ECOM

**Effective Communication
in Outbreak Management for Europe**

ECOM Symposium

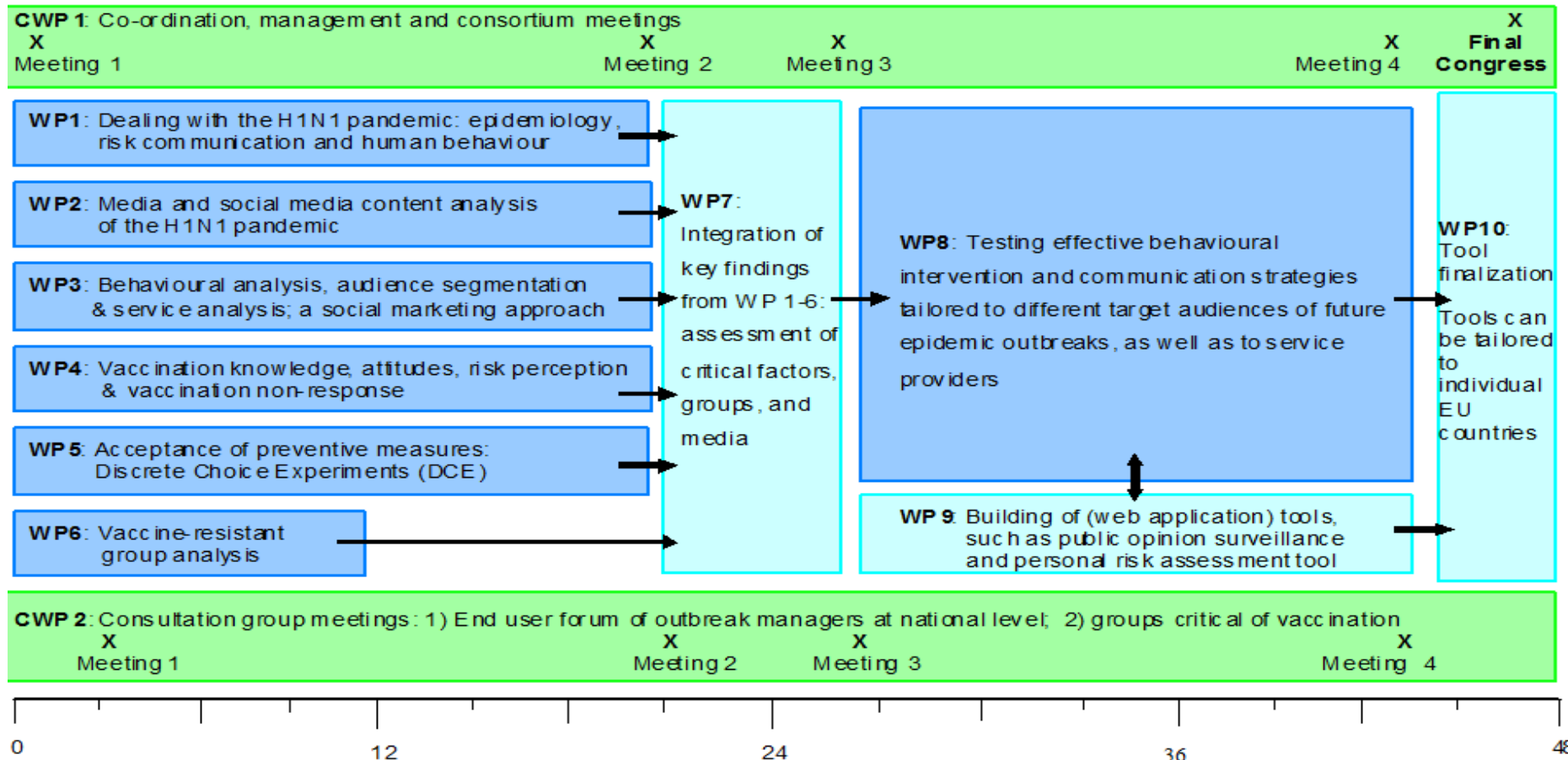**Stockholm, 10 November 2015**

Welcome and introduction to the ECOM project

Jan Hendrik Richardus MD, PhD
Project co-ordinator

Erasmus University MC Rotterdam, the Netherlands

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CWP 1: Co-ordination, management and consortium meetings
X   X   X   X   X
Meeting 1   Meeting 2   Meeting 3   Meeting 4   **Final Congress**

WP1: Dealing with the H1N1 pandemic: epidemiology, risk communication and human behaviour

WP2: Media and social media content analysis of the H1N1 pandemic

WP3: Behavioural analysis, audience segmentation & service analysis; a social marketing approach

WP4: Vaccination knowledge, attitudes, risk perception & vaccination non-response

WP5: Acceptance of preventive measures: Discrete Choice Experiments (DCE)

WP6: Vaccine-resistant group analysis

WP7: Integration of key findings from WP 1-6: assessment of critical factors, groups, and media

WP8: Testing effective behavioural intervention and communication strategies tailored to different target audiences of future epidemic outbreaks, as well as to service providers

WP9: Building of (web application) tools, such as public opinion surveillance and personal risk assessment tool

WP10: Tool finalization

Tools can be tailored to individual EU countries

CWP 2: Consultation group meetings: 1) End user forum of outbreak managers at national level; 2) groups critical of vaccination
X   X   X   X
Meeting 1   Meeting 2   Meeting 3   Meeting 4

