



Break Out session II

Tools, Guidelines & Capacity Building

Jan. 21, 2020



This project is funded by
the Health Programme of
the European Union

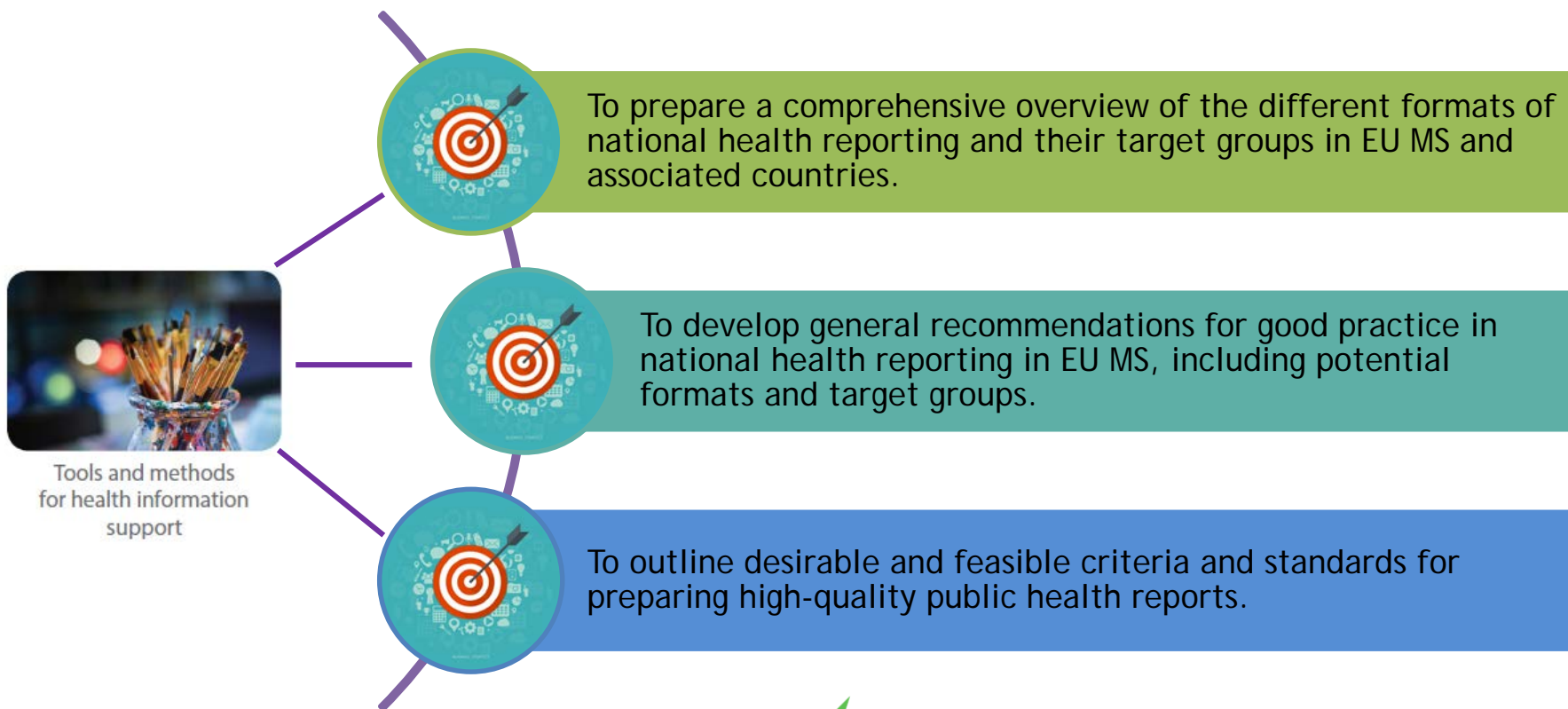
1. Guidance for Health Reporting
2. Machine learning techniques and public health surveillance (methodological guidelines)
3. Recommendations to perform a BoD study
4. School on HI experience in increasing HI skills for researchers and future roadmap

1. Guidance for Health Reporting



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Aims

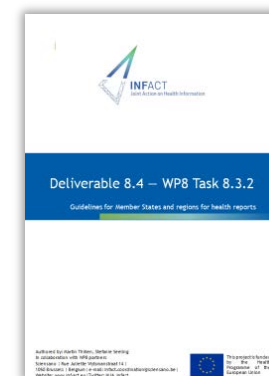
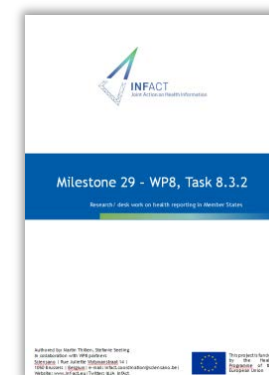


