



Save Our Sisyphus Challenge

Week 9: Interpreting the Results

OHDSI Community Call
May 23, 2023 • 11 am ET



May 23: Interpreting The Results (SOS Week 9)



Nicole Pratt

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System

SOS Challenge Weekly Tutorial Schedule

Date	Topic
Mar 28	Initiating A Network Study
Apr 4	Data Diagnostics
Apr 11	Phenotype Development
Apr 18	Phenotype Evaluation
Apr 25	Analysis Design
May 2	Network Execution
May 9	Study Diagnostics
May 16	Evidence Synthesis
<u>May 23</u>	<u>Interpreting Results</u>

SOS Challenge Homepage



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Save Our Sisyphus Challenge

The OHDSI mission is to improve health by empowering a community to collaboratively generate the evidence that promotes better health decisions and better care. The 2023 Save Our Sisyphus (SOS) Challenge will try to fulfill that mission, but not through one study at a time.

We will be collaborating simultaneously on four studies, each of which will be designed, implemented, executed and disseminated by members of the OHDSI global community.

As you can see on the right, there will be two weekly tutorials, taught by different members of the community, and featuring two of the four studies that were voted on by the community. Please join either or both each week to learn every step of executing a network study. The earlier session will take place during the weekly global community call, while the later will take place at 7 pm ET. Weekly call invites will go out for both, or you can access either meeting using the links below.

SOS Challenge Weekly Tutorial Schedule

Date	Times	Topic
Mar 28	11 am / 7 pm ET	SOS Week 1 Tutorial: Initiating A Network Study
Apr 4	11 am / 7 pm ET	SOS Week 2 Tutorial: Data Diagnostics
Apr 11	11 am / 7 pm ET	SOS Week 3 Tutorial: Phenotype Development
Apr 18	11 am / 7 pm ET	SOS Week 4 Tutorial: Phenotype Evaluation
Apr 25	11 am / 7 pm ET	SOS Week 5 Tutorial: Creating Analysis Specifications
May 2	11 am / 7 pm ET	SOS Week 6 Tutorial: Network Execution
May 9	11 am / 7 pm ET	SOS Week 7 Tutorial: Study Diagnostics
May 16	11 am / 7 pm ET	SOS Week 8 Tutorial: Evidence Synthesis
May 23	11 am / 7 pm ET	SOS Week 9 Tutorial: Interpreting The Results

Weekly Tutorial Links

Session 1 Meeting Link

Session 2 Meeting Link

Please remember that each week, there are two seminars focused on the same aspect of running a network study, but featuring different SOS Challenge studies. We want to make sure that, regardless of your location, there is a tutorial that is convenient for all hours. All tutorials will also be recorded and posted below.

Global Tutorials Schedule

Global Tutorial	Network 1: Study 1 (CVD) & Study 2 (CVD) & Study 3 (CVD) & Study 4 (CVD)	Network 2: Study 1 (CVD) & Study 2 (CVD) & Study 3 (CVD) & Study 4 (CVD)
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Office Hours

There will be weekly office hours, corresponding with the topic of the weekly tutorials. Office hours are determined by the availability of each week's tutorial lead. When the next set of office hours are determined, the time and meeting link will be posted to the right.

Study Diagnostics
Office Hours:
May 11, 7 pm ET

Join Office Hours

2nd Network Execution
Office Hours:
May 11, 9 am ET

Join Office Hours

SOS Challenge Studies

The SOS Challenge was introduced in January 2023, and community members submitted 35 different studies that could be run during the challenge. Four were selected from that group, two of which will be done live during the weekly tutorials, and two that will be done asynchronously. You can learn more about each of the four studies below, and each of the pertinent links (GitHub repo, protocol, Teams channel, etc.) will be linked in the proper section.

Intravitreal Anti-VEGF and Kidney Failure

Lead: Cindy Cai

OHDSI SOS Challenge: Intravitreal Anti-VEGF and Kidney Failure

Initial collaborators: Seng Chan Yoo, Seonji Kim, Jung Ho Kim, Jung Ah Lee - Nourse University; Jack Janetzki, Nicole Pratt - University of South Australia

3/7/2023

Introductory Video

Introductory Slides

MS Teams Channel

GitHub Repo

Is fluoroquinolone use really associated with the development of aortic aneurysms

Leads: Jack Janetzki, Jung Ho Kim, Seonji Kim, Jung Ah Lee, Nicole Pratt, Seng Chan Yoo,

Is fluoroquinolone use really associated with the development of aortic aneurysms and aortic dissections?

OHDSI Save Our Sisyphus Challenge 2023

Initial collaborators: Seng Chan Yoo, Seonji Kim, Jung Ho Kim, Jung Ah Lee - Nourse University; Jack Janetzki, Nicole Pratt - University of South Australia

Introductory Video

Introductory Slides

MS Teams Channel

GitHub Repo

Tutorial Recordings

Week 8: Evidence Synthesis

Session 1: Yong Chen (slides), Martijn Schuemie (slides)

Session 2: Marc Suchard

Week 7: Study Diagnostics

Session 1: Fan Bu, George Hripscak (slides)

Session 2: Mitchell Conover, Nicole Pratt (slides)

Week 6: Network Execution

Session 1: Jenna Reys, Jack Brewster (slides)

Session 2: Anthony Sena, Chungsoo Kim

ohdsi.org/sos-challenge

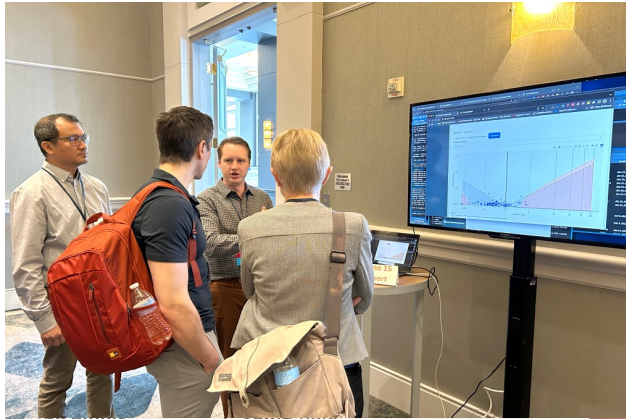


Upcoming Community Calls

Date	Topic
May 30	Collaborator Showcase Sneak Preview & Rapid Brainstorm
June 6	OHDSI Standardized Vocabularies: Landscape, Roadmap & Community Contributions
June 13	ATLAS: User Input For Community Development
June 20	OMOP Supporting Clinical Registries
June 27	Recent Publication Presentations



May 30: Collaborator Showcase Brainstorm



and... those who live in low-income... access to revascularization procedures.