0   12   24   36   48

Afternoon programme

13:45 – 14:00	Introduction to the ECOM Project
14:00 – 15:10	Main findings and implications from the ECOM project
15:10 – 16:00	Presentation of the 'Tool-Box'
15:10 – 15:20	Video illustrating the developed risk-communication tools
15:20 – 15:55	'Hands-on Workshop' to get acquainted with the tools; 3 rounds of 10 minutes
16:00 – 16:15	Keynote speech: *Prof. Karl Ekdahl*
16:15 – 17:05	Panel Discussion
'17:05 – 17:15	Closing Remarks
17:15 – 18.00	Drinks

Stepping into

the spotlight

WP1: Time-dependent influences of epidemiology and risk communication on human behaviour

Hamburg University of Applied Sciences

Ralf Reintjes - MD, MSc(P.H.), MSc(Epi.), PhD
Professor Epidemiology and Public Health Surveillance
ECOM Project - Workpackage 1 leader

Amena Almes Ahmad – MD, MPH
Senior Researcher

Hochschule für Angewandte Wissenschaften Hamburg
Hamburg University of Applied Sciences

Master Health Science Students: Annika Wulff, Rasmus Cloes, Verena Kessler

In collaboration with WP2 & WP4

Aims

1. Time-Series Analysis

> ➤ epidemic curve
> ➤ key events, pandemic control measure
> ➤ media attention
> ➤ vaccine uptake, perceived risk
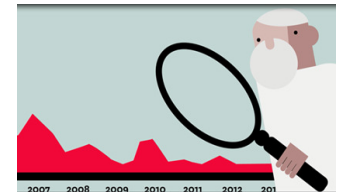
2.Semi-Structured Expert Interviews

> ➤ perception about official action & public reaction
> ➤ receiving and disseminating information
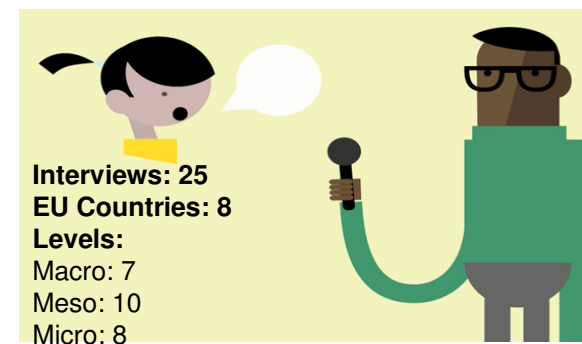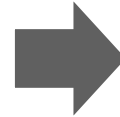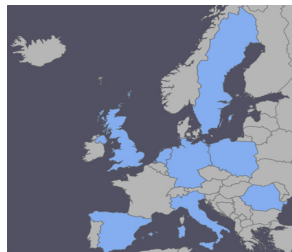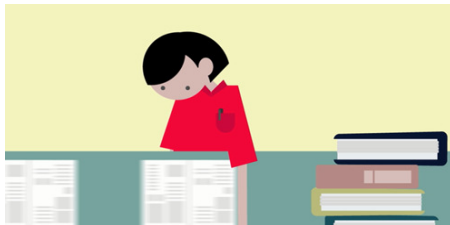> ➤ improving future risk communication
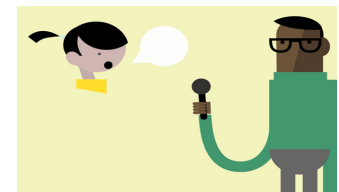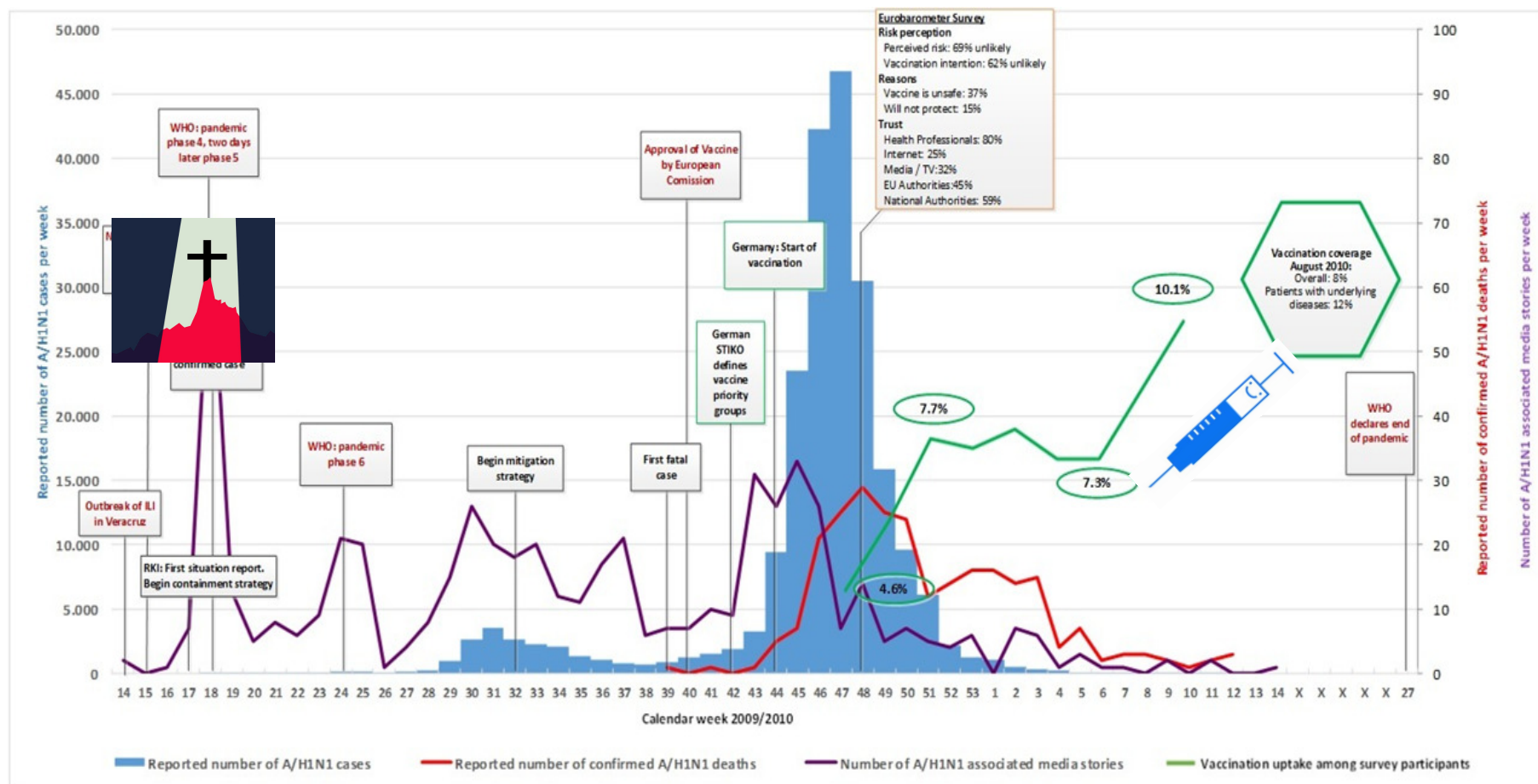
Methods