- A web-based desk research was conducted among EU MS and associated countries

➔ Generate a comprehensive overview of different national health reporting formats and their respective target groups

- Recommendations for Member States and regions for health reports were drafted

➔ Facilitate making health information adequately available while reducing inequalities in health reporting across the EU



Results: Web-based desk research

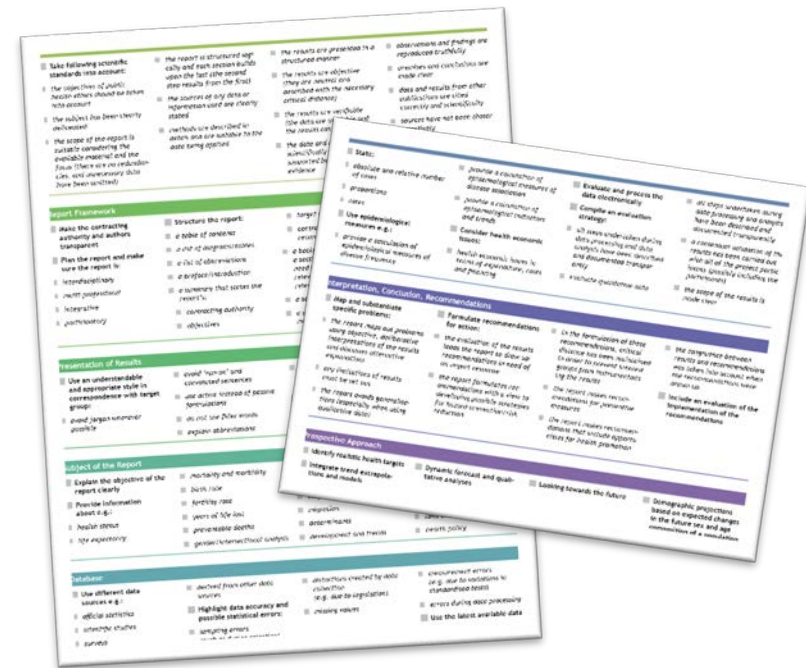
Key messages:

- “ *Health reporting practices and quality in EU Member States are heterogeneous.* ”
- “ *‘Health reporting’ is not a commonly used terminology in all analysed countries.* ”
- “ *Public health reports are the most frequently used health reporting format.* ”
- “ *The general public and scientists or researchers are the most frequently stated target groups of health reporting formats.* ”

Results: Recommendations for Health Reports

A total of eight categories with a variety of quality criteria for public health reports were identified:

1. Scientific Standards
2. Report Framework
3. Presentation of Results
4. Subject of the Report
5. Database
6. Data Evaluation
7. Interpretation, Conclusion, Recommendations
8. Prospective Approach



The guidance document:



- Will be presented at relevant conferences and a scientific paper will be published to spread the findings
- Should be circulated at national level and disseminated to the national nodes to reach relevant stakeholders
- Can be included in training programmes and contribute to capacity building
- Is applicable at national as well as international level and could be integrated into an EU HIS to enhance sustainability

2. Machine Learning Techniques and Public Health Surveillance (methodological guidelines)



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Why methodological guidelines?



- The capacity to use data linkage and artificial intelligence to estimate health indicators varies across European countries. ¹
- The estimation of health indicators from linked administrative data is challenging due to several reasons such as :
 - Variability in data sources, data collection methods resulting in reduced interoperability and timeliness, availability of a large number of variables, lack of skills and capacity to link and analyze big data

1. R Haneef, M Delnord, M Vernay et al, Archives of Public Health 2020

Objective of methodological guidelines



For studies to estimate population-based health indicators using linked data and/or Machine Learning techniques (MLTs) with new approaches

Development of methodological guidelines



Step 1

Literature search for studies using data linkage and/or MLTs

Step 2

A generic method case study using data linkage and MLTs

Step 3

Inspiring examples using innovative use of data sources

Methodological guidelines

Check-list of methodological Guidelines (1)



1. Define the research question
2. Select the appropriate study design
3. Select the required linked data sources
4. Choice of a study population
5. Define study outcomes and level of estimation

Check-list of methodological Guidelines (2)



6. **Data preparation** including extraction, coding of variables, defining the targets, split of data into test and training data set
7. **Data analysis** include variables selection, choice of statistical techniques and sensitivity/uncertainty analysis
8. **Addressing potential issues** such as missing data, imbalanced target groups or bias/variance tradeoff

