- Infection starts at sch... Jun 13, 2023 04:02 PM Created By Lacey Critchley Complete	Pneumonic Plague - LC test - 20230613 - Social d... Jun 13, 2023 03:38 PM Created By Lacey Critchley Complete	Pneumonic Plague - LC test - 20230613 - Home I... Jun 13, 2023 02:19 PM Created By Lacey Critchley Complete

Dashboard for all successfully run simulation experiments.

Also features a “shared” function to view simulation outputs shared within your team.

Click “View Output” for a shortcut to simulation results.

Datasets

UNIVERSITY OF VIRGINIA EXCEEDS

Menu

- Experiments
- Simulation
- Analysis
- Simulation Outputs
- Datasets**
- Initial Condition
- Disease
- Disease Builder
- Trigger
- Archived

Search Datasets

Created By Mine Shared

Click which dataset you want to use.

Name	Type	Owner	Size	Last Updated
☒ COVID-19_Reported_Patient_Impact_and_Hospital_Capacity_by_State_Timeseries.csv	timeseries+csv	brian	34.57 MB	14 days ago

Summary data about your dataset populates in the right hand column.

COVID-19_Reported_Patient_Impact_and_Hospital_Capacity_by_State_Timeseries.csv

ID 7be9512b-e09f-4ff7-b63e-7a5588bcd877

Version 6

State stored

Type timeseries+csv

Created By brian

Created Date 2023-05-03 17:36:25

Updated By brian

Updated date 2023-06-05 19:04:47

Size 34.57 MB

MD5 678118acbe2acf5cea7daf6e69e81a3e

Click "Create Job" and select which analysis template you'd like to use (pop up menu displayed below).

Create Job

Version	Created Date	Created By	Size
6	2023-05-03 17:37:51	brian	34.57 MB
5	2023-05-03 17:37:31	brian	30.97 MB
4	2023-05-03 17:37:13	brian	25.51 MB

- exceeds_dev/single_cell
- exceeds_dev/single_cell_w_params
- exceeds_dev/params_only
- exceeds_dev/single_file
- exceeds_dev/single_file_w_params
- exceeds_dev/multiple_cells_w_params
- exceeds_dev/multiple_files_w_params
- exceeds_dev/cell_and_file_w_params
- exceeds_dev/us_inflection_point_hosp

Initial conditions

Initial conditions templates you can edit / duplicate for use in simulations.

Features "Shared" tab.

UNIVERSITY OF VIRGINIA
EXCEEDS

Menu

- Experiments
- Simulation
- Analysis
- Simulation Outputs
- Datasets
- Initial Condition**
- Disease
- Disease Builder
- Trigger
- Archived

Initial Condition

Search Initial Condition

Created By: Mine Shared

Model: All

Flu Vaccination by Age Group Duplicate

Model: EpiHiper Last Modified: Apr 27, 2023 04:37 AM

Description: Seasonal influenza vaccination and age-specific effectiveness.

Initial Condition Attributes

- Vaccination Rate for Age Group 0-18
Value: 70.0
- Vaccination Rate for Age Group 19-64
Value: 30.0
- Vaccination Rate for Age Group 65+
Value: 50.0
- Effectiveness of the vaccine
Value: 0.8

Initial conditions - options

UNIVERSITY OF VIRGINIA EXCEEDS

Menu

- Experiments
- Simulation
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- Simulation Outputs
- Datasets
- Initial Condition**
- Disease
- Disease Builder
- Trigger
- Archived

Initial Condition

Search Initial Condition

Created By: Mine Shared

Model: PatchSim

Initial infections - percentage

Model: PatchSim Last Modified: May 11, 2023 03:54 AM

Description: Initially infect the specified percentage of the population.

Initial Condition Attributes

- ① Percent of population to initially infect
Value: 2.0
- ① The health state of infected individuals
Text: Not Set

Duplicate

Choose “Model” options based on which synthetic population you are using in experiment.

Click “Duplicate” to duplicate the template and edit for your purposes.

Initial conditions – duplicate and edit

UNIVERSITY OF VIRGINIA EXCEEDS

Lacey Critchley

Menu

- Experiments
- Simulation
- Analysis
- Simulation Outputs
- Datasets
- Initial Condition**
- Disease
- Disease Builder
- Trigger
- Archived

Initial Condition

Search Initial Condition

Created By **Mine** **Shared**

Model: All

Cancel Save

All

- Flu Vaccination by Age Group
- Initialization of a population into proper age and r...
- Age and risk based susceptible states with initial ...
- Flu Vaccination using CDC Age Groups
- Initial Infections - number
- Initial Infections - number and custom state
- Initial infections - percentage
- Initial Infections - number and custom state
- Initial infections - percentage
- Initial Infections - number
- Seeding (number)
- Seeding (fraction)
- Flu-like vaccination schedule
- Initially infect - ISymp**
- Initially infect - SIR (25 StoI)
- Initially infect - SIR (25 Ill)
- Initially infect 100
- Initially infect 5
- Initially infect 25
- 200 Isymp to start

Name

Max 100 characters

Description

Max 2000 characters

Number of individuals to initially infect

☒ Actual Value ☐ Regular Steps ☐ Custom Steps

Value

100.0

Infected State

☒ Text

Various editable options to suit your experiment's needs.

Disease

UNIVERSITY of VIRGINIA

EXCEEDS

Menu

Experiments

Simulation

Analysis

Simulation Outputs

Datasets

Initial Condition

Disease

Trigger

Archived

Disease

Search Disease

Created By

Mine

Shared

Model: All

2019-Ncov

Coronavirus

Ebola

Ebola Virus Disease

General

Flu with symptomatic and asymptomatic i...

SEIR general model

Pneumonic Plague - v2

Simple SEIR

Untitled21JUN-Created On Jun 21, 2023 2:19 ...

Pneumonic Plague

Hemorrhagic Fevers

Influenza

Respiratory Infections

Seir

Pneumonic Plague

Model
EpiHiper

Last Modified
Jun 22, 2023 01:39 PM

Description
Pneumonic Plague

Pneumonic Plague Details

Susceptible

Transmission

Exposed

E to I

ISymp

I to R

Recovered

State

Edge Transmissions

Edge Transitions

Susceptible	Exposed	ISymp	Recovered
Infectivity	0	0	1
Susceptibility	1	0	0

Features the “Shared” tab to share disease models built within your team.

You can “Duplicate” and edit.

Various disease models are built-in.

Disease builder

UNIVERSITY OF VIRGINIA EXCEADS

Menu

- Experiments
- Simulation
- Analysis
- Simulation Outputs
- Datasets
- Initial Condition
- Disease
- Disease Builder**
- Trigger
- Archived

Disease Builder

Search Disease Builder

Filter By **Draft** Publish Mine Shared

Simple SIR - DRAFT Edit Delete Duplicate Publish

Created By Lacey Critchley
Last Modified Jun 20, 2023 01:30 PM

Description

Details

S Incubation I Infectious R

State Edge Transmissions Edge Transitions Analysis Details

S		I		R	
Infectivity	0	Infectivity	1	Infectivity	0
Susceptibility	1	Susceptibility	0	Susceptibility	0

You can also create your own disease model with "Disease Builder".

Click "Create New" to begin.

Click "Publish" once you are done to make the disease model appear in the main "Disease" menu options for experiments.

Trigger

Trigger templates
you can edit /
duplicate for use
in simulations.

 UNIVERSITY OF VIRGINIA

EXCEEDS

Lacey Critchley

Menu

Experiments

Simulation

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Simulation Outputs

Datasets

Initial Condition

Disease

Disease Builder

Trigger

Archived

Trigger

Search Trigger

Created By

Mine

Shared

Model: All

Duplicate

All

Trigger on a specified Day

Newly Symptomatic Individuals with custom sym...

Trigger on a specified Day

Initial Infections - number and custom state

Infected School Children - Number

Trigger Location incompatibility - Initial Infection...

Trigger Prophylax for Household Members

Trigger on a specified Day

ModelPatchSim

Last ModifiedApr 27, 2023 02:36 AM

DescriptionTrigger based on a specific day of the simulation.

Trigger Attributes

Day

Value5.0

Archive

UNIVERSITY of VIRGINIA

EXCEEDS

Lacey Critchley

Menu

Experiments

Simulation

Analysis

Simulation Outputs

Datasets

Initial Condition

Disease

Disease Builder

Trigger

Archived

Archived

Search Archived

Experiments

Simulation

Analysis

Initial Condition

Disease

Trigger

Archived Simulation

DTRAtaining_PneumonicPlague_DC_StrongInt...

Jun 20, 2023 05:40 PM

Model

EpiHiper

Cell(s)

1

Restore

PPtest

Jun 20, 2023 04:25 PM

Model

EpiHiper

Cell(s)

1

Restore

Archive and restore past simulations.

User manual

**EXCEEDS**

Menu

Experiments

Simulation

Analysis

Simulation Outputs

Datasets

Initial Condition

Disease

Disease Builder

Trigger

Archived

Simulation

Search Simulation

Created By

Mine

Shared

Filter

PneumonicPlague_DCmetroarea_Interventions_2...

Jun 20, 2023 12:55 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_DCmetroarea_20230620

Jun 20, 2023 11:43 AM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_NoInterventions_TuningTrans...

Jun 20, 2023 10:49 AM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_SocialDistancing_SchoolWork...

Jun 20, 2023 10:02 AM

Created By

Lacey Critchley

Runnable

Failed

Model

EpiHiper

Status

Shared

Cell(s)

01

Restart

PneumonicPlague_SocialDistancing_SchoolWork...

Jun 19, 2023 04:24 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_NoInterventions_20230617

Jun 17, 2023 09:52 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_InterventionsTest_SocialDista...

Jun 17, 2023 09:50 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague

Jun 17, 2023 09:43 P

Created By

Lacey Critchley

Start

Model

EpiHiper

Status

Shared

Cell(s)

01

PneumonicPlague_InterventionsTest_CloseWork...