Sensitive Attribute **Outcome**

Research Question:
discrimination in allocating revascularization to CAD patients?

Biological sex Myocardial infarction (MI)

OHDSI
OBSERVATIONAL HEALTH DATA SCIENCES AND INFORMATICS



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JOHNS HOPKINS
BLOOMBERG SCHOOL OF PUBLIC HEALTH

Evaluating causal inference methods for survival data in large-scale observational studies
Shiyao Xu*, Arsho Nazarean*, Elizabeth Ogunni*
Johns Hopkins Bloomberg School of Public Health

OHDSI

Causal survival methods for large-scale observational studies

- Evaluate the performance of several causal survival methods in analyzing large-scale observational data.
- Implementations of state-of-the-art causal methods.
- Implementation of causal survival methods.

Methods

Implementation of causal survival methods

- Proposed methods: (1) Cox model, (2) Fine-Gray model, (3) Logistic hazard model, (4) Logistic hazard model with competing risks, (5) Logistic hazard model with competing risks and time-varying covariates.

Results

Survival curves

Conclusion

Implementation of causal survival methods on large-scale observational data is challenging. The proposed methods can be used to analyze large-scale observational data.



Three Stages of The Journey

Where Have We Been?

Where Are We Now?

Where Are We Going?





OHDSI Shoutouts!



Congratulations to
OHDSI veteran
Thamir Alshammari
on earning the
distinction of being
one of the 15 new
ISPE fellows for 2023.

New Fellows 2023

ISPE is pleased to announce the induction of fifteen new ISPE Fellows this year.

ISPE Fellowship is awarded to only a select few each year: individuals who had or have leadership roles in ISPE; made notable contributions to the growth and advancement of the Society through service; shown evidence of substantial scholarship in pharmacoepidemiology or related fields; presented at ISPE events; or have other achievements or made other contributions that validate them as suitable for ISPE Fellowship.

However, achieving Fellowship is not the pinnacle of ISPE achievement. Each new Fellow has agreed to continue to strive to meet the Society's mission, vision, and values, and to continue to volunteer his/her time to ISPE and to mentor new members. We look to these individuals for the future contributions, as much as their past. ISPE holds its Fellows in high regard; all ISPE members are encouraged to follow their example.

Fellows may refer to themselves in public statements, documents, and resumes as "Fellow of the International Society of Pharmacoepidemiology", add the letters FISPE after other credentials, and receive appropriate recognition by ISPE.

Our new Fellows will be officially inducted at the Annual Members' Meeting & Awards Ceremony scheduled for Saturday, August 26th at the Halifax Convention Center, Halifax, Nova Scotia, Canada. Please join us in welcoming the 2023 ISPE Fellows.



Thamir Alshammari



Kwame Appenteng



Kimberly Brodovicz



Rachel DiSantostefano



Daniel Horton



Jessica Jalbert



Caitlin Knox



Edward Lai



Daniela Moga



Elaine Morrato



Elisabetta Patorno



Sallie Pearson



Robert Platt



Jennita Reefhuis



Mina Tadrous



OHDSI Shoutouts!



Congratulations to the team of **Tiffany Callahan, Adrienne Stefanski, Jordan Wyrwa, Chenjie Zeng, Anna Ostropolets, Juan Banda, William Baumgartner Jr., Richard Boyce, Elena Casiraghi, Ben Coleman, Janine Collins, Sara Deakyne Davies, James Feinstein, Asiyah Lin, Blake Martin, Nicolas Matentzoglou, Daniella Meeker, Justin Reese, Jessica Sinclair, Sanya Taneja, Katy Trinkley, Nicole Vasilevsky, Andrew Williams, Xingmin Zhang, Joshua Denny, Patrick Ryan, George Hripcsak, Tellen Bennett, Melissa Haendel, Peter Robinson, Lawrence Hunter & Michael Kahn** on the publication of **Ontologizing health systems data at scale: making translational discovery a reality** in NPJ Digital Medicine.

npj | digital medicine

www.nature.com/npjdigitalmed

ARTICLE OPEN



Ontologizing health systems data at scale: making translational discovery a reality

Tiffany J. Callahan^{1,2,8*}, Adrienne L. Stefanski¹, Jordan M. Wyrwa³, Chenjie Zeng⁴, Anna Ostropolets², Juan M. Banda⁵, William A. Baumgartner Jr.¹, Richard D. Boyce⁶, Elena Casiraghi^{7,8}, Ben D. Coleman⁸, Janine H. Collins⁹, Sara J. Deakyne Davies¹⁰, James A. Feinstein¹¹, Asiyah Y. Lin⁴, Blake Martin¹², Nicolas A. Matentzoglou¹³, Daniella Meeker¹⁴, Justin Reese¹⁵, Jessica Sinclair¹⁶, Sanya B. Taneja¹⁷, Katy E. Trinkley¹⁸, Nicole A. Vasilevsky¹⁹, Andrew E. Williams²⁰, Xingmin A. Zhang⁸, Joshua C. Denny⁴, Patrick B. Ryan²¹, George Hripcsak², Tellen D. Bennett¹², Melissa A. Haendel¹², Peter N. Robinson⁸, Lawrence E. Hunter^{1,22} and Michael G. Kahn²²

Common data models solve many challenges of standardizing electronic health record (EHR) data but are unable to semantically integrate all of the resources needed for deep phenotyping. Open Biological and Biomedical Ontology (OBO) Foundry ontologies provide computable representations of biological knowledge and enable the integration of heterogeneous data. However, mapping EHR data to OBO ontologies requires significant manual curation and domain expertise. We introduce OMOP2OBO, an algorithm for mapping Observational Medical Outcomes Partnership (OMOP) vocabularies to OBO ontologies. Using OMOP2OBO, we produced mappings for 92,367 conditions, 8611 drug ingredients, and 10,673 measurement results, which covered 68–99% of concepts used in clinical practice when examined across 24 hospitals. When used to phenotype rare disease patients, the mappings helped systematically identify undiagnosed patients who might benefit from genetic testing. By aligning OMOP vocabularies to OBO ontologies our algorithm presents new opportunities to advance EHR-based deep phenotyping.