Implications



- Support to develop and adopt new methods/techniques using linked data and MLTs for studies estimating population-based indicators
- Add to high-quality evidence-based research to guide health policy decisions

3. Recommendations to perform a Burden of Disease (BoD) study



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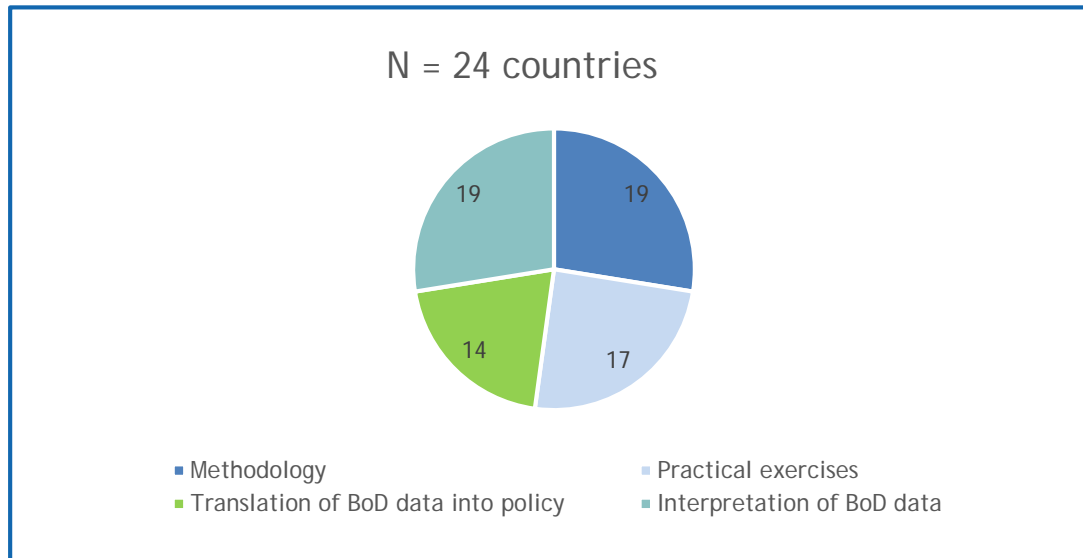
Use of Burden of Disease approaches in Europe

○ Objective:

- To identify the current needs to perform the national BoD studies

○ Results:

- Response rate = 93% (i.e., 25/27 European countries)
- 72% (i.e., 18/25) have not carried out any BoD study
- BoD support required for:



4-step approach to develop the recommendations



Recommendations to perform a national BoD study

1. Survey

2. Narrative overview

3. Country Health Profiles

4. Experts' opinions

Recommendations to perform a national BoD study



1. Define the objectives of the BoD study
2. Secure access to the minimum required data sources
3. Ensure the minimum required workforce
4. Choice of a standard population
5. Choose an appropriate methodological approach
6. Establish a clear governance structure for the BoD study
7. Identify and communicate the benefits of performing national BoD studies
8. Stakeholder engagement/involvement