1. Time-Series Analysis
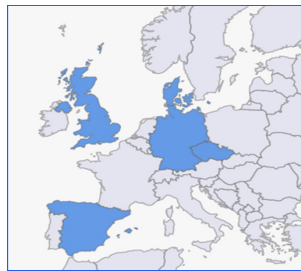
Data were plotted along a (weekly) time-line
April 2009 - March 2010
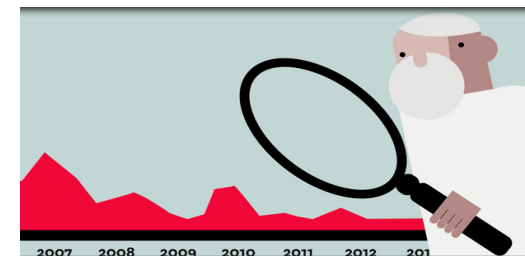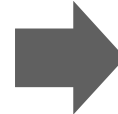
2. Semi-Structured Experts Interviews

Interviews: 25
EU Countries: 8
Levels:
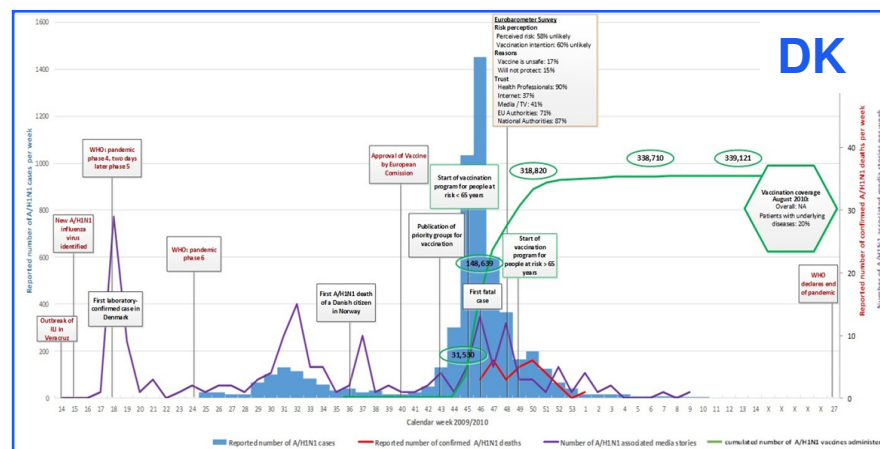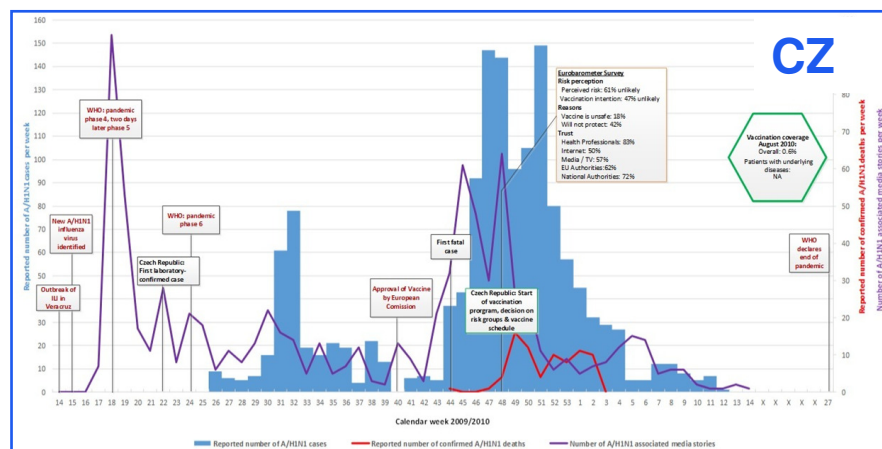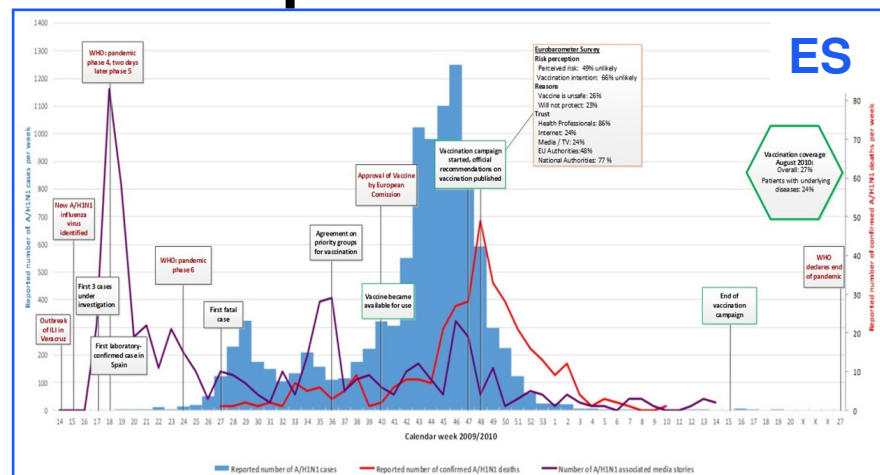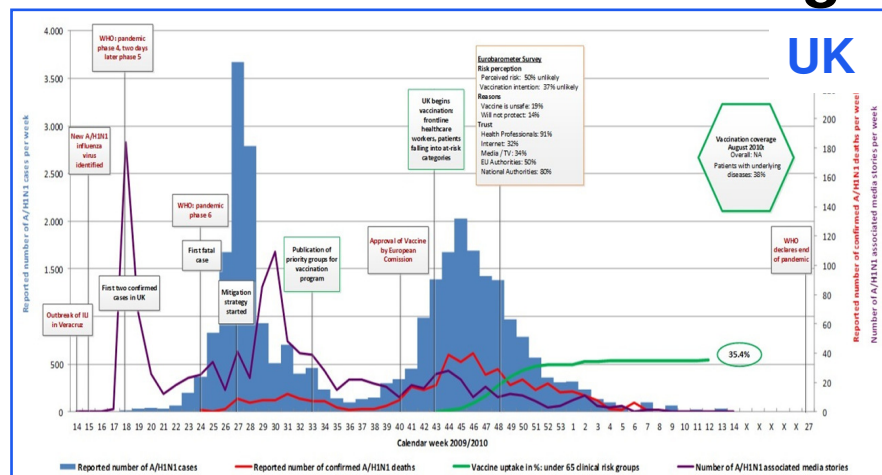Macro: 7
Meso: 10
Micro: 8

Epidemiology, key events and media attention during the A/H1N1 pandemic in Germany

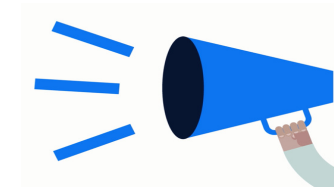# Epidemiology, key events and media attention during the A/H1N1 pandemic
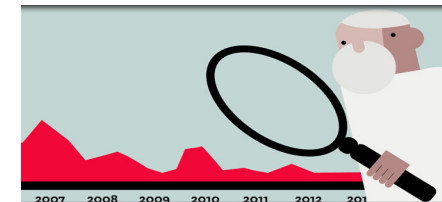
Findings & Suggestions

1. Time-Series Analysis

➢ Media spotlights key events
➢ ⇧Rising number of cases ➔ ⇧Public interest
➢ Low A/H1N1 vaccine coverage
➢ Increased vaccine uptake in first 4 to 6 weeks
➢ Low risk perception

Suggestion

➢ Use the media spotlight – it is a crucial time for risk communication
➢ Start of vaccination campaign – is a crucial time for risk communication

Findings & Suggestions

2. Semi-Structured Interviews

➢ Limited feedback from healthcare staff
➢ Limited contact to media representatives
➢ Importance of first statement
➢ Influence of prominent individuals
➢ Influence of health care support staff
➢ Key events: may trigger vaccine demand
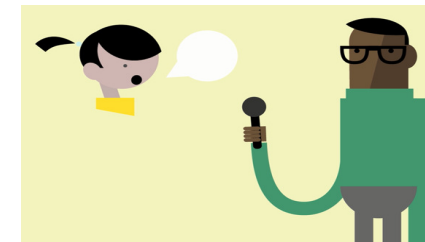
Suggestions

➢ Establish a two-way feedback-loop between healthcare staff and management
➢ Establish cooperative relations with relevant media representatives
➢ Engage with healthcare support staff / respond to their concerns
➢ Pro-actively address loud and prominent voices