npj Digital Medicine (2023)6:89; <https://doi.org/10.1038/s41746-023-00830-x>

INTRODUCTION

Electronic health record (EHR) adoption, which is nearly universal within the US healthcare system^{1,2}, has increased adherence to evidence-based clinical guidelines³ and facilitated greater patient communication⁴ resulting in significant improvements in care⁵. EHRs contain a myriad of systematically collected, longitudinal, patient-level information and are a valuable resource for population-level research⁶. The cornerstone of medicine, diagnosis or clinical phenotyping, aims to identify empirically observable traits exhibited by patients (i.e., signs and symptoms) known to be characteristic of a specific disease⁷. Computational phenotyping is the process of converting clinical phenotypes into computer-executable algorithms in order to identify relevant patients from large sources of clinical data, usually EHRs⁸. One promise of EHR-based computational phenotyping is the ability to perform population-level investigations of mechanistic drivers of disease in diverse patient populations^{9,10}. Despite significant progress, this objective remains largely aspirational^{6,11–14}.

Traditionally, computational phenotypes have been imprecise due to their exclusive reliance on EHR data, which has been shown to be insufficient at capturing the phenotypic heterogeneity

present in most complex diseases^{15–18}. Deep phenotyping, or “the precise and comprehensive analysis of phenotypic abnormalities in which the individual components of the phenotype are observed and described”, is a fundamental component of precision medicine that requires timely synthesis of multiple types of patient data^{19,20}. Deep phenotyping has been successfully applied to rare disease and genetic disorders^{21–33}, cancer^{34–40}, and pregnancy^{41–43} using a variety of clinical and -omic data. Despite large-scale biobanking efforts and resources like the UK Biobank (<https://www.ukbiobank.ac.uk>) and the All of Us (AoU) Research Program (<https://www.researchallofus.org>), most EHRs do not systematically integrate nor have the infrastructure to integrate patient-level genomic data or other forms of external knowledge (e.g., scientific literature) with clinical data^{44–46}.

Within an EHR, most data used for research (i.e., structured data) are stored using clinical terminologies or vocabularies. A clinical vocabulary is a standard representation of preferred terms which may or may not be hierarchical or have formally defined relationships and is designed to facilitate meaningful and unambiguous information exchange within the medical domain^{47–49}. Hundreds of clinical vocabularies have been



OHDSI Shoutouts!



Congratulations to the team of **Romina Blasini, Achim Michel-Backofen, Henning Schneider, and Kurt Marquardt** on the publication of **RD-MON – Building a Rare Disease Monitor to Enhance Awareness for Patients with Rare Diseases in Intensive Care** in Vol. 301 of *Studies in Health Technology and Informatics*.

RD-MON – Building a Rare Disease Monitor to Enhance Awareness for Patients with Rare Diseases in Intensive Care

Authors Romina Blasini, Achim Michel-Backofen, Henning Schneider, Kurt Marquardt
Pages 358 - 359
DOI 10.3233/SHTI230139
Category Research Article
Series [Studies in Health Technology and Informatics](#)
Ebook [Volume 302: Caring is Sharing – Exploiting the Value in Data for Health and Innovation](#)

Abstract

Rare diseases are commonly defined by an incidence of less than 5/10000 inhabitants. There are some 8000 different rare diseases known. So even if a single rare disease is seldom, together they pose a relevant problem for diagnosis and treatment. This is especially true if a patient is treated for another common disease. University hospital of Gießen is part of the CORD-MI Project on rare diseases within the German Medical Informatics Initiative (MII) and a member of the MIRACUM consortium within the MII. As part of the ongoing Development for a clinical research study monitor within the use case 1 of MIRACUM, the study monitor has been configured to detect patients with rare diseases during their routine clinical encounters. The goal was to send a documentation request to the corresponding patient chart within the patient data management system for extended disease documentation to enhance clinical awareness for the patients' potential problems. The project was started in late 2022 and has so far been successfully tuned to detect patients with Mucoviscidosis and place notifications within the patient chart of the patient data management system (PDMS) on intensive care units.



OHDSI Shoutouts!



Congratulations to the team of **Seol Whan Oh, Soo Jeong Ko, Yun Seon Im, Surin Jung, Bo Yeon Choi, Jae Yoon Kim, Wona Choi, and In Young Choi** on the publication of **Data Quality Assessment for Observational Medical Outcomes Partnership Common Data Model of Multi-Center** in Vol. 301 of *Studies in Health Technology and Informatics*.

Data Quality Assessment for Observational Medical Outcomes Partnership Common Data Model of Multi-Center

Authors: Seol Whan Oh, Soo Jeong Ko, Yun Seon Im, Surin Jung, Bo Yeon Choi, Jae Yoon Kim, Wona Choi, In Young Choi
Pages: 322 - 326
DOI: 10.3233/SHTI230127
Category: Research Article
Series: *Studies in Health Technology and Informatics*
Ebook: Volume 302: Caring is Sharing – Exploiting the Value in Data for Health and Innovation

Abstract

The amount of research on the gathering and handling of healthcare data keeps growing. To support multi-center research, numerous institutions have sought to create a common data model (CDM). However, data quality issues continue to be a major obstacle in the development of CDM. To address these limitations, a data quality assessment system was created based on the representative data model OMOP CDM v5.3.1. Additionally, 2,433 advanced evaluation rules were created and incorporated into the system by mapping the rules of existing OMOP CDM quality assessment systems. The data quality of six hospitals was verified using the developed system and an overall error rate of 0.197% was confirmed. Finally, we proposed a plan for high-quality data generation and the evaluation of multi-center CDM quality.



OHDSI Shoutouts!



Congratulations to the team of **Elisa Henke, Michéle Zoch, Ines Reinecke, Melissa Spoden, Thomas Ruhnke, Christian Günster, Martin Sedlmayr, and Franziska Bathelt** on the publication of **German Claims Data for Real-World Research: Content Coverage Evaluation in OMOP CDM** in Vol. 301 of *Studies in Health Technology and Informatics*.