Implications



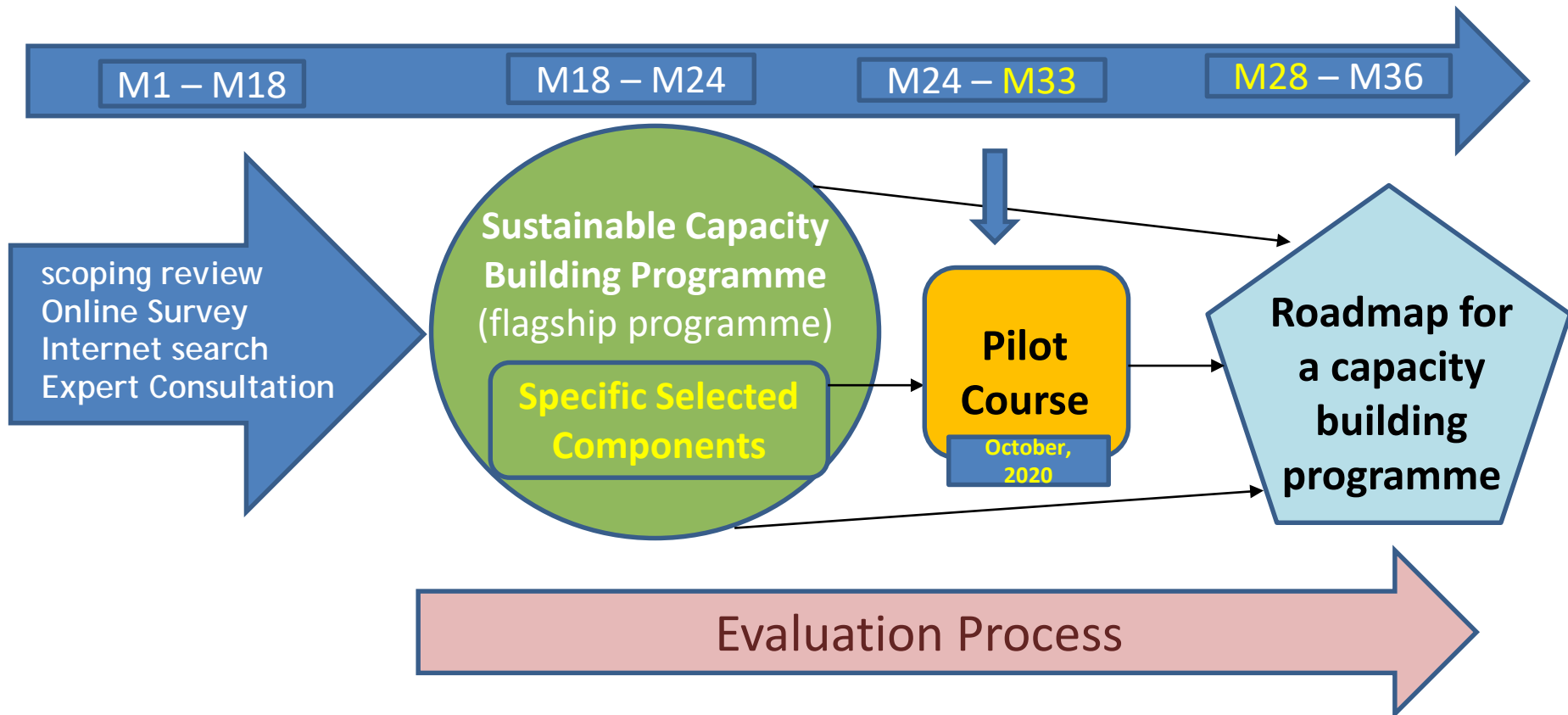
- **InfAct project** has emphasized the potential role of BoD approaches
- The technical platform of COST Action (**European BoD Network**) would support to integrate BoD approaches in routing public health activities through:
 - developing and improving specific expertise to perform a BoD study
 - establishing and strengthening the scientific collaborations

4. School on HI experience in increasing HI skills for researchers and future roadmap



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Leveraging Capacity Building for Reducing HI inequities in Europe



1st European School of Health Information 2020



“Health Information Training on Health Examination Survey: From Data Collection to Policy Dialogue and Translation”

- Day 1: Health information systems, data sources, metrics & indicators
- Day 2: Health data analysis and interpretation
- Day 3: Transfer from health data to policy and clinical practice
- Day 4: Interoperability and record linkage
- Day 5: Data protection (GDPR) & ethical questions for health information & and glimpse future (DIPoH)

Health Information Training Course on Health Examination Survey: From Data Collection to Policy Dialogue and Translation

Time (CET)	<u>1/10/2020</u> <u>Thursday 1</u>	<u>8/10/2020</u> <u>Thursday 2</u>	<u>22/10/2020</u> <u>Thursday 3</u>	<u>29/10/2020</u> <u>Thursday 4</u>	<u>5/11/2020</u> <u>Thursday 5</u>
9:00	Welcome	Session 2.1 Comparability of different data sources	Session 3.1 Interoperability – what it is	Session 4.1 European Core Health Indicators (ECHI): looking back-ward, moving forward	Session 5.1 Health information and GDP
9:30	Tour de table and course introduction				
10:00	Session 1.1 Health information systems	Session 2.2 New innovative data sources (myData, loyalty cards) for HI	Session 3.2 New innovative health indicators	Session 4.2 Examples of interoperability from INFACT	Session 5.2 Legal and ethical requirements in a HES
10:45	Coffee Break			Coffee Break	
11:00	Session 1.2 Role of health examination surveys as a HI data source	Coffee Break	Coffee Break	Session 4.3 Linking survey data to registers	Session 5.3 Discussions on GDPR
11:15		Session 2.3 Non-response in health surveys:	Session 3.3 Estimation of trends and projections/forecast of health and health determinants		
12:00	Group work 1 What information can be obtained through different data sources, and variations			Profiles of the survey non-respondents	
12:30				Group work 4 Data linkage exercise	Session 5.4 WHO Europe
13:00	Lunch	Lunch	Lunch	Lunch	Lunch
14:00	Group work 1 continues	Group work 2 Survey non-response and effective recruitment protocol for your test survey Project presentations	Session 3.4 Examples of HES data use	Group work 4 continues Project presentations	Session 5.5 The Future of Health Information
15:00	Project presentations		Group work 3 Preparing a public health report based on information from different data sources		
15:45	Coffee Break	Coffee Break	Coffee Break	Coffee Break	
16:00	Session 1.3 The experience of European Health Examination Survey (EHES) in Portugal	Session 2.4 Eurostat	Session 3.5 The Portuguese Strategy for ECHI	Session 4.4 Ireland Data Case	Final Words
17:00					