Jun 17, 2023 09:40 PM

Created By

Lacey Critchley

Complete

Model

EpiHiper

Status

Shared

Cell(s)

01

View Output

PneumonicPlague_InterventionsTest_Quarantine...

Jun 17, 2023 09:38 PM

Created By

Lacey Critchley

Runnable

Failed

Model

EpiHiper

Status

Shared

Cell(s)

01

Restart

PneumonicPlague_InterventionsTest_Prophylax...

Jun 17, 2023 09:27 PM

Created By

Lacey Critchley

Runnable

Failed

Model

EpiHiper

Status

Shared

Cell(s)

01

Restart

Pneumonic Plague

Jun 17, 2023 03:36 P

Created By

Lacey Critchley

View Output

Model

EpiHiper

Status

Private

Cell(s)

01

Pneumonic Plague - LC Stress Test (Safari dupe)

Jun 15, 2023 12:01 PM

Created By

Lacey Critchley

Complete

Pneumonic Plague - LC Stress Test

Jun 15, 2023 11:47 AM

Created By

Lacey Critchley

Complete

Pneumonic Plague - LC Test - 20230621

Jun 14, 2023 06:14 PM

Created By

Lacey Critchley

Complete

Pneumonic Plague - LC test - 20230614 - Seed 1...

Jun 14, 2023 02:52 PM

Created By

Lacey Critchley

Complete

Lacey Critchley

Log Out

User Manual

EXCEEDS 3.6

Experiments in Computational Epidemiology for Action and Decision Support

**University of Virginia**

User Manual

Network Systems Science and Advanced Computing (NSSAC)

Biocomplexity Institute and Initiative (BII)

When you click on your username, it gives you the option to log out or view the user manual in a new tab.

Questions?

For tool support: exceeds@virginia.edu

For study support: brylew@virginia.edu

EXCEADS Walkthrough: Disease Model Builder



UNIVERSITY *of* VIRGINIA

BIOCOMPLEXITY INSTITUTE

biocomplexity.virginia.edu

Disease Model Builder

UNIVERSITY OF VIRGINIA EXCEADS

Lacey Critchley

Menu

- Experiments
- Simulation
- Analysis
- Simulation Outputs
- Datasets
- Initial Condition
- Disease
- Disease Builder**
- Trigger
- Archived

Disease Builder

Search Disease Builder

Filter By

Draft Publish

Mine Shared

Create New

Disease Builder list is empty.
Create by clicking on Create New

First, click
“Disease Builder”
on the left-hand
menu.

Then, click
“create new”.

Disease Model Builder

The screenshot displays the EXCEEDS Disease Model Builder interface. The top header includes the University of Virginia logo, the title "EXCEEDS", and a user profile for "Lisa Jones". Below the header, a menu on the left lists options: Experiments, Analysis, Initial Condition, Disease, Disease Builder (highlighted), Trigger, and Archived. The main workspace shows a workflow diagram on a grid. The diagram starts with a box labeled "State1", followed by a horizontal arrow labeled "Transition1", then a curved arrow labeled "Transition2", and finally two dashed arrows labeled "Transmission1" and "Transmission2". A "Transmission Attribute" panel is open at the bottom, showing a form with a label "Transmission Name *" and a text input field containing "Transmission2". A note at the bottom of the panel states "Maximum 100 characters are allowed". The top right of the workspace shows "Untitled-Created On Oct 06, 2022 6:40 PM" and buttons for "Preview" and "Save".

Build your disease model with customizable states, transitions, and transmissions. Just click, drag, and drop!

Example of building Pneumonic Plague

UNIVERSITY OF VIRGINIA EXCEEDS

State Attributes

Pneumonic Plague

Preview Save

Menu

- Experiments
- Simulation
- Analysis
- Simulation Outputs
- Datasets
- Initial Condition
- Disease
- Disease Builder**
- Archived

Shapes

- Add State
- Add Edge

Metadata

- Attributes
- Analysis

State Attribute

Attributes

State Name *

Susceptible

Maximum 100 characters are allowed

Infectivity

0

Susceptibility

1

Non-Editable Editable

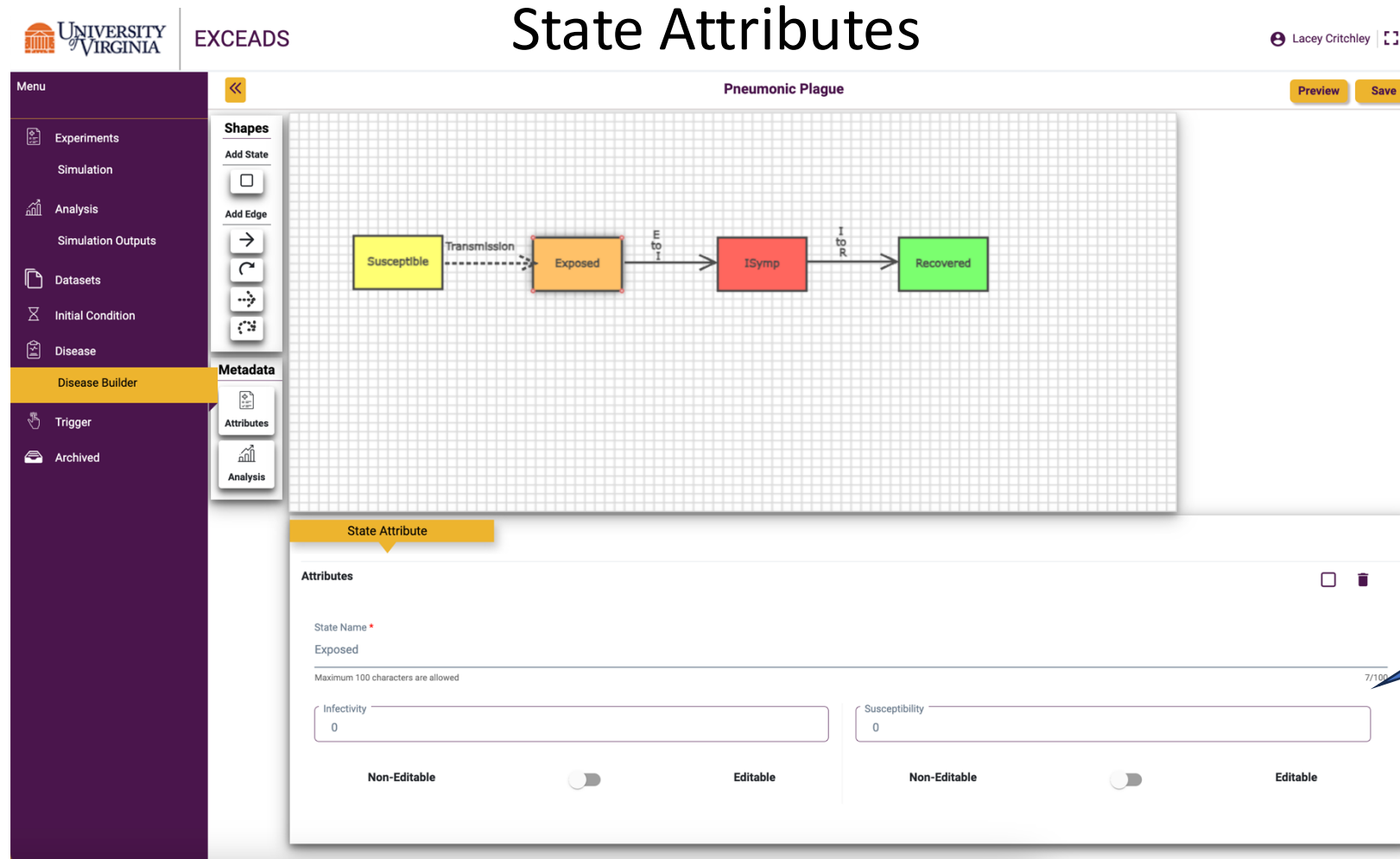
Non-Editable Editable

```
graph LR; S[Susceptible] -.->|Transmission| E[Exposed]; E -- "E to I" --> ISymp[ISymp]; ISymp -- "I to R" --> R[Recovered];
```

Click on each "state" and fill in the attributes tab for the probabilities for infectivity and susceptibility.

In this example, our first state is "susceptible", therefore the probability for infectivity would be 0, while the probability for susceptibility would be 1.

Example of building Pneumonic Plague



In this example, our second state is “exposed”, therefore the probability for infectivity would be 0, while the probability for susceptibility would now be 0.