German Claims Data for Real-World Research: Content Coverage Evaluation in OMOP CDM

Authors	Elisa Henke, Michéle Zoch, Ines Reinecke, Melissa Spoden, Thomas Ruhnke, Christian Günster, Martin Sedlmayr, Franziska Bathelt
Pages	3 - 7
DOI	10.3233/SHTI230053
Category	Research Article
Series	Studies in Health Technology and Informatics
Ebook	Volume 302: Caring is Sharing – Exploiting the Value in Data for Health and Innovation

Abstract

Research on real-world data is becoming increasingly important. The current restriction to clinical data in Germany limits the view of the patient. To gain comprehensive insights, claims data can be added to the existing knowledge. However, standardized transfer of German claims data into OMOP CDM is currently not possible. In this paper, we conducted an evaluation regarding the coverage of source vocabularies and data elements of German claims data in OMOP CDM. We point out the need to extend vocabularies and mappings to support research on German claims data.



OHDSI Shoutouts!



Congratulations to the team of **Florian Katsch, Rada Hussein, Raffael Korntheuer, and Georg Duftschmid** on the publication of **Converting HL7 CDA Based Nationwide Austrian Medication Data to OMOP CDM** in Vol. 301 of *Studies in Health Technology and Informatics*.

Converting HL7 CDA Based Nationwide Austrian Medication Data to OMOP CDM

Authors	Florian Katsch, Rada Hussein, Raffael Korntheuer, Georg Duftschmid
Pages	899 - 900
DOI	10.3233/SHTI230300
Category	Research Article
Series	<i>Studies in Health Technology and Informatics</i>
Ebook	Volume 302: Caring is Sharing – Exploiting the Value in Data for Health and Innovation

Abstract

Austria's national Electronic Health Record (EHR) system holds information on medication prescriptions and dispenses in highly structured HL7 Clinical Document Architecture (CDA) documents. Making these data accessible for research is desirable due to their volume and completeness. This work describes our approach of transforming the HL7 CDA data into Observational Medical Outcomes Partnership (OMOP) Common Data Model (CDM) and highlights a key challenge, namely mapping the Austrian drug terminology to OMOP standard concepts.



OHDSI Shoutouts!



Congratulations to the team of **Markus Haug, Raivo Kolde, Marek Oja, and Maarja Pajusalu** on the publication of **Modeling Patient Treatment Trajectories Using Markov Chains for Cost Analysis** in Vol. 301 of *Studies in Health Technology and Informatics*.

Modeling Patient Treatment Trajectories Using Markov Chains for Cost Analysis

Authors	Markus Haug, Raivo Kolde, Marek Oja, Maarja Pajusalu
Pages	755 - 756
DOI	10.3233/SHTI230258
Category	Research Article
Series	Studies in Health Technology and Informatics
Ebook	Volume 302: Caring is Sharing – Exploiting the Value in Data for Health and Innovation

Abstract

Electronically stored medical records offer a rich source of data for investigating treatment trajectories and identifying best practices in healthcare. These trajectories, which consist of medical interventions, give us a foundation to evaluate the economics of treatment patterns and model the treatment paths. The aim of this work is to introduce a technical solution for the aforementioned tasks. The developed tools use the open source Observational Health Data Sciences and Informatics Observational Medical Outcomes Partnership Common Data Model to construct treatment trajectories and implement these to compose Markov models for composing financial analysis between standard of care and alternatives.



OHDSI Shoutouts!



Congratulations to the team of **Yuan Peng, Elisa Henke, Martin Sedlmayr, and Franziska Bathelt** on the publication of **Towards ETL Processes to OMOP CDM Using Metadata and Modularization** in Vol. 301 of **Studies in Health Technology and Informatics**.

Towards ETL Processes to OMOP CDM Using Metadata and Modularization

Authors	Yuan Peng, Elisa Henke, Martin Sedlmayr, Franziska Bathelt
Pages	751 - 752
DOI	10.3233/SHTI230256
Category	Research Article
Series	Studies in Health Technology and Informatics
Ebook	Volume 302: Caring is Sharing – Exploiting the Value in Data for Health and Innovation

Abstract

OMOP common data model (CDM) is designed for analyzing large clinical data and building cohorts for medical research, which requires Extract-Transform-Load processes (ETL) of local heterogeneous medical data. We present a concept for developing and evaluating a modularized metadata-driven ETL process, which can transform data into OMOP CDM regardless of 1) the source data format, 2) its versions and 3) context of use.



OHDSI Shoutouts!



Congratulations to the team of **Ines Reinecke, Elisa Henke, Yuan Peng, Martin Sedlmayr, and Franziska Bathelt** on the publication of **Fitness for Use of Anatomical Therapeutic Classification for Real World Data Research** in Vol. 301 of **Studies in Health Technology and Informatics**.

Fitness for Use of Anatomical Therapeutic Classification for Real World Data Research

Authors	Ines Reinecke, Elisa Henke, Yuan Peng, Martin Sedlmayr, Franziska Bathelt
Pages	711 - 715
DOI	10.3233/SHTI230245
Category	Research Article
Series	Studies in Health Technology and Informatics
Ebook	Volume 302: Caring is Sharing – Exploiting the Value in Data for Health and Innovation

Abstract

Introduction:

Real-world data (RWD) is gaining importance in research. For instance, the European Medicines Agency (EMA) is currently in the process of establishing a cross-national research network that utilizes RWD for research. However, data harmonization across countries must be carefully considered to avoid misclassification and bias.



OHDSI Shoutouts!



Any shoutouts from the community? Please share and help promote and celebrate OHDSI work!

Do you have anything you want to share? Please send to sachson@ohdsi.org so we can highlight during this call and on our social channels.

Let's work together to promote the collaborative work happening in OHDSI!





Three Stages of The Journey

Where Have We Been?

Where Are We Now?

Where Are We Going?