Working
groups

The Lecturers were Experts from European Public Health Institutes and Universities



- Damir Ivankovic (HZJZ)
- Hanna Tolonen (THL)
- Henk Hilderink (RIVM)
- Kenneth Eaton (University College London)
- Jakov Vukovic (HZJZ)
- Luigi Palmieri (ISS)
- Luís Velez Lapão (IHMT/UNL)
- Mariken J. Tjhuis (RIVM)
- Päivikki Koponen (THL)
- Paulo Jorge Nogueira (FMUL)
- Petronille Bogaert (Sciensano)
- Rodrigo Sarmiento-Suárez (Inst de Salud Carlos III)
- Sarah Craig (HRB Ireland)
- Tommi Härkänen (THL)

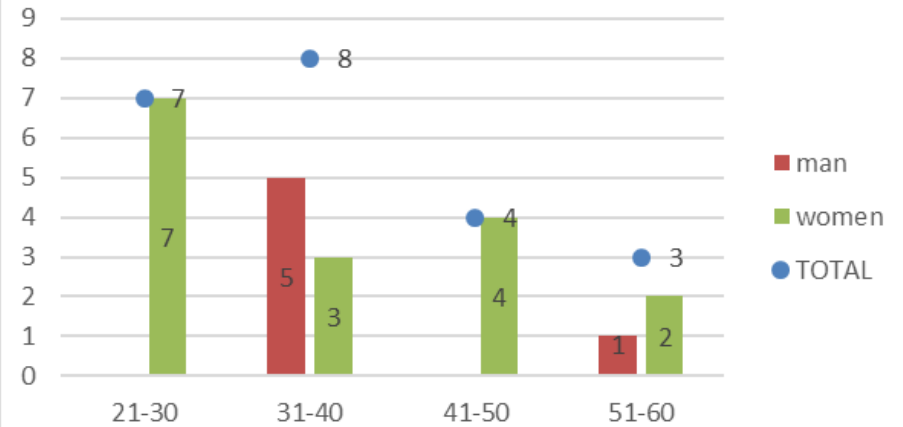
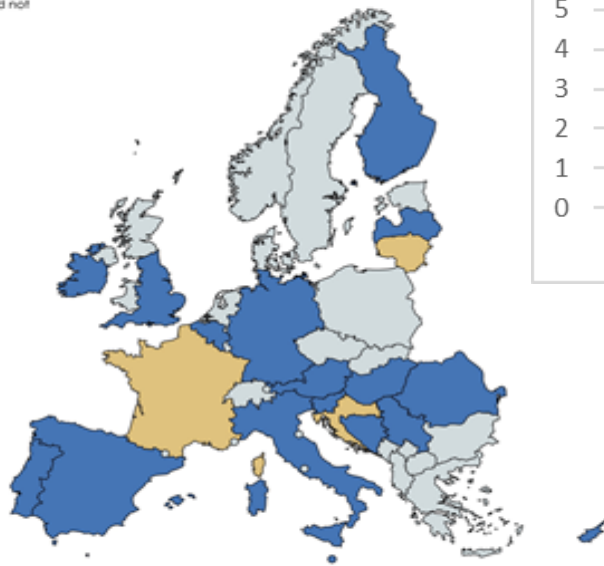
SPECIAL GUESTS

- Ana Dulce Pinto (INE - Statistics Portugal)
- David Novillo-Ortiz (WHO Europe)
- Eduarda Góis (INE - Statistics Portugal)
- Ena Lynn (Health Research Board - Ireland)
- Herman van Oyen (INFACT/Sciensano)
- Ilze Burkevica (EUROSTAT)
- Neville Calleja (MoH, Malta)
- Marta Barreto (INSA, Portugal)

22 Participants from 17 countries (and Madeira)

Participants country of work

■ Participants
■ Selected participants who did not attend



1st European School on Health Information

Health Information Training Course on Health Examination Survey: From Data Collection to Policy Dialogue and Translation

1, 8, 22, 29 October and 5 November 2020

Course Website

CONTENTS

- Profiles of the survey non-respondents
- What can be done during the survey to minimize non-response?
- Statistical adjustment methods for survey non-response