Example of building Pneumonic Plague

UNIVERSITY of VIRGINIA

EXCEEDS

State Attributes

Lacey Critchley

Menu

Experiments

Simulation

Analysis

Simulation Outputs

Datasets

Initial Condition

Disease

Disease Builder

Trigger

Archived

Shapes

Add State

Add Edge

Metadata

Attributes

Analysis

Pneumonic Plague

Preview Save

Susceptible

Exposed

ISymp

Recovered

Transmission

to

to

to

State Attribute

Attributes

State Name *

ISymp

Maximum 100 characters are allowed

Infectivity

1

Non-Editable

Editable

Susceptibility

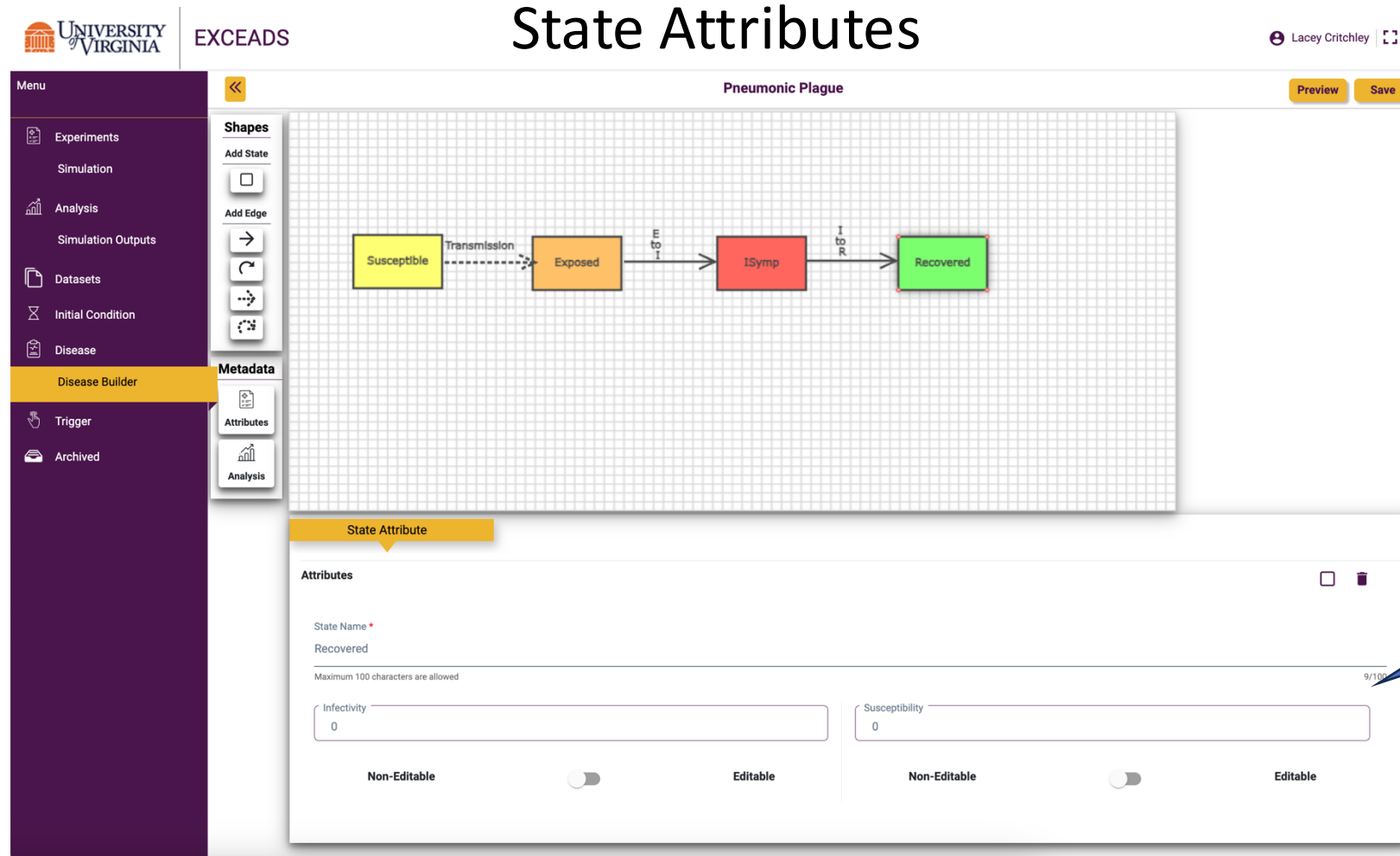
0

Non-Editable

Editable

In this example, our third state is “infected”, therefore the probability for infectivity would now be 1, while the probability for susceptibility remains 0.

Example of building Pneumonic Plague



In this example, our final state is “recovered”, therefore the probabilities for infectivity and susceptibility are now both 0.

Example of building Pneumonic Plague

Transition Attributes

RESEARCH

Epidemiologic Determinants for Modeling Pneumonic Plague Outbreaks

Raymond Gani* and Steve Leach*

Pneumonic plague poses a potentially increasing risk to humans in plague nonendemic regions either as a consequence of an aerosolized release or through importation of the disease. Pneumonic plague is person-to-person transmissible. We provide a quantitative assessment of transmissibility based on past outbreaks that shows that the average number of secondary cases per primary case (R_0) was 1.3 (variance = 3.1) assuming a geometric probability distribution of infectious periods. We estimate R_0 by examining by using lognormal distributions with mean (SD) of 4.3 (1.8) and 2.5 (1.2) days. Based on this parameter estimation, we construct a Markov-chain epidemic model to demonstrate the potential impact of delaying numbers of infectious periods on the number of cases in simulated outbreaks.

Yersinia pestis causes an enzootic vector-borne disease infecting rodents and fleas; humans can also become infected when exposed to aerosolized organisms. Infection in

The risk of importing *Y. pestis* to nonendemic regions may have increased over recent years. The worldwide extent of plague endemic-areas and the global incidence of reported disease have both increased (6), as have the volume and rapidity of national and international trade and travel. These factors raise the likelihood of importation either through travelers incubating plague (as occurred in New York 2002 [7]), or through importation of infected vectors, such as fleas or rats. Imported vectors then have the potential to initiate outbreaks of pneumonic plague. Plague is also recognized as a potential weapon for use, as a biologic weapon in the past. From the 14th to the 18th century in Europe, attempts were made to spread plague in besieged cities by catapulting plague victims over the walls (12). During the 1930s, the Japanese military attempted to spread plague in China by dropping plague-infected fleas from aircraft (12). As late as the 1990s, the Union of Soviet Socialist Republics was developing plague

Pneumonic Plague

Preview Save

Transition Attribute

Attributes

Transition Name *
E to I

Maximum 100 characters are allowed

Title
E to I (incubation period)

Maximum 100 characters are allowed

Select Entry State
Exposed

Select Exit State
ISymp

Probability
1

Maximum 10 digits are allowed

Select DwellTime
normal

Mean
4.3

Maximum 10 digits are allowed

Standard-Deviation
1.8

Maximum 10 digits are allowed

Non-Editable Editable

Choose your entry and exit states from the drop-down menus, the probability of moving between these two states, and select the dwell time and enter the duration.

"Transition" arrows denote within-person progression. Click on an arrow and fill in the attributes tab.

Click the toggle if you'd like to make these details editable once the disease model has been published.

Dwell time can be modeled as fixed, discrete, uniform, or normal. For this example of "Exposed" to Infected ("ISymp") –reflecting the incubation period, we use a normally distributed dwell time with a mean 4.3 days, standard deviation of 1.8.

Example of building Pneumonic Plague

RESEARCH

Epidemiologic Determinants for Modeling Pneumonic Plague Outbreaks

Raymond Gani* and Steve Leach*

Pneumonic plague poses a potentially increasing risk to humans in plague nonendemic regions either as a consequence of an aerosolized release or through importation of the disease. Pneumonic plague is person-to-person transmissible. We provide a quantitative assessment of transmissibility based on past outbreaks that shows that the average number of secondary cases per primary case (R_0) was 4.3 (1.8) and 2.5 (1.2) days. Based on this parameterization, we construct a Markov-chain model to show that the latent and infectious periods can be approximated by using lognormal distributions with means (SD) of 4.3 (1.8) and 2.5 (1.2) days. Based on this parameterization, we construct a Markov-chain model to show that the latent and infectious periods can be approximated by using lognormal distributions with means (SD) of 4.3 (1.8) and 2.5 (1.2) days. Based on this parameterization, we construct a Markov-chain model to show that the latent and infectious periods can be approximated by using lognormal distributions with means (SD) of 4.3 (1.8) and 2.5 (1.2) days.

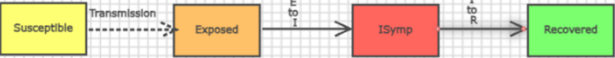
The risk of importing *Y. pestis* to nonendemic regions may have increased over recent years. The worldwide extent of plague endemic-areas and the global incidence of reported disease have both increased (6), as have the volume and rapidity of national and international trade and travel. These factors raise the likelihood of importation either through travelers incubating plague (as occurred in New York 2002 [7]), or through importation of infected vectors, such as fleas or rats. Imported vectors then have the potential to initiate outbreaks of pneumonic plague. Plague is also recognized as a potential weapon for bioterrorists (3,8–11) and has been used, or considered for use, as a biologic weapon in the past. From the 14th to the 18th century in Europe, attempts were made to spread plague in besieged cities by catapulting plague victims over the walls (12). During the 1930s, the Japanese military attempted to spread plague in China by dropping plague-infected fleas from aircraft (12). As late as the 1990s, the Union of Soviet Socialist Republics was developing plague

Yersinia pestis causes an enzootic vector-borne disease infecting rodents and fleas; humans can also become infected when exposed to respiratory droplets. Infection is

Transition Attributes

Pneumonic Plague

Preview Save



Transition Attribute

Attributes

Transition Name *

I to R

Maximum 100 characters are allowed

Title

I to R (infectious period)

Maximum 100 characters are allowed

Select Entry State

ISymp

Select Exit State

Recovered

Probability

1

Maximum 10 digits are allowed

Non-Editable Editable

Select DwellTime

normal

Mean

2.5

Maximum 10 digits are allowed

Non-Editable Editable

Standard-Deviation

1.2

Maximum 10 digits are allowed

Non-Editable Editable

For the infected to recovered transition (the infectious period), we input the probability as 1, and chose a normally distributed dwell time with 2.5 days as the mean with a standard deviation of 1.2.

Example of building Pneumonic Plague

Transmission Attributes

You must have a “transmission” arrow as well. This refers to between-person transmission of the disease (e.g., upon contact of a susceptible with infectious) Fill in the attributes tab.

The screenshot displays the EXCEEDS web interface for configuring a transmission attribute. The top navigation bar includes the University of Virginia logo, the EXCEEDS name, and a user profile for Lacey Critchley. A left-hand menu lists various options: Experiments, Simulation, Analysis, Simulation Outputs, Datasets, Initial Condition, Disease, and Disease Builder (highlighted in orange). The main workspace is titled 'Pneumonic Plague' and features a 'Transmission' diagram with four states: Susceptible (yellow), Exposed (orange), ISymp (red), and Recovered (green). Arrows indicate transitions: a dashed arrow from Susceptible to Exposed labeled 'Transmission', a solid arrow from Exposed to ISymp labeled 'E to I', and a solid arrow from ISymp to Recovered labeled 'I to R'. Below the diagram, the 'Transmission Attribute' configuration form is visible. It includes fields for 'Transmission Name' (set to 'Transmission'), 'Title' (set to 'Transmission'), 'Select Entry State' (set to 'Susceptible'), 'Select Exit State' (set to 'Exposed'), 'Transmissibility' (set to 0.08), and 'Select Contact State' (set to 'ISymp'). A toggle switch for 'Editable' is currently turned on. The 'EXCEEDS Properties' section includes a 'Label' field (set to 'Within-person transmissibility for pneumonic plague'), a 'Description' field (set to 'Within-person transmissibility/disease progression for pneumonic plague.'), and 'Min Value' (set to 0) and 'Max Value' (set to 1) fields. A 'HighPrecision' toggle is at the bottom.