WP2. Media and social media content analysis of the H1N1 pandemic

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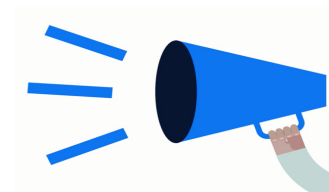
Celine Klemm[a], Enny Das[b], Tilo Hartmann[a]

[a] Department of Communication Science, VU University, Amsterdam, The Netherlands

[b] Department of Communication and Information Science, Radboud University, Nijmegen, The Netherland
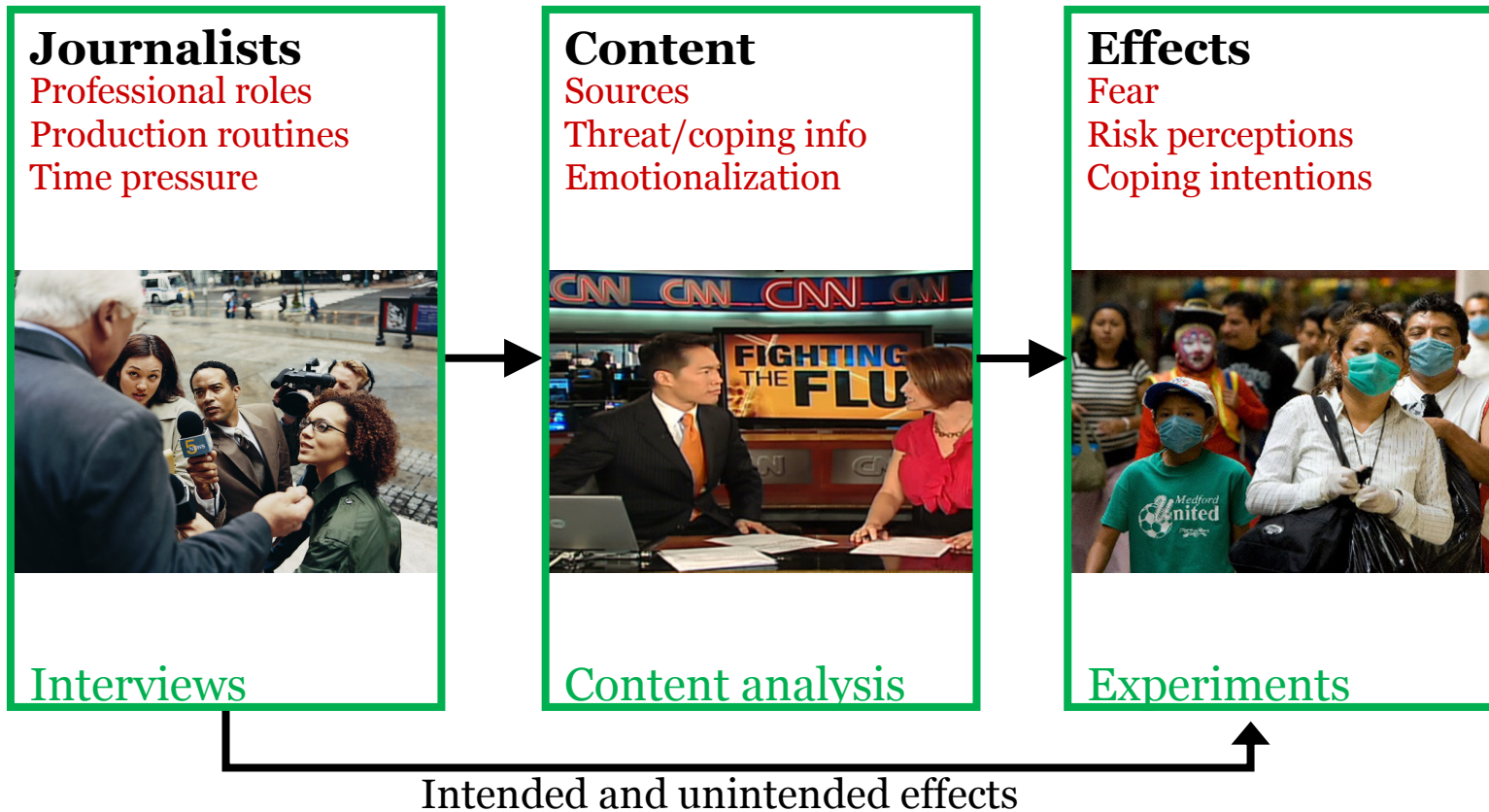
Findings: News content

- **No clear evidence that media as a whole intentionally dramatize epidemics**

- **Emphasis risk over prevention**

- **Dramatization seems mostly driven by the pure amount of coverage**

Findings: Journalists' Roles

Klemm, C., Das, E., & Hartmann, T. (in preparation). Self-perceptions of journalists in times of an epidemic: How journalistic consider their role and practices and use of emotionality in reporting.