LEARNING OBJECTIVES

- Key terminology related to sample-based surveys
- Differences between existing definition of response rates
- Characteristics of survey non-respondents
- Ways to minimize survey non-response
- Non-response bias
- Statistical adjustment methods for survey non-response

LEARNING MATERIALS

- Non-response in health surveys [Download pdf](#)
- Groves RA, Dillman DA, Eltinge JL, Little RJA. Survey nonresponse. 2002. John Wiley & Sons, Inc.
- Edwards PJ, Roberts I, Clarke MJ, et al. Methods to increase response to postal and electronic questionnaires. Cochrane Database of Systematic Reviews 2009, Issue 3. Art. No.: MR000008. DOI: 10.1002/14651858.MR000008.pub4 [Open](#)
- Tolonen H (Ed.) EHES Manual. Part A. Planning and preparation of the survey. 2nd edition. National Institute for Health and Welfare, 2016, Directions 2016_13. URN:ISBN-978-952-302-700-8 [Open](#)



Session 2.3 - Non-response in health surveys: Profiles of the survey non-respondents

1st European Health Information Course

October/November 2020

Day 2: Health Data analysis and Interpretation

Session 2.3: Non-response in health surveys: Profiles of the survey non-respondents

Hanna Tolonen (THL)

Päivi Koponen (THL)

Tommi Härkänen (THL)

DGS

Project co-funded by the Health Programme of the European Union

Communication and News about the initiative



HOME ABOUT US WORK PACKA

The 1st European School on Health Information: ongoing success!

Date: Thu, 10/01/2020 - 09:00 - Thu, 11/01/2020 - 17:00

Coordinated by Universidade Nova de Lisboa and the Ministry of Health, the initiative started on the 1st of October and involves several European Public Health Institutes.



SNS INSTITUTO DE SAÚDE

INSA | Formação Internacional



Aluno conclui o primeiro Curso Europeu sobre informação em Saúde

O Curso Europeu sobre informação em Saúde, coordenado pelo Instituto Nacional de Saúde da Universidade Nova de Lisboa, que decorreu até 11 de outubro, foi considerado um sucesso. O curso foi organizado pelo Instituto de Saúde da Universidade Nova de Lisboa, em parceria com o Instituto de Saúde da Universidade Nova de Lisboa, e envolveu a participação de vários especialistas em Saúde Pública, com o objetivo de promover a troca de experiências e conhecimentos entre os participantes.

O primeiro objetivo deste primeiro curso, que decorreu até 11 de outubro, foi promover a troca de experiências e conhecimentos entre os participantes, através da partilha de informações e da realização de atividades práticas. O curso foi considerado um sucesso, pois os participantes adquiriram conhecimentos e habilidades que serão úteis no seu trabalho diário.



TERCEIRO ENSINO
INSTITUTO DE HIGIENE E
MEDICINA TROPICAL
UNIVERSIDADE NOVA DE LISBOA

Search

TEACHING INVESTIGATION TROPICAL DISEASES TEACHING AND RESEARCH UNITS 6TH NATIONAL CONGRESS OF TROPICAL MEDICINE

HOME / NEWS A EUROPEAN COURSE ON HEALTH INFORMATION WAS A SUCCESS. SECOND EDITION IS ALREADY IN PREPARATION

I European Course on Health Information was a success. Second edition is already in preparation.


11/11/2020

The 1st edition of the European School on Health Information has come to an end. This course involved participants from 20 European countries and speakers from 10 Public Health Institutes, different universities and research centers, as well as from supranational entities such as Eurostat or WHO.

The course was very active on Twitter

Mekha Mathew @Mekha72395135 · 1 de out
Proud to be part of 1st EU Health Information Training. Amazing teachers and such enthusiastic students. Love the supernatural representation 🇮🇳
#InfAct #1ETSEH


InfAct @JA_InfAct · 1 de out
We have just started the 1st European Training Course on Health Information #1ETSEH. Just take a look at our website!
...information.primarycareinnovation.org



Hanna Tolonen @tolonen_hanna
The 2nd day of the @JA_InfAct training school on health information is starting. Today's topics: comparability of different data sources, new innovative data sources and survey non-response. Lecturers of today Kenneth Eaton, @KoponenPaivikki, @luislapao, @TommiHrknen and myself.
Traduzir Tweet
7:46 AM · 8 de out de 2020 · Twitter Web App
5 Retweets 7 Curtidas

Neville Calleja @nevillecalleja · 5 de nov
Honoured to have been able to contribute

InfAct @JA_InfAct · 5 de nov
We are starting the last day of the @JA_InfAct 1st European Course on Health Information with the hot topic: will #GDPR be a barrier or a use tool for health information? Professor @nevillecalleja is behind the wheel @DhirMalta