Choose your entry and exit states from the drop-down menus, as well as the contact state and rate of transmissibility.

When you toggle “editable”, more fields populate to fill in; labels, a description, and the option to set minimum and maximum values of transmissibility.

Example of building Pneumonic Plague

UNIVERSITY OF VIRGINIA EXCEEDS

Menu

- Experiments
- Simulation
- Analysis
- Simulation Outputs
- Datasets
- Initial Condition
- Disease
- Disease Builder**
- Archived

Shapes

- Add State
- Add Edge

Metadata

- Attributes**
- Analysis

Pneumonic Plague

Preview Save

Susceptible Transmission Exposed E to I Isum I to R Recovered

Attributes

Enter Title
Pneumonic Plague
Max 100 characters 16/100

Enter Description
Pneumonic Plague
Max 2000 characters 16/2000

Select Initial State
Susceptible

Please add states to select an Initial State and to publish a Disease Builder.

Cancel Save

Start adding object to view/edit the properties

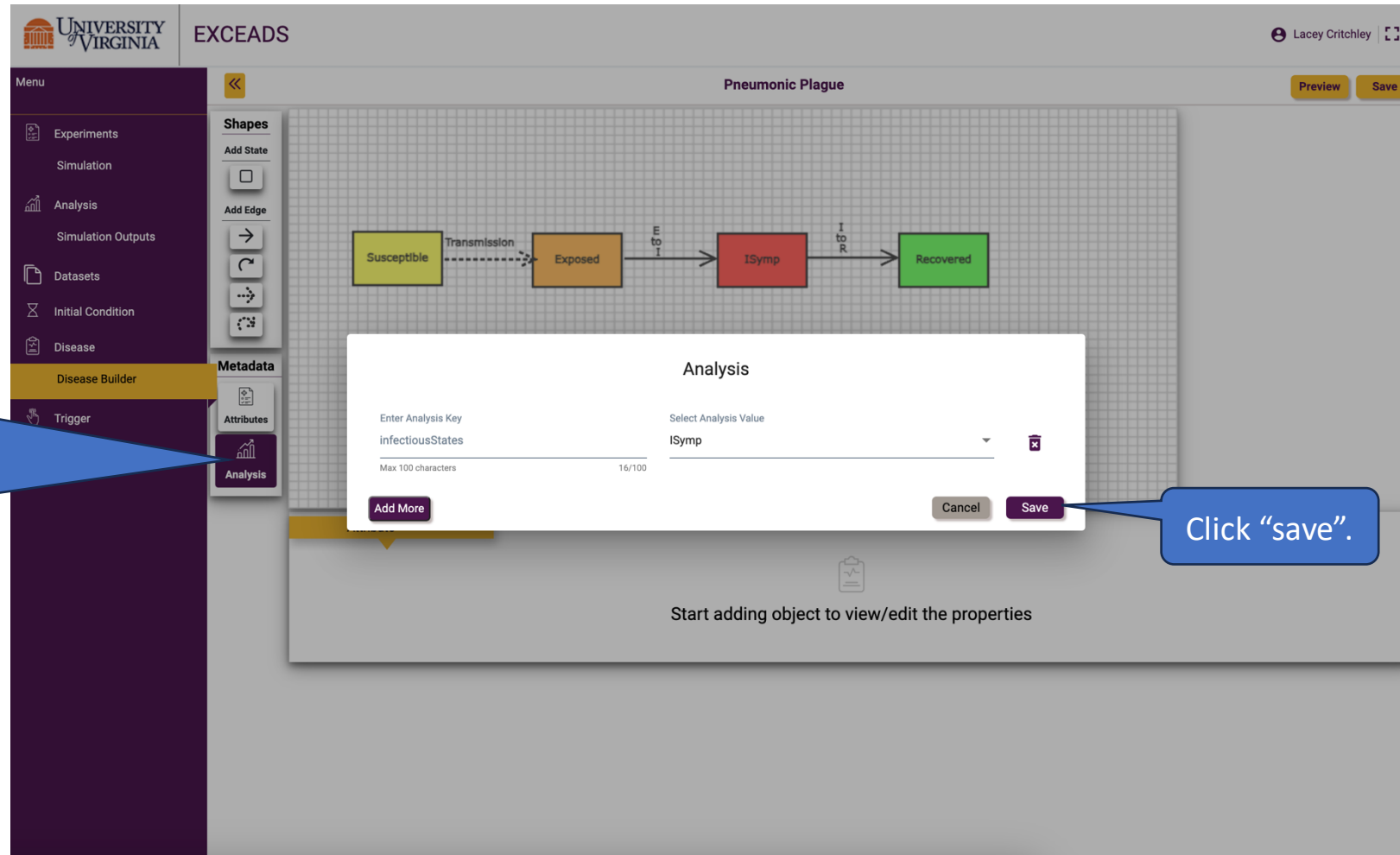
Once all model attributes are complete, click on "Metadata Attributes".

Fill in the title, description, and choose the initial state from the drop-down menu.

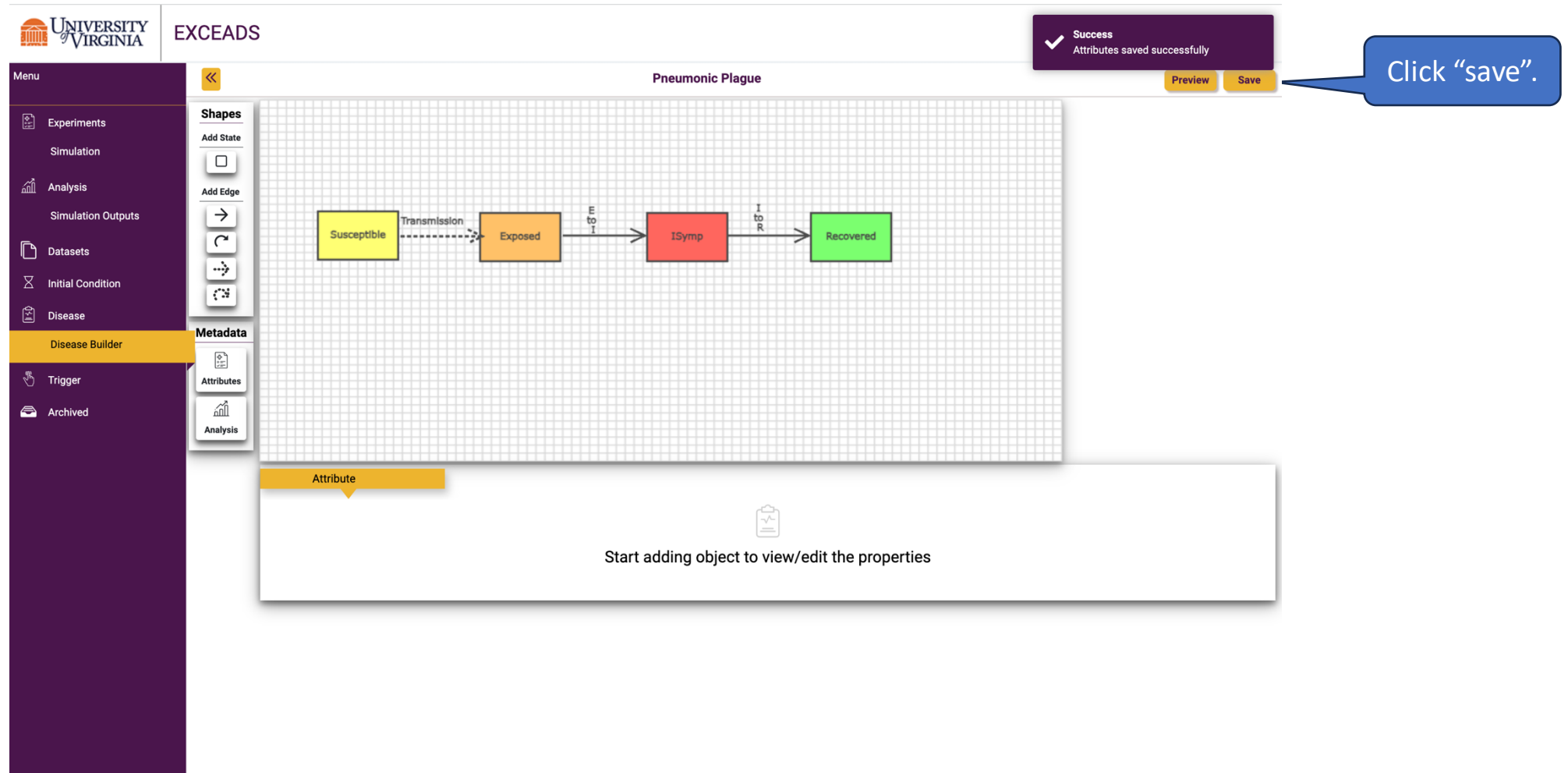
Click "save".

Example of building Pneumonic Plague

You can also enter a “Metadata” “Analysis” key to pool together multiple disease states for your analysis.



Example of building Pneumonic Plague



Example of building Pneumonic Plague

UNIVERSITY OF VIRGINIA EXCEEDS

Menu

- Experiments
- Simulation
- Analysis
- Simulation Outputs
- Datasets
- Initial Condition
- Disease
- Disease Builder**
- Trigger
- Archived

Disease Builder

Search Disease Builder

Filter By **Draft** Publish Mine Shared

Pneumonic Plague

Simple SIR - DRAFT

Created By **Lacey Critchley** Description **Pneumonic Plague**

Last Modified **Jun 22, 2023 01:14 PM**

Details

State

Susceptible

Exposed

ISymp

Recovered

Transmission

ISymp

Recovered

Success
✓ Disease Builder 'Pneumonic Plague' saved successfully

Edit Delete Duplicate Publish

Click "publish".

