



# Building capacity in evidence synthesis through training and education

## IMPACT

1. Capacity built through training and education
2. Greater quality and coherence of training for evidence synthesis
3. Greater use of evidence synthesis for decision making in policy and practice
4. Raised awareness and knowledge of evidence synthesis



Photo 1. Meta-ethnography training, with Dr Emma France, Dr Linda Biesty, Dr Pauline Meskell, in Queens University Belfast, Nov 2019.

## SUMMARY

Evidence Synthesis Ireland (ESI) developed a training programme to improve **quality** and **coherence** of evidence synthesis training on the island of Ireland. In over two years, we have built capacity by delivering **28** events (2 in Northern Ireland, 11 online) and **22** webinars in a range of evidence synthesis methods that have been attended by **5164** individuals (~15% from Northern Ireland)<sup>1</sup>. In evaluation surveys, trainees report increased knowledge and skills, and customer satisfaction. In parallel, we developed a bespoke Train the Trainers programme and registered **23** trainers (**4** from Northern Ireland)<sup>1</sup>. In surveys, trainers attest to having **increased knowledge, capacity** and **confidence**<sup>2</sup>, which is also evidenced by trainers leading workshops, webinars, and reviews<sup>1</sup>.

## BACKGROUND

With exponential growth in evidence syntheses and increasing complexity of reviews, there is an urgent need to improve the capability to **do** and **use** evidence syntheses. ESI was funded in December 2018 to deliver a varied high-quality training programme across a range of synthesis types including, but not limited to, Cochrane reviews. Through educational events, we aim to build evidence synthesis knowledge, awareness and capacity among healthcare professionals, policymakers, and researchers on the Island of Ireland. In this case study, we will highlight our **educational events** and **trainers programme**. We provide a comprehensive programme in evidence synthesis, across four prioritised streams: Cochrane, qualitative evidence synthesis, rapid reviews and mixed methods (see Table 1).



Synthesis Type	Workshops	Webinars
<b>Cochrane reviews (with focus on effectiveness of health and social care interventions)</b>	13	3
<b>Qualitative Evidence Syntheses</b>	7	7
<b>Rapid/Scoping Reviews, Evidence and Gap Maps</b>	3	4
<b>Mixed Methods</b>	2	3

Table 1. ESI workshops and webinars

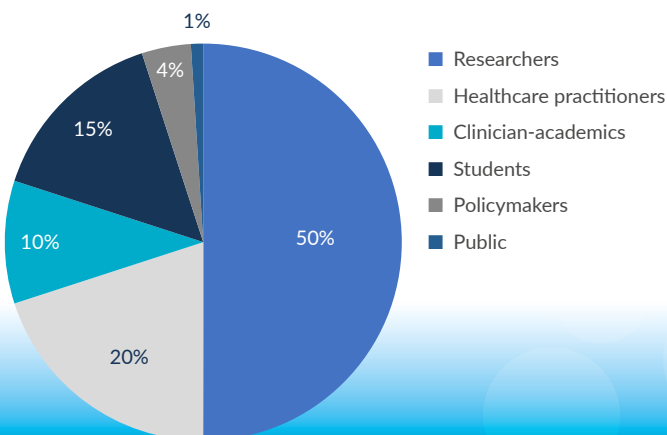
Our educational programme is **tailored** to different audiences (e.g. healthcare professionals, researchers) and learning needs (e.g., introductory, intermediate and advanced). We have also trained people in network meta-analysis, searching, and open synthesis, with upcoming workshops on Risk of Bias 2.0 and GRADE. To support decision-making in health and social care, we are hosting training in **Critical Appraisal of Systematic Reviews** (facilitated by CASP UK) for those working in frontline care services. The May 2021 workshop booked out within days, and we are repeating the workshop in September 2021. This helps support the needs of healthcare professionals in appraising the trustworthiness, relevance and findings of systematic reviews and demonstrates the value of evidence synthesis in informing care decisions.

## IMPACT

To date, the **reach** of our activities includes **2404** people across **28** events and **2760** people in **22** webinars<sup>1</sup>.

### Webinars

Our monthly **webinars** are popular and demonstrate an engaged community, which we use to introduce evidence synthesis methods, support knowledge translation, foster relationships, and build the national and international profile of ESI. These webinars have significant **reach**:



- Our webinar audience comprises **researchers** (50%), **healthcare practitioners** (20%), **clinician-academics** (10%), **students** (15%), **policymakers** (4%) and the **public** (1%).
- Attendees span **>60** countries on **5** continents including **North America** (Canada and USA), **Europe** (e.g. Ireland 50%, UK 20%, Sweden), **Australia**, **South America** (e.g. Brazil, Mexico, Ecuador) and **Africa** (e.g. South Africa).