SNS Portugal @SNS_Portugal
Já teve início o primeiro Curso Europeu sobre Informação em Saúde. #Saúde #SNS

INSA | Formação Internacional
Já teve início o primeiro Curso Europeu sobre Informação em Saúde. O 1º Curso Europeu sobre Informação em Saúde, ...
sns.gov.pt

2:00 PM · 14 de out de 2020 · TweetDeck


HealthPros Innovative Training Network @HealthProsH2... · 1 de out
We are very happy to have several @HealthProsH2020 fellows involved in the 1st European Training course on Health Information! @JA_InfAct

InfAct @JA_InfAct · 1 de out
We have just started the 1st European Training Course on Health Information #1ETSEH. Just take a look at our website!
...information.primarycareinnovation.org



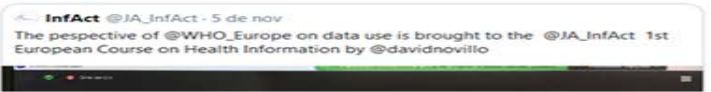
Sarah Burgmann @SarahBurgmann · 29 de out
Interoperability in data related projects, so important and so complex. #COVID19 fostered data linkage a lot. Looking forward to further innovations great to have the chance to attend #1steuhealthinformationschool #infact

InfAct @JA_InfAct · 29 de out
In another good example of partner cooperation, @damir_ivankovic and Jakov Vukovic give us insight into the work done by @JA_InfAct's WP10 on "systems interoperability"



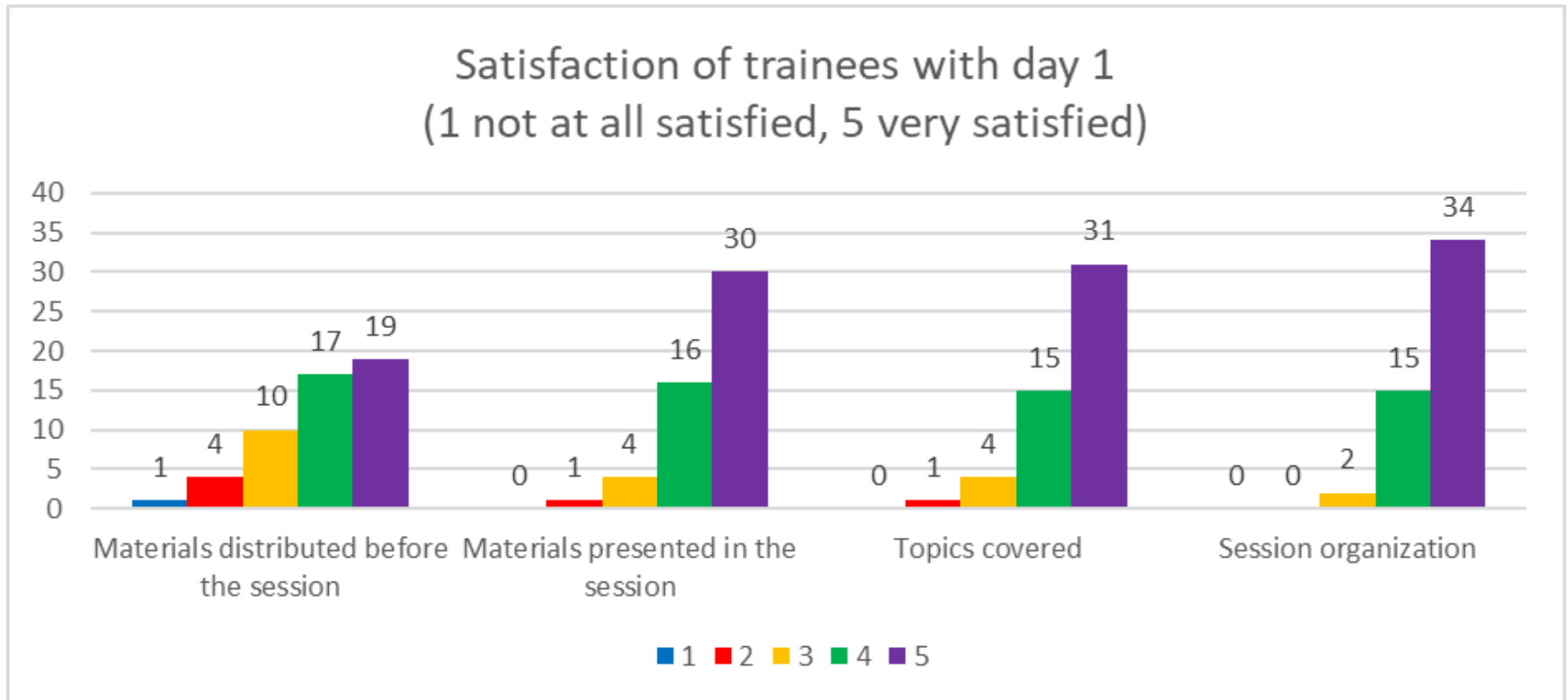
David Novillo Ortiz @davidnovillo
Thanks for the opportunity!