Notice you can review all model attributes down here by clicking the "state", "edge transmission", "edge transitions", and "analysis details" tabs.

Susceptible	Exposed	ISymp	Recovered
Infectivity	0	Infectivity	0
Susceptibility	1	Susceptibility	0

Example of building Pneumonic Plague

The screenshot displays the EXCEEDS Disease Builder interface. On the left is a dark purple sidebar menu with options: Experiments, Simulation, Analysis, Simulation Outputs, Datasets, Initial Condition, Disease, Disease Builder (highlighted), Trigger, and Archived. The main area is titled 'Disease Builder' and shows a search bar, filter buttons (Draft, Publish), and a 'Create New' button. The selected model is 'Pneumonic Plague', which is in 'Draft' status. It was created by Lacey Critchley on Jun 22, 2023 at 01:34 PM. A pop-up window is open for naming the group, with 'General' selected and 'Pneumonic Plague' entered as the short name. A blue callout bubble points to this window, stating: 'A pop-up window populates. Choose a group that your new disease model fits under using the drop-down menu and enter a short name for your disease.'

State | Edge Transmissions | Edge Transitions | Analysis Details

Susceptible		Exposed		ISymp		Recovered	
Infectivity	0	Infectivity	0	Infectivity	1	Infectivity	0
Susceptibility	1	Susceptibility	0	Susceptibility	0	Susceptibility	0

Example of building Pneumonic Plague

UNIVERSITY of VIRGINIA EXCEEDS

Lacey Critchley

Menu

- Experiments
- Simulation
- Analysis
- Simulation Outputs
- Datasets
- Initial Condition
- Disease
- Disease Builder**
- Trigger
- Archived

Disease Builder

Search Disease Builder

Filter By Draft Publish Mine Shared

Pneumonic Plague

Created By Lacey Critchley

Description Pneumonic Plague

Last Modified Jun 22, 2023 01:35 PM

Details

Delete Duplicate Unpublish Export

Susceptible Exposed ISymp Recovered

Transmission

to m

to S

State Edge Transmissions Edge Transitions Analysis Details

Susceptible	Exposed	ISymp	Recovered
Infectivity	0	0	1
Susceptibility	1	0	0

Once your disease model is published, you can come back and make edits by clicking the “unpublish” then “edit” buttons. Just be sure to “save” and “publish” again once editing is complete!

Questions?

For tool support: exceeds@virginia.edu
For study support: brylew@virginia.edu

EXCEADS Walkthrough: Output Analysis



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BIOCOMPLEXITY INSTITUTE

biocomplexity.virginia.edu

View experiment results

Once your simulation has completed, click "view output".

UNIVERSITY OF VIRGINIA

EXCEEDS-test v3.7.0

Srini Venkatramanan

Menu

Experiments

Simulation

Analysis

Simulation Outputs

Datasets

Initial Condition

Disease

Disease Builder

Trigger

Archived

Simulation

Search Simulation

Created By Mine Shared All

Filter

DTRatraining_PneumonicPlague_DC_NoInt...

Sep 04, 2024 12:17 PM

Created By Srini Venkatramanan

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

DTRatraining_PneumonicPlague_DC_SoftIn...

Sep 04, 2024 12:17 PM

Created By Srini Venkatramanan

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

DTRatraining_PneumonicPlague_DC_Stron...

Sep 04, 2024 12:16 PM

Created By Srini Venkatramanan

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

Plume example - test - interventions - v4.2....

Aug 27, 2024 12:45 PM

Created By Srini Venkatramanan

Model EpiHiper

Status Shared

Cell(s) 01

Complete

View Output

Plume example - demo - v3.5.3 - 5reps

Aug 07, 2024 08:09 AM

Created By Srini Venkatramanan

Model EpiHiper

Status Private

Cell(s) 04

Complete

View Output

SEIRHVD - larger design

Mar 19, 2024 04:19 PM

Created By Srini Venkatramanan

Model EpiHiper

Status Shared

Cell(s) 25

Complete

View Output

SEIRHVD - medium design

Mar 19, 2024 03:03 PM

Created By Srini Venkatramanan

Model EpiHiper

Status Shared

Cell(s) 15

Complete

View Output

SEIRHVD - medium design - 5 repl

Mar 19, 2024 02:30 PM

Created By Srini Venkatramanan

Model EpiHiper

Status Shared

Cell(s) 15

Complete

View Output

Virginia - race-eth seeding - O - COVID_les...

Mar 12, 2024 02:57 PM

Created By Srini Venkatramanan

Model EpiHiper

Status Private

Cell(s) 01

Complete

View Output

Virginia - race-eth seeding - A - COVID_les...

Mar 12, 2024 02:56 PM

Created By Srini Venkatramanan

Model EpiHiper

Status Private

Cell(s) 01

Complete

View Output

Virginia - race-eth seeding - L - COVID_les...

Mar 12, 2024 02:55 PM

Created By Srini Venkatramanan

Model EpiHiper

Status Private

Cell(s) 01

Complete

View Output

Virginia - race-eth seeding - B - COVID_les...