Recordings are made freely available on the ESI website and have been accessed **2546** times and are being **used** as **resources** to teach **evidence-based practice** in both developed and developing regions. For example, our webinars are used by the **Ecuador Associate Cochrane Centre**, in **Cochrane Austria's** evidence-based nursing centre and the medical library at the **University of Cape Town**. **Beyond academia**, webinar participants are from the Health Service Executive, Public Health, Department of Health, Health Information Quality Authority, funders, hospital groups, patient groups, policing and housing authorities, trusts, and more<sup>4</sup>.

“The series represents an important map of key emerging/leading-edge considerations and shared expertise in evidence synthesis – it has been on point on topic areas and has influenced a systematic review book I am contributing to (Ruairidh Hill<sup>5</sup>).”

### Workshops

The **beneficiaries** of this training are a diverse community of stakeholders involved in and contributing to evidence synthesis, from a mix of career stages and backgrounds. Workshop attendees in **Northern Ireland** are mainly from the Hospital Trusts and NHS (e.g. Belfast City Hospital, Royal Victoria Hospital) and Universities (Queen's University Belfast, Ulster University), and in the ROI from universities, hospitals, charities and others<sup>4</sup>. The potential impact is that these trainees will act as change agents advocating the use of evidence synthesis within their clinical settings and institutions.

“I valued the accessibility of the instructors, their passion for teaching and their willingness to help. I was in a unique position in that I had particular difficulties with a Cochrane review. This was invaluable learning for me, and has given me much confidence in my review. I couldn't rate [the trainers] high enough”

Feedback from the **Advanced Author Systematic Review** course.



# EVIDENCE SYNTHESIS

I R E L A N D

“The facilitators are excellent educators, bringing in helpful anecdotes and making complex processes understandable to a novice (or at least understandable at that moment, and then realising later, wow, I have a lot more to learn). The content was pitched at an appropriate level. And the group size was conducive for discussion based learning. All in all it was a very positive experience.”

## Feedback from **Introduction to Systematic Reviews**.

We have trained people across disciplines including **medicine** (e.g. psychiatry, general practice, dietetics, geriatrics, public health), **nursing and midwifery**, health **economics, allied health** (e.g. physiotherapy, occupational therapy, speech and language), **psychology, pharmacy, social work**, and **education**<sup>4</sup>. Potential impacts from our training include greater knowledge and awareness of evidence syntheses to support clinical practice and healthcare policy decisions. Through targeted marketing and moving to online training, we have increased the number of healthcare workers attending our workshops:

- **Feb 2019** Introduction to Systematic Reviews (in person)
  - o 65% researcher, **15% clinician-researcher**, **7% healthcare practitioner**, 11% librarian
- **Jan 2021** Introduction to Systematic Reviews (online)
  - o 50% researcher, **25% clinician researcher**, **25% healthcare practitioner**

In Nov 2020, we updated our evaluation surveys to more accurately capture capacity building and impact such as increased knowledge and skills. From a purposeful sample of 10 workshop **evaluations** spanning the four training streams and with 147 survey respondents:

- 87% participants rated the training as **excellent**
- 86% strongly agreed it was **relevant** to their work
- 97% strongly agreed they would recommend the training to a colleague
- 100% reported an **increase in knowledge** from training (e.g. Introduction to Systematic Reviews, Jan 2021, participants self-reporting as very knowledgeable: prior to training 7.1%, after training 55.9%)

Early impacts in **follow-up surveys**<sup>6</sup> showed that participants went on to start or complete systematic reviews. One attendee described the workshop as providing the “skills necessary to complete review protocol and giving me the confidence to get the Cochrane protocol published” (Anon,

13 04 21<sup>6</sup>). Participants valued learning the systematic review steps, learning how to perform data extraction and assess risk of bias, how to access resources as reference material, as well as networking with other participants<sup>6</sup>.

“After taking part in this training, I was involved in a systematic review. The training **improved my ability to conduct a rigorous review**. The worked examples were very beneficial and I enjoyed trying out the questions. The in-depth training **improved my understanding** and appreciation of statistics such as odds ratios and I felt **confident enough to work out figures by myself**. Running through the software was useful. The focus on the basics first was **most beneficial to my learning**.”