Mobilizing health prevention

"You need to give people right information that they can take precautions, they know if they need to take a vaccine or anything. You have a big role there. [...] So it's maybe compared to many of our stories , it's more of a news story where really what we tell affects people's actions." (medical reporter)

Informing the public

"New information, all the information you can gather in let's say, eight hours, twelve hours, what it usually takes in one day. [...] That is what counts." (editor)

Contextual analysis

"it's not always enough just to give the facts
because people also need explanation and analysis
'what should I think about that?'" (science reporter)

Emotion management

"It's a national task of the authorities to
calm the big audience. But in a way, we are in
the same boat, I think (laughing)" (general reporter)

Findings: News effects

Klemm, C., Hartmann, T., & Das, E. (in preparation). Reactant to emotionalized reporting? An experimental examination of the impact of emotionalized reporting about an epidemic on people's risk perception and reactance.
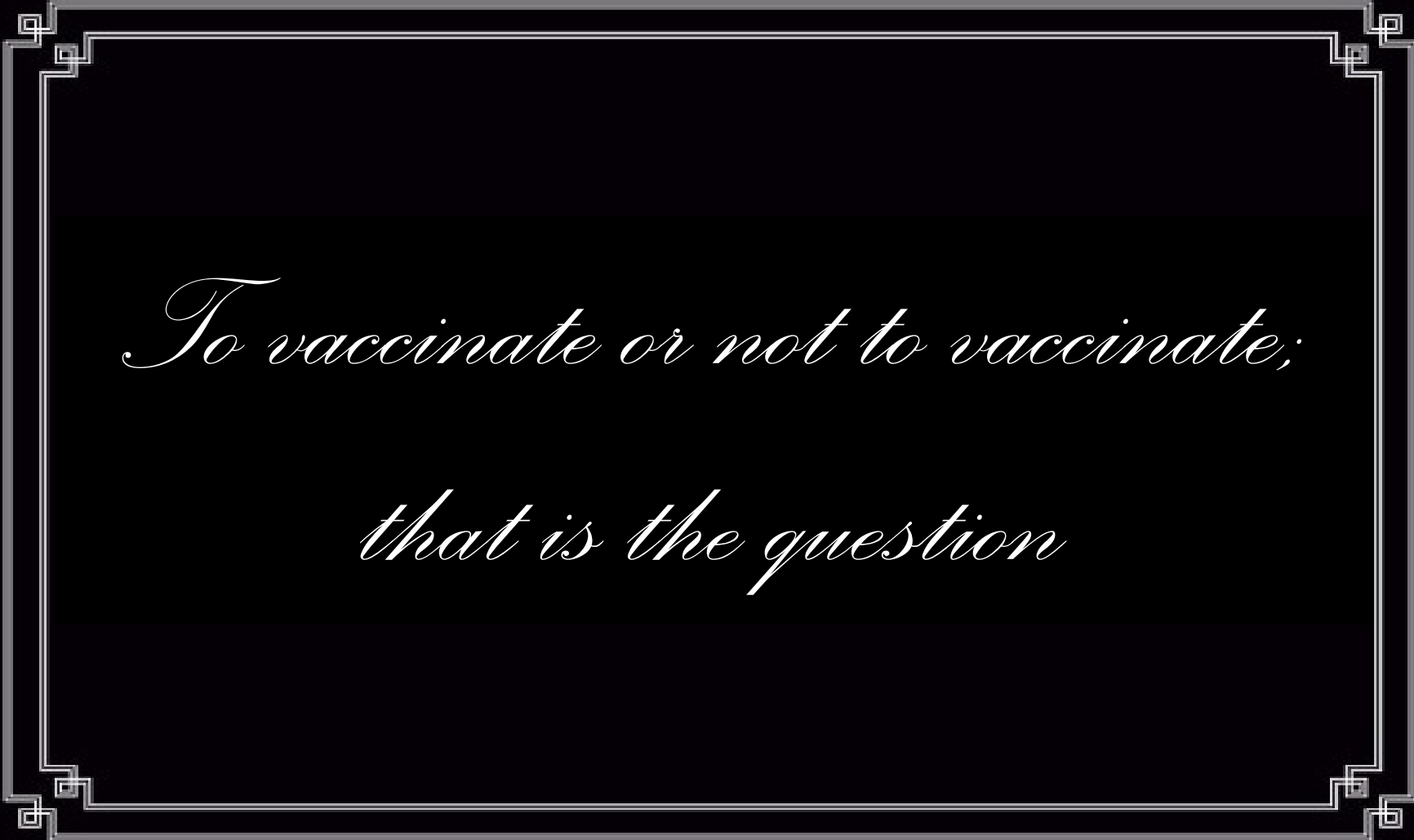
- **Emotionalizing reporting may increase risk perception, and fear**

- **But emotionalizing coverage (or coverage of pandemic per se) may also trigger reactance = perception of "dramatization", which diminishes this effect**
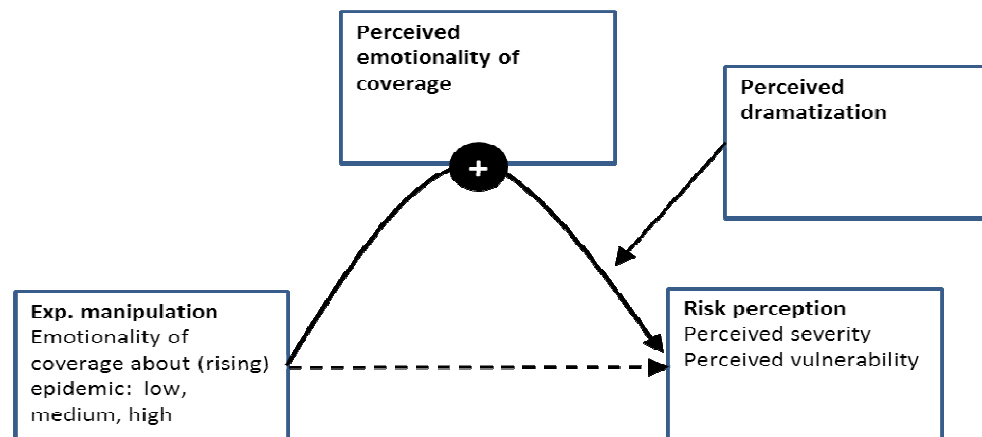
Implications