Mar 12, 2024 02:53 PM

Created By Srini Venkatramanan

Model EpiHiper

Status Private

Cell(s) 01

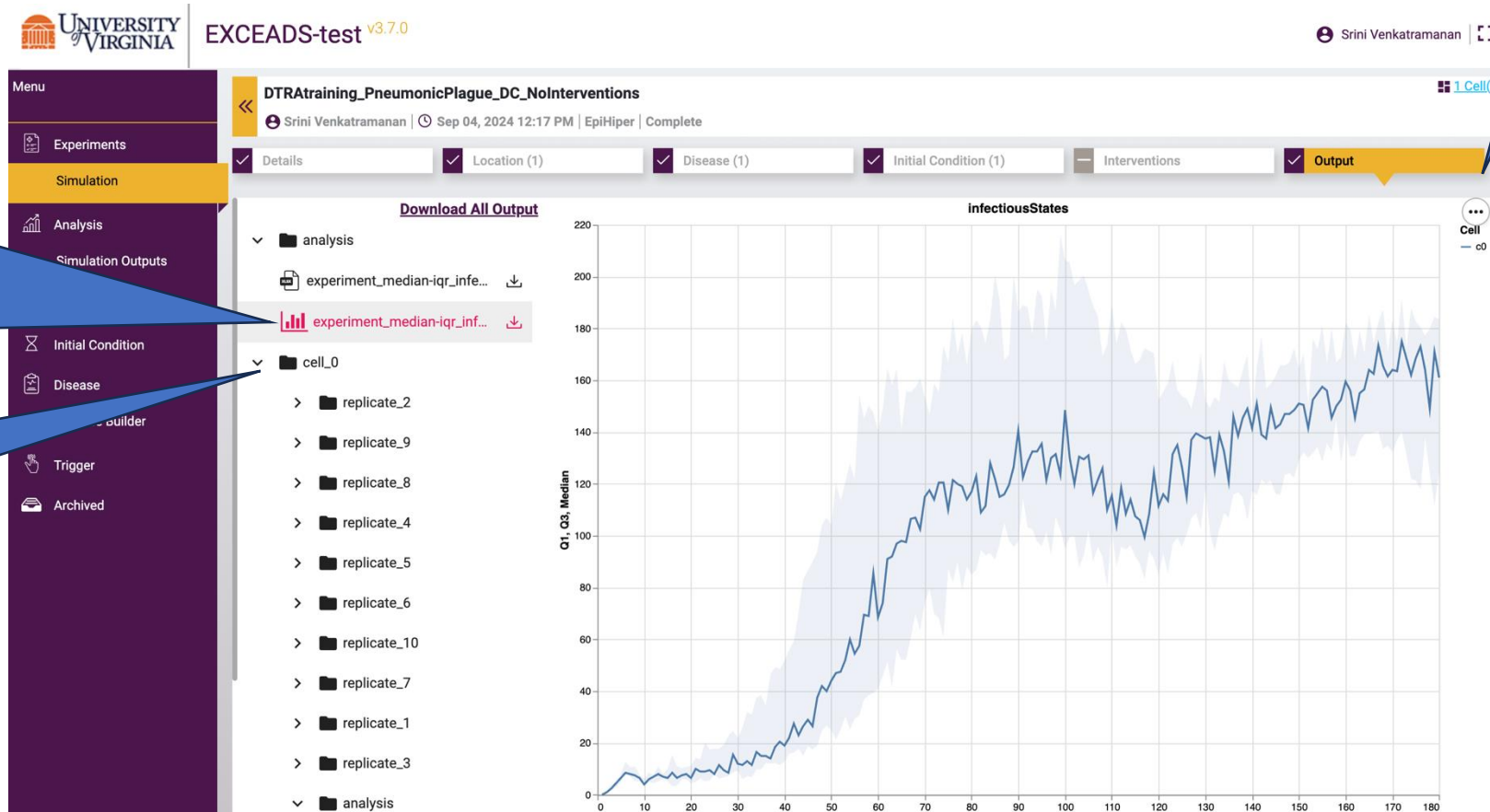
Complete

View Output

View experiment results

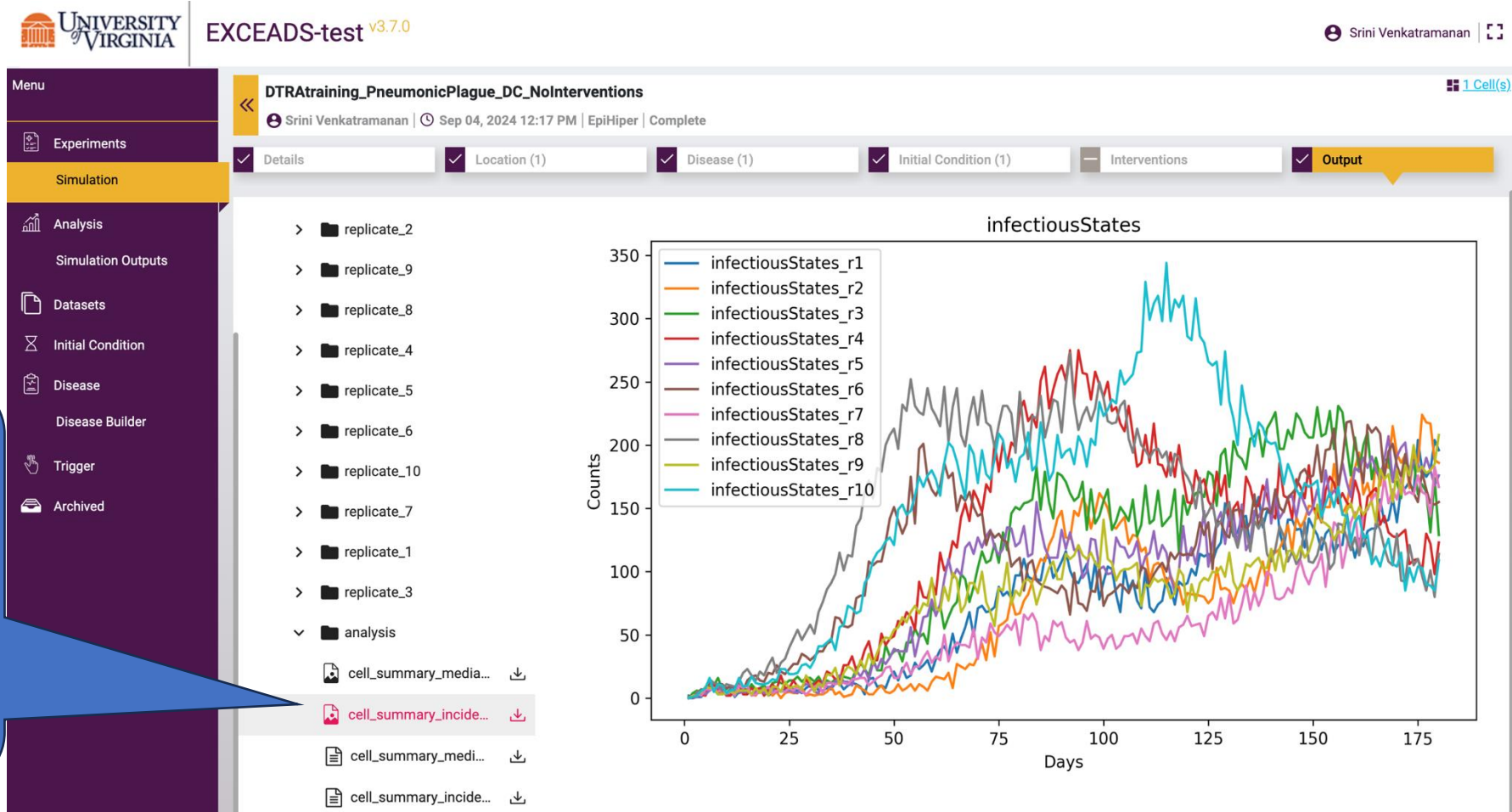
The first plot you'll see is the combined results of all your replicates, initial conditions, and interventions.

Click into each "cell" to view each replicate's results.



This plot shows us how Pneumonic Plague (with our chosen parameters) would spread through DC city limits with no interventions.

View results – No interventions



Cell_0 gives specific outputs for each replicate. Here we are viewing a combined plot of all replicates, based on no interventions.

View results – No interventions

 **EXCEEDS-test** v3.7.0

Srini Venkatramanan

Menu

Experiments

Simulation

Analysis

Simulation Outputs

Datasets

Initial Condition

Disease

Disease Builder

Trigger

Archived

DTRAtaining_PneumonicPlague_DC_NoInterventions

Srini Venkatramanan | Sep 04, 2024 12:17 PM | EpiHiper | Complete

Details

Location (1)

Disease (1)

Initial Condition (1)

Interventions

Output

1 Cell(s)

replicate_2

replicate_9

replicate_8

replicate_4

replicate_5

replicate_6

replicate_10

replicate_7

replicate_1

replicate_3

analysis

cell_summary_media...

cell_summary_incede...

cell_summary_modi...

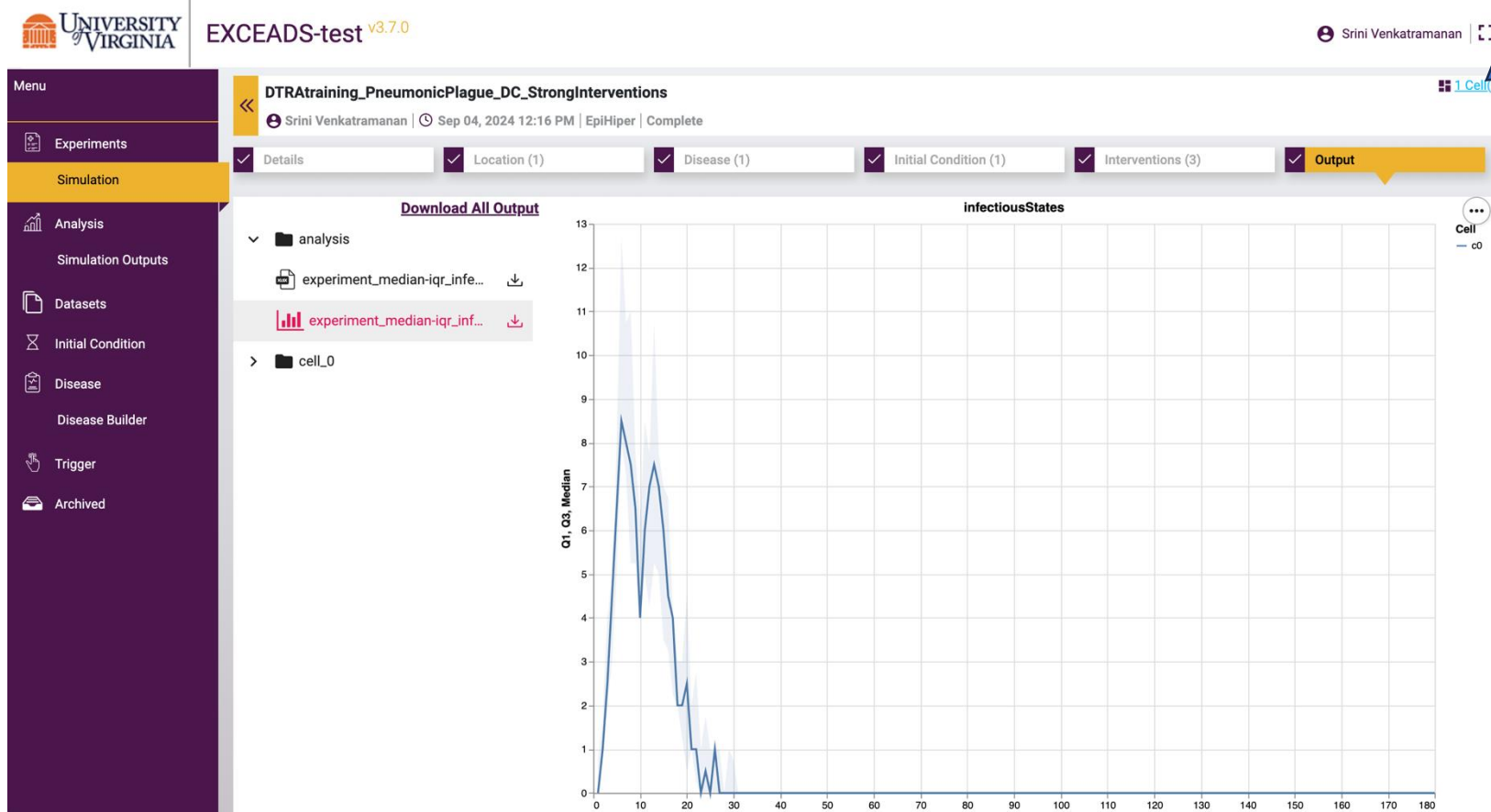
cell_summary_incidence_infectiousStates_epicurves.csv

cell_summary_incede...

Day	infectiousStates_r1	infectiousStates_r2	infectiousStates_r3	infectiousStates_r4	infectiousStates_r5	infectiousStates_r6	infectiousSta
1	2	0	0	0	0	1	0
2	1	1	4	1	0	0	2
3	1	2	6	3	1	4	4
4	1	3	4	3	5	7	2
5	5	5	8	2	3	6	7
6	9	13	8	8	6	12	7
7	7	8	10	11	8	12	7
8	3	7	16	6	8	11	5
9	5	4	7	8	6	11	7
10	4	4	7	2	3	8	4
11	7	3	10	2	5	9	6
12	1	7	8	7	6	8	2
13	5	6	4	11	4	11	10
14	7	7	8	3	5	6	8

You can also view and download csv files with the data behind the graphs and calculations.