(Anon, 03 03 21<sup>6</sup>).

## **Train the trainers**

We developed a **Train the Trainers** model that provides trainers with:

1. A **buddy system** to build capacity and confidence in ESI faculty delivering workshops (from preparation through to content delivery and evaluation);
2. **Free** access to ESI training;
3. Discrete **advanced-level training** organised by ESI;
4. Access to the **ESI Training Awards Scheme** to support professional development of trainers;
5. **Support, networking** and **collaboration opportunities**

The majority (84%) of our training events are led or co-delivered by ESI trainers. We have established processes and curricular templates, and we support trainers with event management, hosting and evaluation. Evaluations are shared with trainers to help improve future workshops. In 2020, we launched the ESI Training Awards Scheme to further build trainer capacity - applications are peer-reviewed to ensure high-quality applications that align with key training strands and ESI objectives. The first awardee will undertake **JBI Systematic Reviewing training** (June 2021), the first step in the path to completing the JBI Train the Trainer program.

We developed Training Streams to identify and **support** individual trainers who commit to further expanding their skills. Junior trainers are gaining the experience required to **lead** streams, showing **impact** of our training programme on **confidence** and **skills**. The **beneficiaries** are the trainers, who receive high-quality professional development, and their trainees, who receive the benefits of high-quality training.



## EVIDENCE SYNTHESIS IRELAND

In 28 months, we:

- Increased the number of registered ESI Trainers by >50% to **23** (4 from Northern Ireland), from a baseline of 11 Cochrane trainers in Ireland
- Built capacity in trainers with **41** attendances at ESI workshops
- Trained **13** faculty through the buddy system
- Provided **8** trainers with the **opportunity** to work directly with, and learn from, methodological experts (e.g. Chris Cates, Andrew Booth, Claire Glenton, Simon Lewin, Ruth Garside, Declan Devane, Valerie Smith).

Though early, we see pathways to impact with:

- ESI trainers delivering **19** workshops and **2** webinars for ESI;
- Further **collaborations** emerging including training (GRADECerQual, 2021) and systematic reviews (Cochrane EPOC review on vaccine hesitancy, 2021).
- ESI-trained faculty **leading** and **co-authoring** high-profile Cochrane reviews (**7** trainers), as well as mentoring ESI Fellows (**3**)

Feedback from **Senior ESI trainer** Prof Valerie Smith, Trinity College Dublin<sup>2</sup>:

“Being an ESI Trainer helped develop my capacity and confidence in evidence synthesis, and those of others, through **co-facilitating** Cochrane **advanced meta-analysis** training with a Cochrane UK trainer (C. Cates). This expanded my knowledge in advanced techniques and provided an amazing opportunity to work with a senior, internationally renowned expert. It extends my capabilities for delivering future advanced training, as well as my professional standing as a Cochrane trainer. I have **built capacity in others** by co-facilitating ESI training with **junior trainers**, which will strengthen and secure future capabilities for synthesis activity.”

Following Dr Cates retirement, Valerie will **lead** advanced systematic review training Q4 2021, with Dr Nuala Livingstone (Northern Ireland).

Feedback from **Junior ESI trainer**, Dr Elaine Finucane, NUI Galway<sup>2</sup>:

“I completed the comprehensive ‘train the trainer’ with ESI, using a ‘buddy’ system. This hands-on training method provided active training under the guidance of an experienced mentor, Prof Declan Devane. This method supported and developed my knowledge of evidence synthesis methodologies and provided me with the tools to facilitate Cochrane Ireland training courses.”

Elaine will **lead** the next “Introduction to Systematic Review Training” in Jan 2022.



Dr Elaine Finucane



Prof Valerie Smith

## REFERENCES

- 1 Outputs and outcomes appendix for full details
- 2 ESI feedback survey, qualitative data, Prof Valerie Smith (18 03 21); Dr Elaine Finucane (03 03 21), Dr Fionnuala Jordan (18 03 21), Dr Linda Biesty (01 04 21); Dr Catherine Houghton (18 03 21)
- 3 Personal communications from colleagues (19 Nov 2019; 11 Feb 2020; 14 April 2021)
- 4 Data collated during registration for workshops and webinars.
- 5 Webinar feedback, via email from Ruairidh Hill, Lecturer in Evidence Synthesis, University of Liverpool (28.10.20)
- 6 Follow-up survey of quantitative and qualitative data administered between Feb-April 2021 to a sample of past attendees.