Upcoming Workgroup Calls



Date	Time (ET)	Meeting
Tuesday	7 pm	SOS Challenge Tutorial: Interpreting the Results
Wednesday	9 am	OMOP CDM Oncology Outreach/Research Subgroup
Wednesday	12 pm	Health Equity Journal Club
Wednesday	12 pm	Latin America
Thursday	9:30 am	Data Network Quality
Thursday	12 pm	Medical Devices
Thursday	7 pm	Dentistry
Friday	9 am	GIS – Geographic Information Systems Development
Friday	9 am	Phenotype Development & Evaluation
Friday	1 pm	Clinical Trials
Monday	9 am	Vaccine Vocabulary
Monday	10 am	Africa Chapter



PIONEER Study-A-Thon: June 13-16

The PIONEER team is leading a studyathon June 13-16 in Stockholm, Sweden, with a focus on **Observational health data analysis on the adverse events of systemic treatment in patients with metastatic hormone-sensitive prostate cancer** and is looking for participation from the OHDSI community.

PIONEER studyathon 2023

June 13-16th 2023, Stockholm
Topic: What is the best treatment for men with advanced Pca?
Contact: carl@collaborate.eu

* Required

1. Name

2. Organisation

3. Email *
We will use your email address to contact you about the studyathon and send invites for studyathon meetings and sessions.

4. I will attend the studyathon ... *
 In person
 Online only
 Don't know yet

5. If you attend in person which days will you join
 Tuesday, June 13th 2023
 Wednesday, June 14th 2023
 Thursday, June 15th 2023
 Friday, June 16th 2023

6. How do you think you can contribute during the study-a-thon?
 Literature review and evidence synthesis
 Protocol writing
 Phenotype definition and evaluation
 ATLAS implementation of cohorts and analysis designs
 Statistical programming for characterization (SAS, SQL, R)
 Statistical programming for patient-level prediction (SAS, R)
 Statistical programming for population-level estimation (SAS, R)
 R Shiny application development for evidence dissemination
 Execute study packages on data mapped to OMOP that I have access to
 Technical support for data partners executing study packages
 Clinical review with expertise in prostate cancer



5 Fully Funded PhDs in Cancer Digital Health RWE

EHealth Hub For Cancer is funding 5 PhD students to work on cutting-edge cancer health data science research.

The program is being coordinated by **Aedin Culhane** in the School of Medicine, University of Limerick, Ireland, and the team is looking for students with a **background in statistics, epidemiologists, bioinformatics, computational biology, software engineering or a related quantitative discipline.**



Limerick Digital
Cancer Research
Centre



5 Fully Funded PhDs in Cancer Digital Health Real World Evidence

Project topic: Digital Health in Cancer.

Project lead: Prof Aedin Culhane

Project location: School of Medicine, University of Limerick, Queen's University Belfast

Application deadline: **June 15th, 2023**

Start date: Successful applicants should be registered by **September 2023**.

Application Deadline: June 15, 2023



OHDSI HADES releases: Capr 2.0.3

Capr 2.0.3

Reference

Articles ▾

Changelog

HADES



Capr

Capr is part of [HADES](#)

Introduction

The goal of Capr, pronounced 'kay-pr' like the edible flower, is to provide a language for expressing OHDSI Cohort definitions in R code. OHDSI defines a cohort as "a set of persons who satisfy one or more inclusion criteria for a duration of time" and provides a standardized approach for defining them (Circe-be). Capr exposes the standardized approach to cohort building through a programmatic interface in R which is particularly helpful when creating a large number of similar cohorts. Capr version 2 introduces a new user interface designed for readability with the goal that Capr code being a human readable description of a cohort while also being executable on an OMOP Common Data Model.

Learn more about the OHDSI approach to cohort building in the [cohorts chapter of the Book of OHDSI](#).

Installation

Capr can be installed via:

```
# install.packages("Capr")
```

Users can install the current development version of Capr from [GitHub](#) with:



Links

[Browse source code](#)

[Report a bug](#)

[Ask a question](#)

License

[Full license](#)

Apache License (≥ 2)

Citation

[Citing Capr](#)

Developers

Martin Lavalley
Author, maintainer

Adam Black
Author

Dev status

codecov 74%

R-CMD-check passing





OHDSI HADES releases: Achilles 1.7.2

Achilles 1.7.2 Reference Articles ▾ Changelog



Achilles

R-CMD-check passing codecov 2% CRAN 1.7.2 downloads 389/month

Achilles is part of [HADES](#).

Introduction

Automated Characterization of Health Information at Large-Scale Longitudinal Evidence Systems (ACHILLES) Achilles provides descriptive statistics on an OMOP CDM database. ACHILLES currently supports CDM version 5.3 and 5.4.

Features

- Performs broad database characterization
- Export feature for [ARES](#)
- Export feature for AchillesWeb (deprecated)

Technology

Achilles is an R package.

Links

[View on CRAN](#)

[Ask a question](#)

License

[Apache License](#)

Citation

[Citing Achilles](#)

Developers

Frank DeFalco
Author, maintainer

Patrick Ryan
Author

Martijn Schuemie
Author

Vojtech Huser
Author

Chris Knoll
Author





OHDSI HADES releases: DataQualityDashboard 2.3.0

DataQualityDashboard

DataQualityDashboard is part of [HADES](#).

The goal of the Data Quality Dashboard (DQD) project is to design and develop an open-source tool to expose and evaluate observational data quality.

Introduction

This package will run a series of data quality checks against an OMOP CDM instance (currently supports v5.4, v5.3 and v5.2). It systematically runs the checks, evaluates the checks against some pre-specified threshold, and then communicates what was done in a transparent and easily understandable way.

Overview

The quality checks were organized according to the Kahn Framework¹ which uses a system of categories and contexts that represent strategies for assessing data quality. For an introduction to the kahn framework please click [here](#).