InfAct @JA_InfAct · 5 de nov
The perspective of @WHO_Europe on data use is brought to the @JA_InfAct 1st European Course on Health Information by @davidnovillo



Results

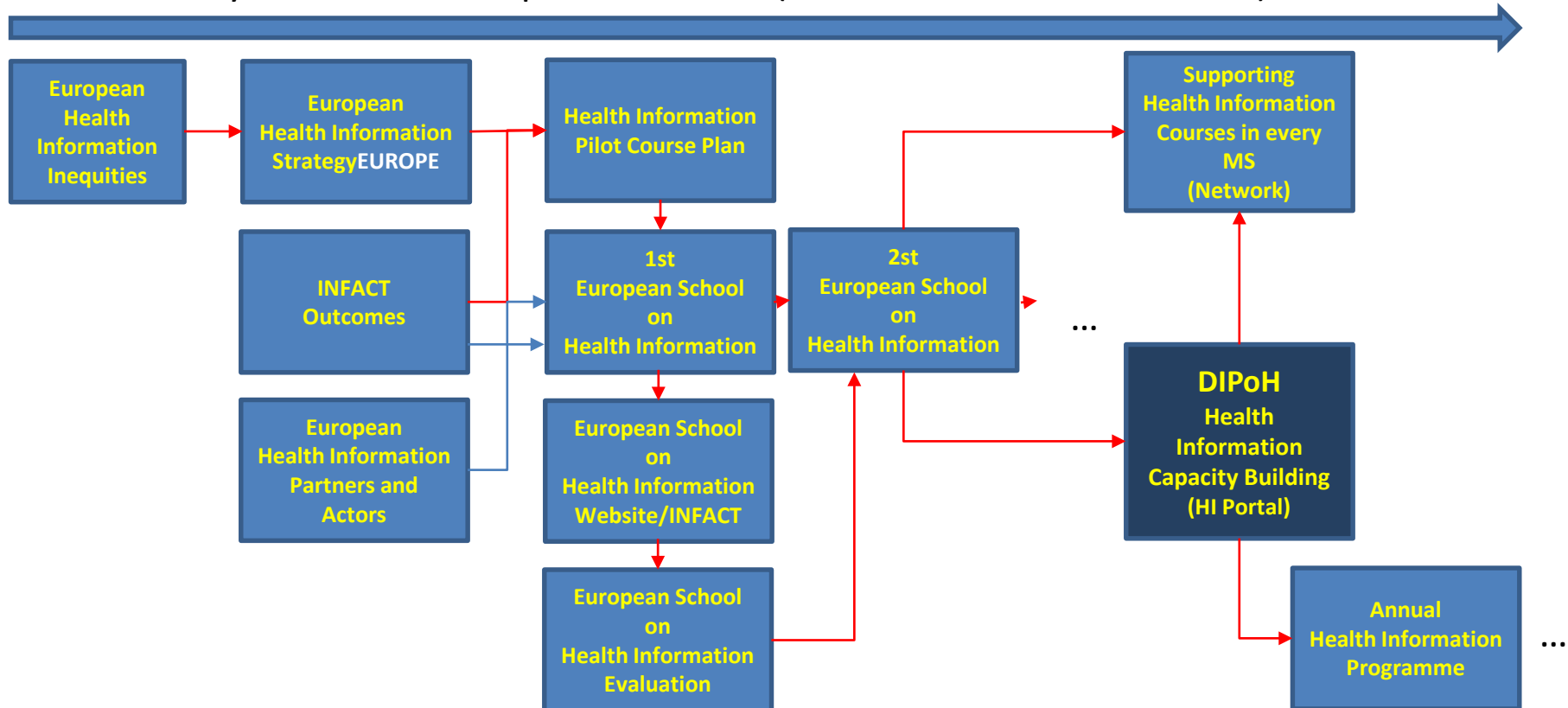
Trainees very positive evaluation



Sustainability

A Roadmap for Health Information in Europe

MSs Maturity levels leads to Specific Actions (Courses, webinars, Tutorials) Timeline



Acknowledgements