View results – “strong” interventions



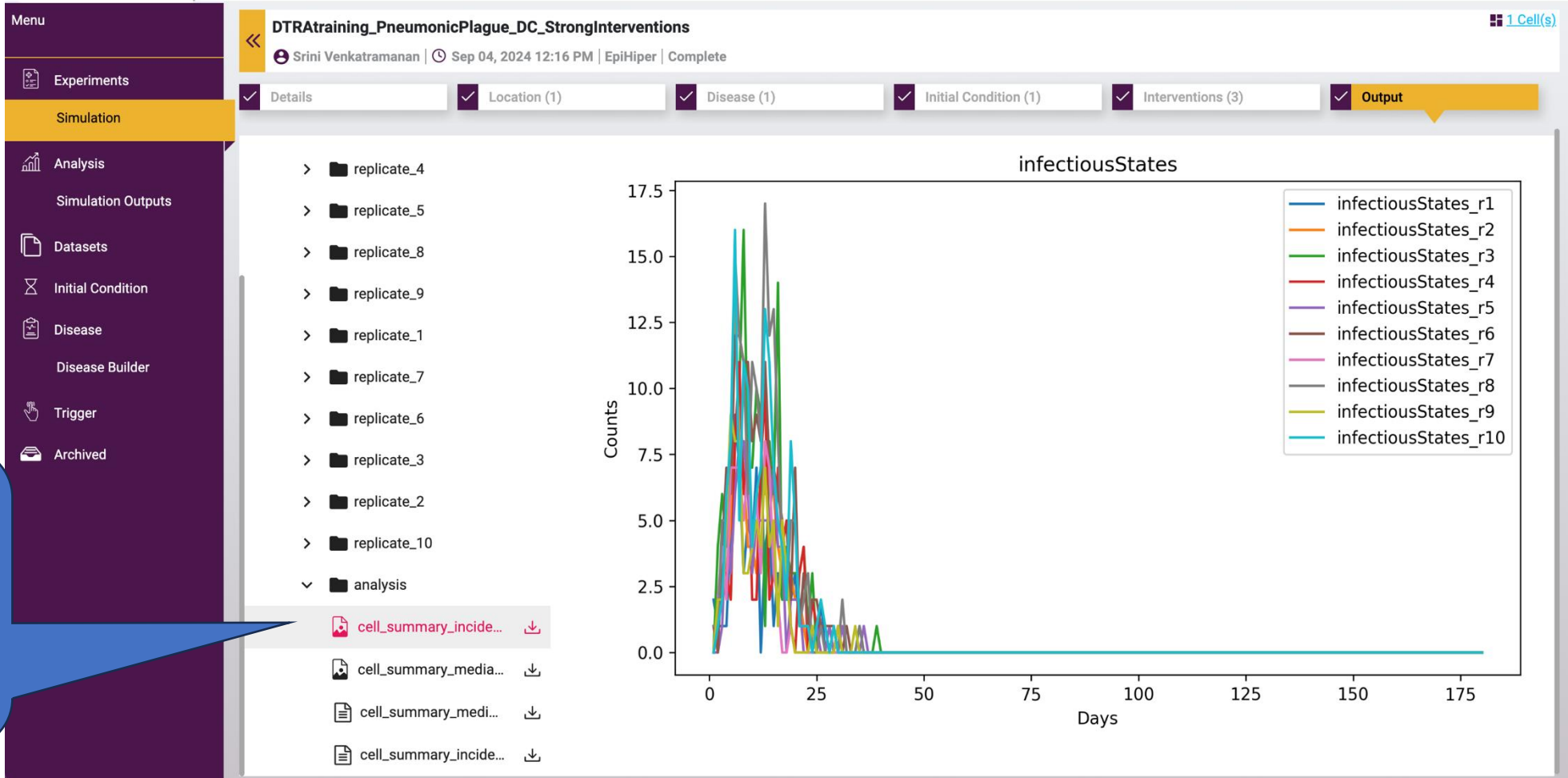
This plot shows us how Pneumonic Plague (with our chosen parameters) would spread through DC city limits with “strong” interventions: (i.e., social distancing enacted at Day 10 for 170 days, and closing all schools and work at day 10 for 60 days).

View results – “strong” interventions



EXCEEDS-test v3.7.0

Srini Venkatramanan | [icon]



Here we are viewing a combined plot of all replicates, based on “strong” interventions.

View results – “soft” interventions



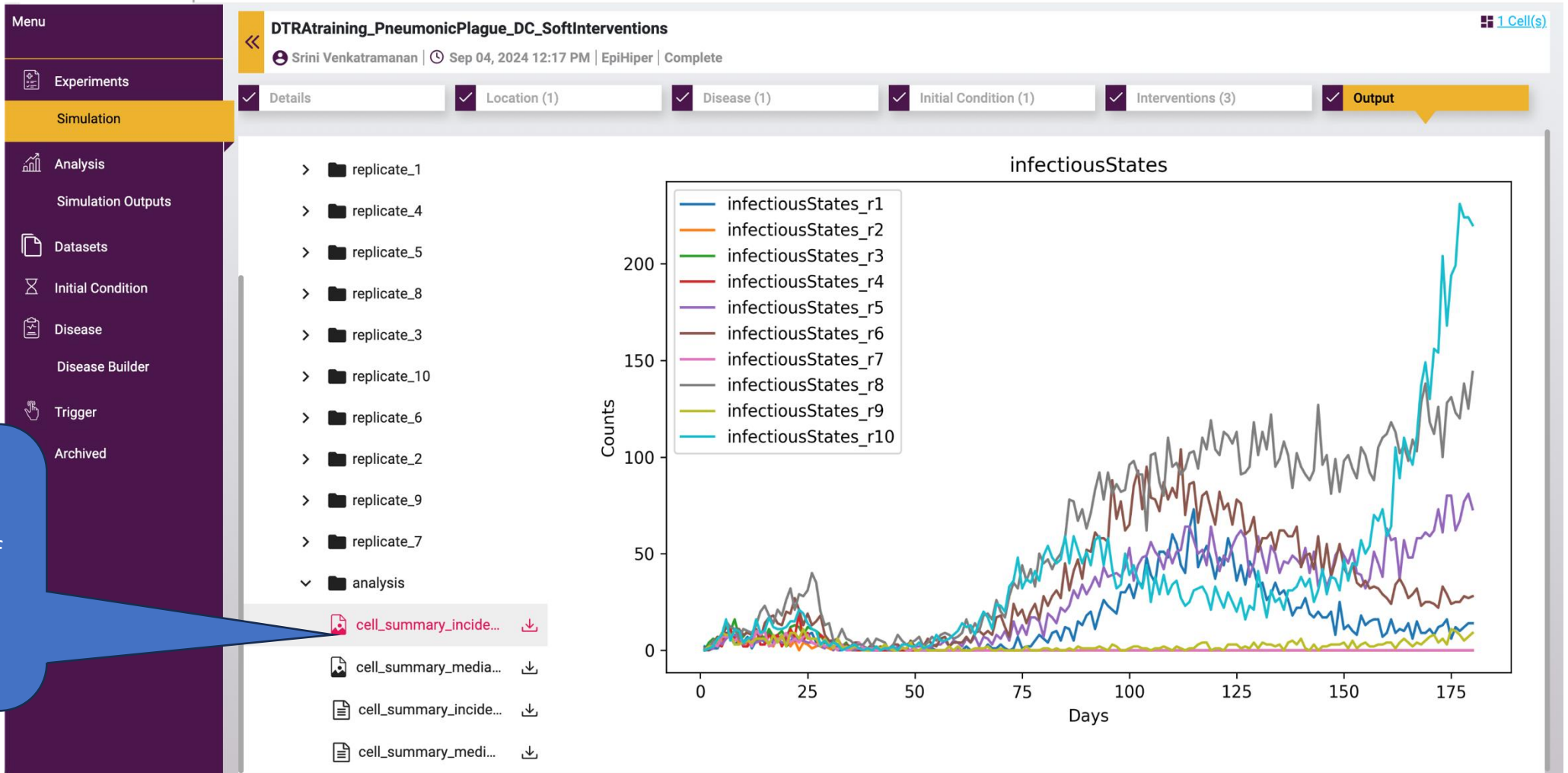
This plot shows us how Pneumonic Plague (with our chosen parameters) would spread through DC city limits with “soft” interventions: (i.e., social distancing enacted at Day 21 for 159 days, and closing all schools and work at day 21 for 14 days.

View results – “soft” interventions



EXCEEDS-test v3.7.0

Srini Venkatramanan



Here we are viewing a combined plot of all replicates, based on “soft” interventions.

Combining Analyses

You can combine the outputs of these three scenarios for easy comparison using the “analysis” tab.

UNIVERSITY OF VIRGINIA EXCEEDS

Menu

- Experiments
- Simulation
- Analysis**
- Simulation Outputs
- Datasets
- Initial Condition
- Disease
- Disease Builder
- Trigger
- Archived

Analysis

Search Analysis

Created By Mine Shared Filter

DTRAtaining_InterventionComparison
Jun 20, 2023 06:31 PM
Created By Lacey Critchley
Job Type development/ephip... Status Shared Cell(s) 03
[Start](#) [View Output](#)

Combining Mandy's Wyoming simulations (1)
Jun 20, 2023 03:59 PM
Created By Lacey Critchley
Job Type development/ephip... Status Private Cell(s) 02
[View Output](#)

Combining Mandy's Wyoming simulations
Jun 20, 2023 03:52 PM
Created By Lacey Critchley
Job Type development/ephip... Status Shared Cell(s) 02
[View Output](#)

Dataset - inflection point - LC Stress test (safari du...
Jun 15, 2023 12:03 PM
Created By Lacey Critchley
Job Type exceeds_dev/us_infl... Status Shared
[View Output](#)

Dataset - Inflection point - LC Stress Test
Jun 15, 2023 11:55 AM
Created By Lacey Critchley
Job Type exceeds_dev/us_infl... Status Shared
[View Output](#)

Click “Create Job” to get started, which populates the menu below. Choose “development/epi hiper_multicell_an alysis”

- development/epihiper_multicell_analy...
- exceeds_dev/single_cell
- exceeds_dev/single_cell_w_params
- exceeds_dev/params_only
- exceeds_dev/single_file
- exceeds_dev/single_file_w_params
- exceeds_dev/multiple_cells_w_params
- exceeds_dev/multiple_files_w_params
- exceeds_dev/cell_and_file_w_params
- exceeds_dev/us_inflection_point_hosp

Combining Analyses

UNIVERSITY OF VIRGINIA EXCEEDS

Lacey Critchley

Menu

- Experiments
- Simulation
- Analysis**
- Simulation Outputs
- Datasets
- Initial Condition
- Disease
- Disease Builder
- Trigger
- Archived

DTRAtaining_InterventionComparison

Lacey Critchley | Jun 20, 2023 06:31 PM | New

Analysis Details Select Cells Analysis Output

DTRAtaining_InterventionComparison

Cancel Save

Shared With:

all users

Job Type

development/epihiper_multicell_analysis

Share With:

Select Team(s)

Analysis Name

DTRAtaining_InterventionComparison

Max 100 characters 35/100

Description

DTRAtaining_InterventionComparison

Max 2000 characters 35/2000

Fill in the “analysis details” details tab and click “Save”.