- Use the media spotlight to establish channels independent of the mainstream media to reach audiences when attention has moved on

- Maintain good contacts with specialist reporters, who are better equipped for reporting and have leverage within news organisations, but also build trusting relations to general reporters before crises times

- Sensationalism or dramatization necessary/unnecessary concern!? It increases risk perceptions to an extent but audiences' may also 'correct' for it if too dramatic

To vaccinate or not to vaccinate;

that is the question

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WP4: Vaccination knowledge, attitudes, risk perception & vaccination non-response

Hélène Voeten[1]

Marloes Bults[1]

Jan Hendrik Richardus[1,2]

[1.] Municipal Public Health Service Rotterdam-Rijnmond, the Netherlands

[2.] Erasmus MC, University Medical Center Rotterdam, the Netherlands

Aims

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1. To systematically review studies into risk perception and vaccination acceptance among the general population during the H1N1 pandemic
2. To review studies on vaccination acceptance of H1N1 and seasonal flu, and reasons for (non) compliance, among health care workers
3. To identify knowledge, attitudes, risk perception, information needs, and reasons for (non) compliance for seasonal/pandemic influenza in 4 European countries
4. To develop and evaluate a protocol for outbreak managers to identify the urgency and level of risk communication (⟹ tool demonstration)

Methods I

- Systematic review risk perception studies H1N1 general population

- Compilation of 8 reviews on health care workers vaccination for seasonal/ pandemic flu, covering 118 different studies

Findings I

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Review risk perception General population, H1N1:

- Perceived vulnerability increased over time, whereas perceived severity, anxiety, self-efficacy, and vaccination intention decreased
- Improved hygienic practice and social distancing were practiced mostly
- High vaccination willingness, low actual rates

    => Bults et al. Disaster Med Public Health Preparedness. 2015 Apr;9(2):207-19

Review Health care workers: determinants vaccination non-compliance:

- not feeling at risk (healthy, professional exposure, not a high risk group)
- low perceived severity; concerns safety/side effects; doubts efficacy
- inconvenient vaccination delivery / not getting around to it
- being a nurse, female, young, lower salary, single, healthy

Methods II

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- Internet survey among representative internet panels in UK, Sweden, Poland, Spain (500 respondents per country)

- Mild vs. medium vs. severe
  pandemic influenza scenario:
  - illness: 1% - 10% - 30%
  - deaths per 10 million inhabitants:
    40 - 1.000 - 25.000

- => ESCAIDE oral presentation Thursday at 17.15,
     Parellel session 14: Vaccine Preventable Diseases II

Findings II

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General population UK, Sweden, Spain, Poland; 3 pandemic flu scenarios
- Good hygiene and social distancing are considered more effective than vaccination => lower intention for vaccination than hygiene/distancing
- 59% willing to be vaccinated in worst pandemic scenario
  (UK highest 71%, Spain 64%, Poland 58%, Sweden lowest 43%)
- Sweden: lowest risk perception, perceived efficacy of preventive measures, and intention to perform these measures
- Mild vs. intermediate vs. severe pandemic scenario: hardly any influence on risk perception and intention
- Confidence in government actions during flu pandemic:
  No/little confidence: Sweden 21%, UK 28%, Spain 36%, Poland 42%