Using this framework, the Data Quality Dashboard takes a systematic-based approach to running data quality checks. Instead of writing thousands of individual checks, we use “data quality check types”. These “check types” are more general, parameterized data quality checks into which OMOP tables, fields, and concepts can be substituted to represent a singular data quality idea. For example, one check type might be written as

*The number and percent of records with a value in the **cdmFieldName** field of the **cdmTableName** table less than **plausibleValueLow**.*

This would be considered an atemporal plausibility verification check because we are looking for implausibly low values in some field based on historical knowledge. We can use this check type to substitute in values for **cdmFieldName**, **cdmTableName**, and

Links

[Browse source code](#)

[Report a bug](#)

[Ask a question](#)

[DQD Example Output](#)

License

Apache License (>= 2)

Citation

[Citing DataQualityDashboard](#)

Developers

Katy Sadowski
Author, maintainer

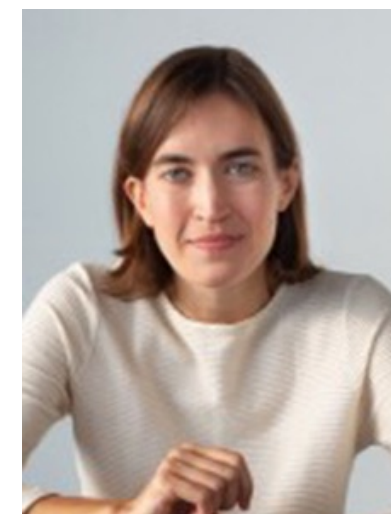
Clair Blacketer
Author

Ajit Londhe
Author

Anthony Sena
Author

Anthony Molinaro
Author

Frank DeFalco





Publications Dashboard



Community Dashboard



Publications

Media

Ehden Courses

Network Studies

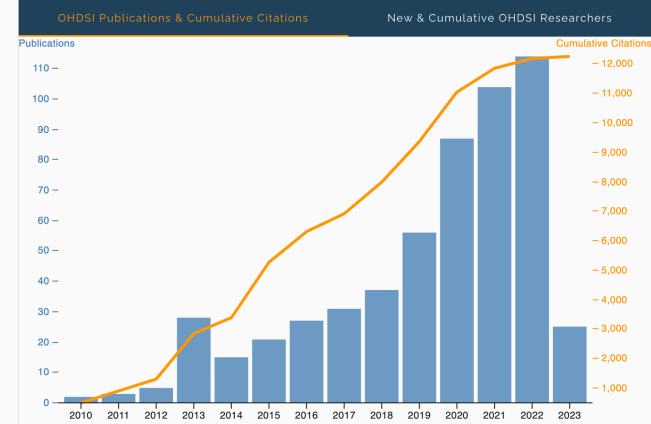
Phenotype Library

Opportunities

Publication Analysis

PubMed OHDSI Manuscripts

PubMed Publication Tracking highlights scholarship generated using the OMP Common Data Model, OHDSI tools, or the OHDSI network. These publications represent scientific accomplishments across areas of data standards, methodological research, open-source development, and clinical applications. We provide the resource to search and browse the catalogue of OHDSI-related publications by date, author, title, journal, and SNOMED terms. We monitor the impact of our community using summary statistics (number of publications and citations), and the growth and diversity of our community with the number of distinct authors. Searches for new papers are performed daily, and citation counts are updated monthly.



Community Dashboard



Publications

Media

Ehden Courses

Network Studies

Phenotype Library

Opportunities

Creation Date	Authors	Publication	Journal	SNOMED Terms (n)	Citation Count
2023/05/14	Matthew Spotnitz, Nripendra Acharya, James J Cimino, Shawn Murphy, Bahram Namjou, Nancy Crimmins, Theresa Walunas, Cong Liu, David Crosslin, Barbara Benoit, Elisabeth Rosenthal, Jennifer A Pacheco, Anna Ostropolets, Harry Reyes Nieva, Jason S Patterson, Lauren R Richter, Tiffany J Callahan, Ahmed Elhussein, Chao Pang, Krzysztof Kiryluk, Jordan Nestor, Atlas Khan, Sumit Mohan, Evan Minty, Wendy Chung, Wei-Qi Wei, Karthik Natarajan, Chunhua Weng	A metadata framework for computational phenotypes.	JAMIA open		
2023/05/12	Raffael Lukas Korntheuer, Florian Katsch, Georg Duftschmid	Transforming Documents of the Austrian Nationwide EHR System into the OMP CDM.	Studies in health technology and informatics		
2023/05/11	Byungjin Choi, Ah Ran Oh, Jungchan Park, Jong-Hwan Lee, Kwangmo Yang, Dong Yun Lee, Sang Youl Rhee, Sang-Soo Kang, Seung Do Lee, Sun Hack Lee, Chang Won Jeong, Bumhee Park, Soobeen Seol, Rae Woong Park, Seunghwa Lee	Perioperative adverse cardiac events and mortality after non-cardiac surgery: a multicenter study.	Korean journal of anesthesiology		
2023/05/11	Emmanuelle Kempf, Morgan Vaterkowski, Damien Leprovost, Nicolas Griffon, David Ouagne, Stephane Breant, Patricia Serre, Alexandre Mouchet, Bastien Rance, Gilles Chatellier, Ali Bellamine, Marie Frank, Julien Guerin, Xavier Tannier, Alain Livartowski, Martin Hilka, Christel Daniel	How to Improve Cancer Patients Enrollment in Clinical Trials From Real-Life Databases Using the Observational Medical Outcomes Partnership Oncology Extension: Results of the PENELOPE Initiative in Urologic Cancers.	JCO clinical cancer informatics		
2023/05/02	Xinzhuo Jiang, Maura A Beaton, Jake Gillberg, Andrew Williams, Karthik Natarajan	Feasibility of Linking Area Deprivation Index Data to the OMP Common Data Model.	AMIA ... Annual Symposium proceedings AMIA Symposium		
2023/05/02	Venkata Joopudi, Bharath Dandala, Ching-Huei Tsou, Jennifer J Liang	Hierarchy-aware Adverse Reaction Embeddings for Signal Detection.	AMIA ... Annual Symposium proceedings AMIA Symposium		



OHDSI

OBSERVATIONAL HEALTH DATA SCIENCES AND INFORMATICS

- Who We Are
- Updates & News
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Welcome to OHDSI!

The Observational Health Data Sciences and Informatics (or OHDSI, pronounced "Odyssey") program is a multi-stakeholder, interdisciplinary collaborative to bring out the value of health data through large-scale analytics. All our solutions are open-source.

OHDSI has established an international network of researchers and observational health databases with a central coordinating center housed at Columbia University.

Building A Healthier World Together

The 2022 OHDSI Symposium focused on the theme of "Building A Healthier World Together" and it featured presentations and researchers from collaborators around the world. Please visit the symposium homepage to see the videos, slides and all other output from this three-day event.