Combining Analyses

Next, choose your cells for comparison, ticking the appropriate experiments.

The screenshot displays the EXCEEDS web application interface. At the top, the University of Virginia logo and the EXCEEDS title are visible. The user is logged in as Lacey Critchley. The interface is divided into a left sidebar menu and a main content area. The sidebar menu includes options like Menu, Experiments, Simulation, Analysis, Disease, Disease Builder, Trigger, and Archived. The main content area shows a list of simulations under the heading 'DTRAtaining_InterventionComparison'. A 'Select Cells' tab is active, showing a list of simulations. A tooltip is visible over the first simulation, 'DTRAtaining_PneumonicPlague_DC_SoftInterventions', indicating that cell 327 is selected. The tooltip also shows the model 'slurm-bii-common' and notes 'No Differentiating Factors.'.

UNIVERSITY OF VIRGINIA EXCEEDS

Lacey Critchley

Menu

Experiments

Simulation

Analysis

Initial Condition

Disease

Disease Builder

Trigger

Archived

DTRAtaining_InterventionComparison

Lacey Critchley | Jun 20, 2023 07:03 PM | New

Analysis Details

Select Cells

Analysis Output

Search Simulation

Model: All

DTRAtaining_PneumonicPlague_DC_SoftInterventions

Lacey Critchley | EpiHiper | 1 Cells

Select All

Cell: 327

slurm-bii-common

No Differentiating Factors.

View More

Once you have chosen the cells for comparison, click “(#) cell selected”.

Combining Analyses

Note the 3 cells chosen for comparison (corresponding to no interventions, soft interventions, and strong interventions) in this example.

The screenshot displays the EXCEEDS web application interface. At the top, the University of Virginia logo and the text "EXCEEDS" are visible. The user "Lacey Critchley" is logged in. A left-hand menu contains options: Menu, Analysis (highlighted), Simulation Outputs, Datasets, Initial Condition, Disease, Disease Builder, Trigger, and Archived. The main content area is titled "Selected Cells >> DTRAtaining_InterventionComparison". It shows a list of three cells for comparison:

- DTRAtaining_PneumonicPlague_DC_NoInterventions**
Cell: 316 slurm-bii-common
No Differentiating Factors.
View More
- DTRAtaining_PneumonicPlague_DC_SoftInterventions**
Cell: 327 slurm-bii-common
No Differentiating Factors.
View More
- DTRAtaining_PneumonicPlague_DC_StrongInterventions**
Cell: 317 slurm-bii-common
No Differentiating Factors.
View More

Each cell entry includes a close button (X) in the top right corner.

Click the (internal) "back" button.

Combining Analyses


EXCEEDS
Lacey Critchley | [User Icon]

Menu

- [Icon] Experiments
- Simulation
- [Icon] Analysis**
- Simulation Outputs
- [Icon] Datasets
- [Icon] Initial Condition
- [Icon] Disease
- Disease Builder
- [Icon] Trigger
- [Icon] Archived

Analysis

Created By Mine Shared

Filter

⬇️ ⬆️ ⬇️ ⬆️
Create Job

Job Name	Created By	Status	Cell(s)	Job Type	View Output
DTRAtaining_InterventionComparison Jun 20, 2023 07:03 PM Created By Lacey Critchley Job Type Status Cell(s) development/epihip... Shared 03	Lacey Critchley	New	03	development/epihip... Private	Start 🗑️ 🔗 📄 📊
Combining Mandy's Wyoming simulations (1) Jun 20, 2023 03:59 PM Created By Lacey Critchley Job Type Status Cell(s) development/epihip... Private 02	Lacey Critchley	Complete	02	development/epihip... Shared	View Output 🔗 📄 📊
Combining Mandy's Wyoming simulations Jun 20, 2023 03:52 PM Created By Lacey Critchley Job Type Status Cell(s) development/epihip... Shared 02	Lacey Critchley	Complete	02	development/epihip... Shared	View Output 🔗 📄 📊
Dataset - inflection point - LC Stress test (safari du... Jun 15, 2023 12:03 PM Created By Lacey Critchley Job Type Status exceeds_dev/us_infl... Shared	Lacey Critchley	Complete		exceeds_dev/us_infl...	View Output 🔗 📄
Dataset - Inflection point - LC Stress Test Jun 15, 2023 11:55 AM Created By Lacey Critchley Job Type Status exceeds_dev/us_infl... Shared	Lacey Critchley	Complete		exceeds_dev/us_infl...	View Output 🔗 📄

Click the “start” button.

Combining Analyses

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EXCEEDS

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Analysis

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Created By Mine Shared Filter

DTRAtaining_InterventionComparison
Jun 20, 2023 07:05 PM

Created By Lacey Critchley

Job Type development/ephip... Status Shared Cell(s) 03

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Combining Mandy's Wyoming simulations (1)
Jun 20, 2023 03:59 PM

Created By Lacey Critchley

Job Type development/ephip... Status Private Cell(s) 02

Complete

Combining Mandy's Wyoming simulations
Jun 20, 2023 03:52 PM

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Complete

Dataset - inflection point - LC Stress test (safari du...
Jun 15, 2023 12:03 PM

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Dataset - Inflection point - LC Stress Test
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As we saw when running an experiment, the analysis goes through various phases.

Once complete, click "view output" to see your results.

DTRAtaining_InterventionComparison

Jun 20, 2023 07:05 PM

Created By

Lacey Critchley

Runnable

Queued

Job Type

development/ephip... Shared

Status

Cell(s)

03



DTRAtaining_InterventionComparison

Jun 20, 2023 07:05 PM

Created By

Lacey Critchley

Running

development/ephip... Shared

03

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DTRAtaining_InterventionComparison

Jun 20, 2023 07:05 PM

Created By

Lacey Critchley

Complete

Job Type

development/ephip... Shared

Status

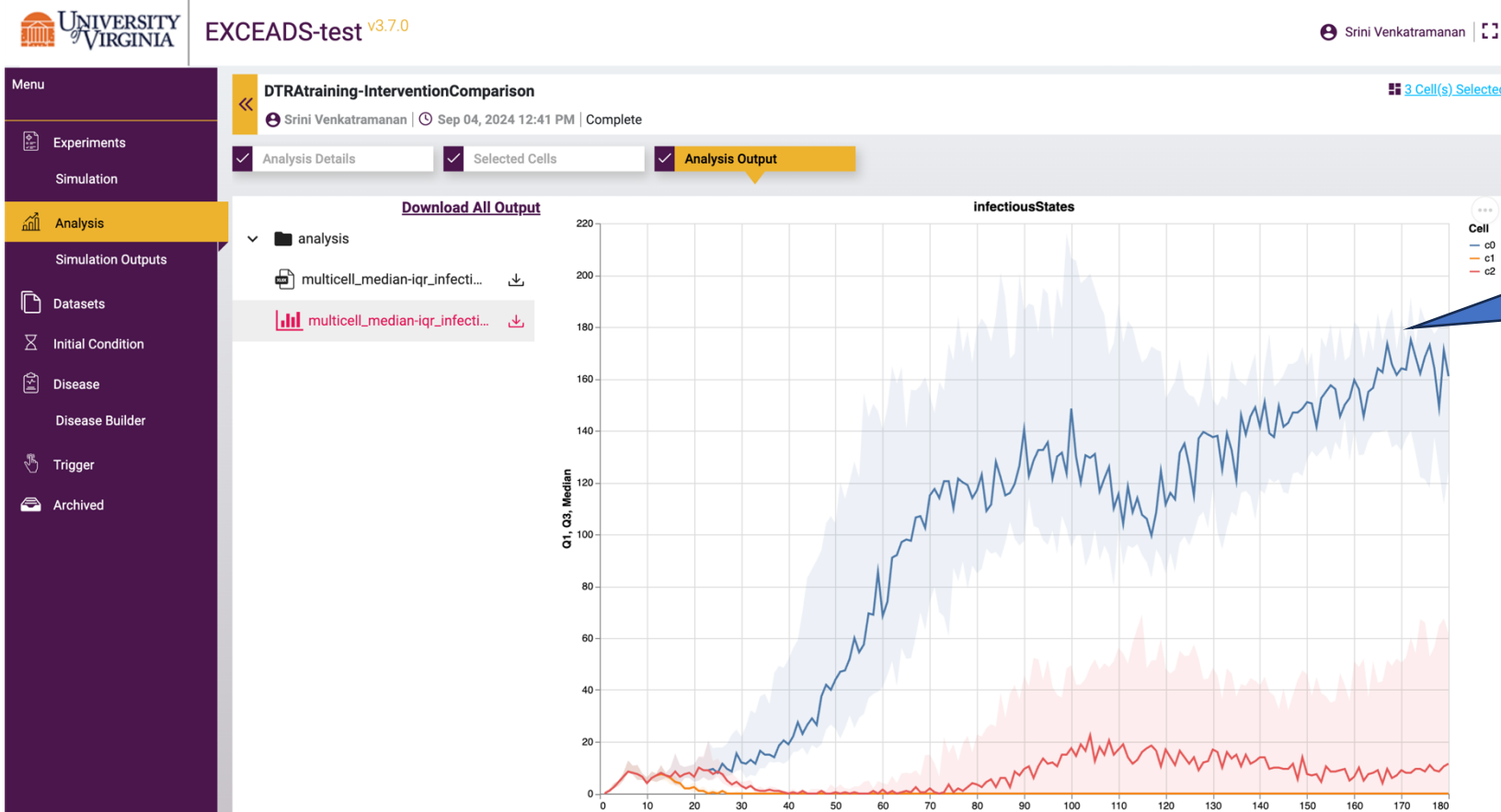
Cell(s)

03

[View Output](#)



Combined Output



View your
combined plots
for easy
comparison.

Blue = No interventions
Orange = “Strong” interventions
Red = “Soft” interventions

Questions?

For tool support: exceeds@virginia.edu

For study support: brylew@virginia.edu