

Open Access data sharing - How to make simulation-based training data Findable, Accessible, Interoperable and Reusable?

Format: Workshop

Topic: Quality assurance, Faculty development and Program evaluation

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Title

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Introduction & Aims

Open Access publishing is getting more and more attention. Research is made available to the public and developing countries, giving more exposure. The underlying data, which can be qualitative (i.e. interview data) or quantitative (test scores, time to perform a task, simulator parameters) are however often not shared. Publishing these data improves reproducibility, accelerates innovation and allows for sharing of unique data not available to everyone. We believe this is the next step forward in maturation of the field of simulation applied to medicine and nursing. There are however perceived concerns regarding privacy and access under the EU general data protection regulation (GDPR). At the same time anonymization techniques allow for data sharing and reuse under the GDPR.

So how to publish your simulation-based studies and practices according to the so called FAIR principles, making it Findable, Accessible, Interoperable and Reusable?

The aim of this workshop is to show best practices for publishing simulation-based training data. We use a graduate surgical skills curriculum study previously published as use case.

Context (reading not required before the workshop):

1. Wilkinson, M., Dumontier, M., Aalbersberg, I. et al. (2016). The FAIR Guiding Principles for scientific data management and stewardship. *Sci Data* 3, 160018. <https://doi.org/10.1038/sdata.2016.18>
2. Halfwerk, F., Groot Jebbink, E., & Groenier, M. (2020). Development and Evaluation of a Proficiency-based and Simulation-based Surgical Skills Training for Technical Medicine Students. *MedEdPublish*, 9(1), [3523]. <https://doi.org/10.15694/mep.2020.000284.1>
3. Halfwerk, F., Groot Jebbink, E., & Groenier, M. (2021): Data underlying the Research on "Development and Evaluation of a Proficiency-based and Simulation-based Surgical Skills Training for Technical Medicine Students". 4TU.ResearchData. Dataset. <https://doi.org/10.4121/14837907.v1>

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Learning objectives

After this workshop, participants will be able to:

1. Discuss advantages and limitations of publishing your simulation data
2. Recall the FAIR principles of making data Findable, Accessible, Interoperable and Reusable
3. Address anonymization techniques for personal data sharing of simulation participants or patients, and learn which open or restricted licenses are available for data reuse
4. Apply FAIR principles and review how (well) these were applied on a published simulation-based training dataset from graduate surgical skills training
5. Use the FAIR framework in your own simulation practice and simulation research

Session Description (planned activities: how learning objectives will be reached, time distribution of interactive vs presented content)

This interactive 90-minute workshop consists of:

1. Introductory lecture with welcome, learning objectives and workshop format. Workshop participants share experience with simulation data publishing (10 min)
2. Lecture with theoretical framework on the FAIR principles (10 min)
3. Introduction of a best-practice case with following small group discussion: applying one of the FAIR principles per group on simulation-based data (25 min)
4. Plenary group presentation and discussion of small group results on applying the FAIR-framework (20 min)
5. Small group discussion: Start planning data sharing for your own practice and studies (15 min)
6. Plenary closure and wrap up: Where can you find support on data sharing? (10 min)

Educational methods (e.g. group dynamics, interactive methods)

Faculty presentations on framework, context, and data publishing support

Small group discussions with expert facilitation

Plenary group discussion with small group findings and tips for use in own practice and research

Expected impact

Participants will consider sharing data best-practices when designing and conducting their simulation practices and research studies. Data sharing in simulation applied to medicine and nursing allows for comparison between learner groups, benchmarking data, finding best practices, and potentially norms and standards for specific task trainers and levels of proficiency.

Target audience

All delegates involved in simulation design, simulation practice, simulation evaluation, simulation research.

Level (introductory/ intermediate/ advanced)

Introductory

Maximum number of participants

25

Keywords

Simulation practice; simulation research; open access; surgery; non-technical skills; collaboration

Equipment Requests - Please consider space required, presentation materials required eg flipchart, projector etc

Projector/Beamer and 2 wireless microphones

Room with multiple tables and chairs for small group discussions

Wi-Fi connection for participants and online faculty support

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