[2022 OHDSI Global Symposium](#)



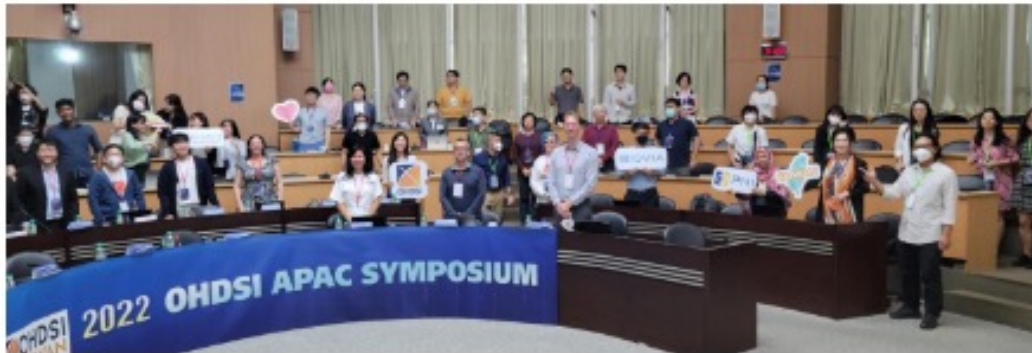
2023 OHDSI Symposium Schedule



European Symposium

July 1-3 • Rotterdam, Neth.

ohdsi-europe.org



Asia-Pacific Symposium

July 13-14 • Sydney, Australia

ohdsi.org/2023apacsymposium



Global Symposium

Oct. 20-22 • East Brunswick, NJ, USA

ohdsi.org/ohdsi2023



Job Opening

Research Programmer Analyst (RPA) Remote/Hybrid

IT EDW Operations
Full Time
72973BR

Job Summary

Work as a Research Programmer Analyst (RPA) on a small team to develop, operate, and maintain ETL processes, clinical data warehouses, and associated data products for health research.

The RPA's role is multi-faceted, involving domain knowledge (clinical data, research informatics), technical expertise, and communication skills. The RPA will operate, monitor, and enhance existing ETL processes and infrastructure, develop data profiles, perform quality assessments, investigate data anomalies, and create/maintain related documentation and annotated data dictionaries. The RPA will routinely communicate with researchers, clinicians, data scientists, and other stakeholders to stay aligned with needs and understand data requirements and translate them into efficient, well-documented ETL solutions.

The RPA will support multiple projects and data assets, including the PCORnet CDM (and related research projects), the UC Health Data Warehouse (UC HDW Operational OMOP), and the "All of Us" Research Program.

Responsibilities include, but are not limited to the following:

1. Work closely with researchers, data scientists, and other stakeholders to understand their data requirements and translate them into efficient ETL solutions.
2. Develop, implement, and maintain ETL processes using SSIS and t-SQL stored procedures to extract, transform, and load data from Epic EHR and other sources into common data models like PCORnet CDM and OHDSI's OMOP.
3. Ensure data quality and integrity throughout the ETL process by performing data mapping, transformation, and validation.
4. Optimize ETL processes for performance, scalability, and reliability, identifying and resolving bottlenecks as needed.
5. Collaborate with team members to integrate data from disparate sources and ensure seamless data flow for research purposes.
6. Maintain up-to-date knowledge of the healthcare domain, including clinical terminologies, workflows, data standards, and regulations.
7. Adhere to data security best practices and ensure compliance with privacy regulations like HIPAA.
8. Provide (and request) technical support and guidance to (and from) other team members as needed.
9. Contribute to project management, setting priorities, and meeting deadlines.

To see the salary range for this position (we recommend that you make a note of the job code and use that to look up): [TCS Non-Academic Titles Search \(ucop.edu\)](https://ucop.edu/titles-search)

Please note: The compensation ranges listed online for roles not covered by a bargaining unit agreement are very wide, however a job offer will typically fall in the range of 80% - 120% of the established mid-point. An offer will take into consideration the experience of the final candidate AND the current salary level of individuals working at UCSF in a similar role.

For roles covered by a bargaining unit agreement, there will be specific rules about where a new hire would be placed on the range.

To learn more about the benefits of working at UCSF, including total compensation, please visit: <https://ucnet.universityofcalifornia.edu/compensation-and-benefits/index.html>

Job Openings – This Week In OHDSI page



OMOP Data Analyst

[Apply](#)

Wayne, PA, United States of America

Full time

Posted 5 Days Ago

R1363929

OMOP Data Analyst
Job Overview

Under broad guidance, performs data analytics activities related to complex business problems and issues to provide insight to decision makers. May provide analytic support for internal project teams and for external client consulting or services engagements.

Essential Functions

- Under broad guidance, performs quantitative or qualitative analyses to support the development of solutions for internal or external client project teams.
- Identifies and interprets trends and patterns in datasets to support the development of recommendations.
- Constructs impact assessment based on business data and market knowledge. Creates specifications for reports and analysis based on business needs and required or available data elements.
- May directly produce datasets and reports for analysis using system reporting tools.
- Verifies data for accuracy and completeness.
- May manipulate and transform data to optimize analyses.
- Performs audits of own work or that of others to ensure conformance with established procedures or to resolve routine issues.
- May work with stand alone data systems or enterprise wide tools supporting activities such as inquiry resolution, data validation, and trend analysis.
- SQL programming is a must.
- OMOP data model work experience is required.
- Experience with clinical data, EHR or pharmaceutical data is required.

About Us

IQVIA is a world leader in using data, technology, advanced analytics, and expertise to help customers drive healthcare – and human health – forward. Together with the companies we serve, we are enabling a more

[Read More](#)

COLUMBIA UNIVERSITY
DEPARTMENT OF BIOMEDICAL INFORMATICS

DBMI Home News & Events Research People Prospective Students Academics Resources

Tenure Track Faculty

#105752

Description

The Department of Biomedical Informatics (DBMI) of Columbia University seeks exceptional junior-level faculty members in the tenure track.

The positions are open to researchers interested in developing and applying informatics theory and achieving tangible benefits to health care and biology. Three particular foci are (1) machine learning for healthcare and health-related data science, (2) health information technology-based interventions to improve health care and the health of individuals and populations, and (3) translational bioinformatics.

Open Rank- Tenure Track of Internal Medicine in Translational Informatics

Albuquerque, NM, United States req23346

[Apply Now](#) [Share](#) [Save Job](#)

Open Rank- Tenure Track of Internal Medicine in Translational Informatics

Posting Number	req23346
Employment Type	Faculty
Faculty Type	Open Rank
Hiring Department	IM Translations Informatics (B52T)
Academic Location	School of Medicine
Benefits Eligible	The University of New Mexico provides a comprehensive package of benefits including medical, dental, vision, and life insurance. In addition, UNM offers educational benefits through the tuition remission and dependent education programs. See the Benefits home page for more information.
Position Summary	The University of New Mexico, Health Sciences Center, Department of Internal Medicine, seeks a faculty member to join the Division of Translational Informatics. This position is at the Open rank and Tenure track. While the focus of the position is research-oriented, optionally, the position affords the opportunity for the candidate to have a joint clinical appointment for part-time clinical service with the University of New Mexico, and/or the Raymond G. Murphy VA Medical Center. Salary will be commensurate with experience and education.

Software Dev Analyst II - Res - G&C - CTSI

Job ID: REF9053H

Date posted: 2/20/2023

Employment Type: Full Time

Shift: Days

Location: Boston, MA

Boehringer Ingelheim is an equal opportunity global employer who takes pride in maintaining a diverse and inclusive culture. We embrace diversity of perspectives and strive for an inclusive environment which benefits our employees, patients and communities.

Senior Associate Director, Real World Data & Analytics (Remote)-232633

Description:

The purpose of this job is to:

- Generate real world evidence (RWE) to support in-line and pipeline products.
- Provide statistical advice on the analysis of real world data (RWD) to various internal and external stakeholders.
- Contribute to the RWD acquisition strategy and tool evaluation.
- Participate in the development and presentation of RWE trainings.

As an employee of Boehringer Ingelheim, you will actively contribute to the discovery, development and delivery of our products to our patients and customers. Our global presence provides opportunity for all employees to collaborate internationally, offering visibility and opportunity to directly contribute to the company's success. We realize that our strength and competitive advantage lie with our people. We support our employees in a number of ways to foster a healthy working environment, meaningful work, diversity and inclusion, mobility, networking and work-life balance. Our competitive compensation and benefit programs reflect Boehringer Ingelheim's high regard for our employees.

Duties & Responsibilities:

- Provide expert advice in the analysis of real world data (such as medical claims, electronic health records, registries) for stakeholders in epidemiology, market access / HEOR, medical affairs, and other functional areas. These analyses may include:

Northwestern Medicine | Feinberg School of Medicine

Department of Preventive Medicine

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Feinberg Home > Home > About Us > Job postings > Postdoctoral Fellowship in Systems Biology and Clinical Data Management

About Us

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- News
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- Diversity, Equity and Inclusion Committee
- Giving
- Alumni

Postdoctoral Fellowship in Systems Biology and Clinical Data Management

The Successful Clinical Response in Pneumonia Therapy (SCRIPT) Systems Biology Center (SCRIPT) is hiring a postdoctoral fellow to work at the intersection of systems biology and clinical data management. The fellow will collaborate with an interdisciplinary team of clinicians, biologists, geneticists, and data scientists to develop tools to improve the management of multi-faceted data to support systems biology research. Candidates should have strong software skills and an MD or PhD with research experience with Electronic Health Record data. Experience with Common Data Models, such as OMOP CDM from OHDSI, is preferred.

This position is supervised by Dr. Justin Starren and the primary appointment will be in the Division of Health and Biomedical Informatics in the Department of Preventive Medicine. Northwestern has a vibrant Informatics and Data Science research community, with the Institute of Augmented Intelligence in Medicine and AI@NU. We are located in downtown Chicago, which has been voted the best big city in the United States for six years running.

Research Programmer Analyst (RPA) Remote/Hybrid

IT EDW Operations

Full Time

72873BR

Job Summary

Work as a Research Programmer Analyst (RPA) on a small team to develop, operate, and maintain ETL processes, clinical data warehouses, and associated data products for health research.

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The RPA will support multiple projects and data assets, including the PCORnet CDM (and related research projects), the UC Health Data Warehouse (UC HDW Operational OMOP), and the 'All of Us' Research Program.

Responsibilities include, but are not limited to the following:

- Work closely with researchers, data scientists, and other stakeholders to understand their data requirements and translate them into efficient ETL solutions.
- Develop, implement, and maintain ETL processes using SSIS and T-SQL stored procedures to extract, transform, and load data from Epic EHR and other sources into common data models like PCORnet CDM and OHDSI's OMOP.
- Ensure data quality and integrity throughout the ETL process by performing data mapping, transformation, and validation.
- Optimize ETL processes for performance, scalability, and reliability, identifying and resolving bottlenecks as needed.
- Collaborate with team members to integrate data from disparate sources and ensure seamless data flow for research purposes.
- Maintain up-to-date knowledge of the healthcare domain, including clinical terminologies, workflows, data standards, and regulations.
- Adhere to data security best practices and ensure compliance with privacy regulations like HIPAA.
- Provide (and request) technical support and guidance to (and from) other team members as needed.
- Contribute to project management, setting priorities, and meeting deadlines.

To see the salary range for this position (we recommend that you make a note of the job code and use that to look up): [UCSF Non-Academic Titles Search \(ucsf.edu\)](#)

Please note: The compensation ranges listed online for roles not covered by a bargaining unit agreement are very wide, however a job offer will typically fall in the range of 80% - 120% of the established mid-point. An offer will take into consideration the experience of the final candidate AND the current salary level of individuals working at UCSF in a similar role.

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To learn more about the benefits of working at UCSF, including total compensation, please visit: <https://ucsfnet.universityofcalifornia.edu/compensation-and-benefits/index.html>



Where Are We Going?

**Any other announcements
of upcoming work, events,
deadlines, etc?**





Three Stages of The Journey

Where Have We Been?

Where Are We Now?

Where Are We Going?





May 23: Interpreting The Results (SOS Week 9)



Cindy Cai

Assistant Professor of Ophthalmology,
Johns Hopkins University

SOS Challenge Weekly Tutorial Schedule

Date	Topic
Mar 28	Initiating A Network Study
Apr 4	Data Diagnostics
Apr 11	Phenotype Development
Apr 18	Phenotype Evaluation
Apr 25	Analysis Design
May 2	Network Execution
May 9	Study Diagnostics
May 16	Evidence Synthesis
<u>May 23</u>	<u>Interpreting Results</u>