Main reasons declining flu vaccination

Implications

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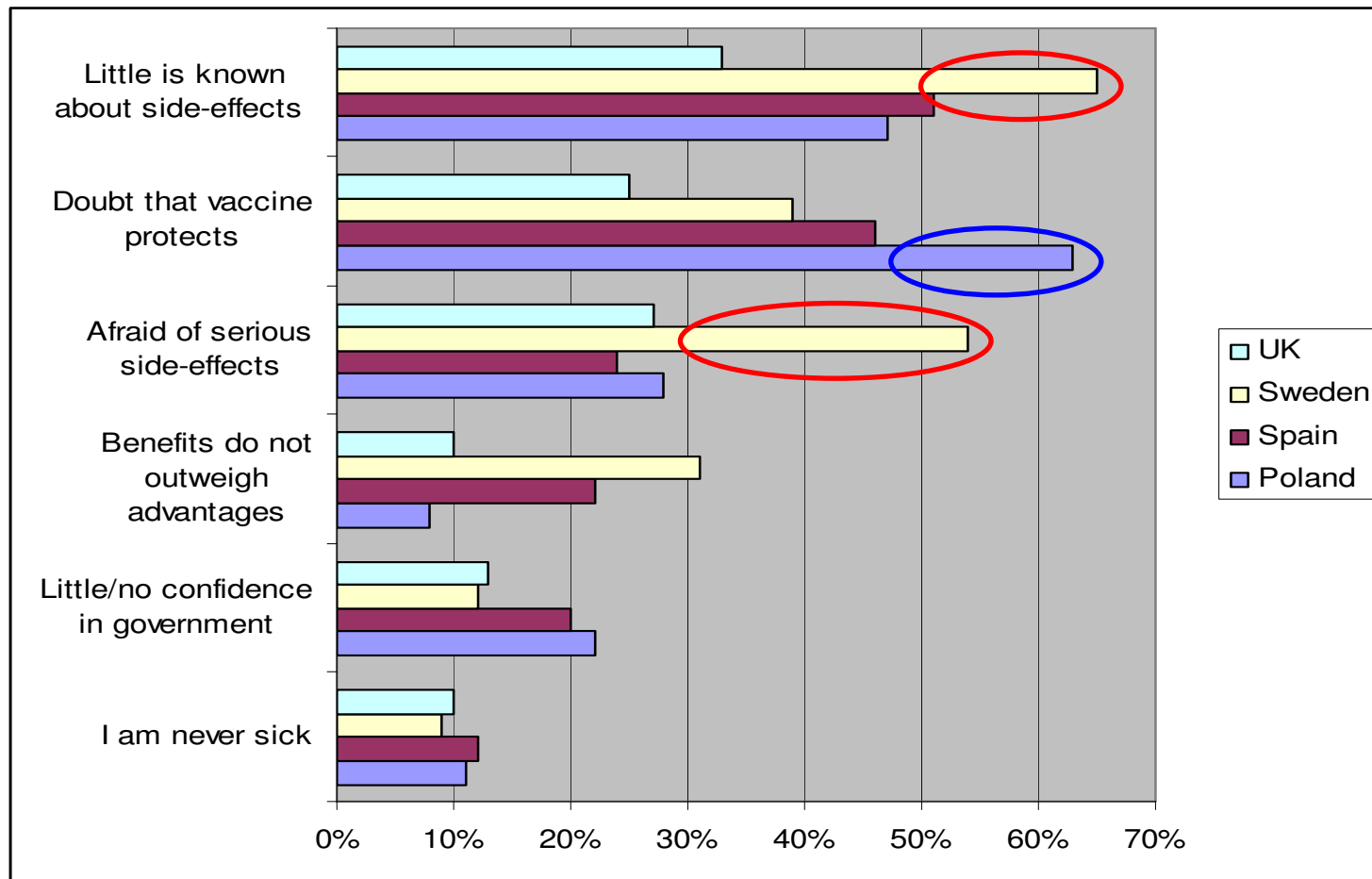
- Monitor public perceptions and misconceptions continuously

- Educate health care workers on their role in influenza transmission and prevention

- Combine it with strategies like improved access to vaccination, the use of incentives/disincentives, use of role-models

- Educate the public that influenza vaccination by is far more effective than good hygiene / social distancing

- Countries differ much in risk perception, so tailor risk communication to the specific circumstances/experience of each country

WP5. Acceptance of Vaccinations in Pandemic Outbreaks across Europe: a Discrete Choice Experiment

- **Esther W. de Bekker-Grob, PhD[1]**

- **Ida J. Korfage, PhD[1]**

- **Domino Determann, MD, PhD-candidate[1,2]**

1. **Department of Public Health**
   Erasmus MC, University Medical Center Rotterdam, the Netherlands

2. **Department of Quality of Care and Health Economics**
   National Institute for Public Health and the Environment, the Netherlands

Aims
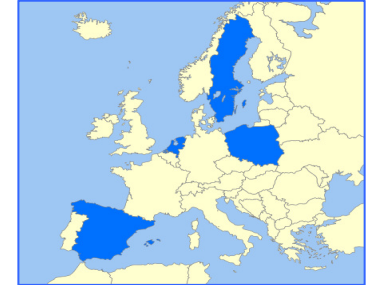
- To obtain insights in the **attributes that influence pandemic vaccination preferences** of the general population of four different European countries;

- To assess which trade-offs are made between these attributes by means of a **discrete choice experiment;**

- To investigate whether **trade-offs differ** within and between the populations of different countries;

- To **calculate the expected uptake** of several vaccination programmes for several pandemic scenarios; and

- To **develop tools:** 1) How to design your own discrete choice experiment on pandemic vaccinations, and 2) Calculator to estimate vaccination uptake.

Findings I: focus group study

- **Both disease characteristics and vaccination programme characteristics influence willingness to get vaccinated in case of a new pandemic;**

- **Except for those who belong to a risk group, the level of susceptibility was low;**

- **Previous vaccination experiences play a key role in willingness to get vaccinated in case of a new pandemic;**

- **The general public does not think it is possible that a vaccine against a new pandemic can ever be totally safe.**

Findings II: discrete choice experiment

- Severe pandemic: vaccine effectiveness key characteristic in all countries;

- Respondents were more sensitive to advice against compared to advice in favour of vaccination;

- The advice of physicians strongly affects vaccine preferences in Sweden, in contrast to Poland and Spain, where the advice of (international) health authorities was more important;

- Seriousness of a pandemic influences vaccination uptake dramatically;

- Irrespective of pandemic scenario or vaccination programme characteristics, expected vaccine uptake was lowest in Swedish sample.

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Disease Characteristics

Number of people getting sick (out of 1000 people)

50   200   `59`

Percentage of people getting severe symptoms

5%   75%   `35` %

Results

the Netherlands	Poland
65%	77%
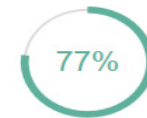
Spain	Sweden
76%	44%
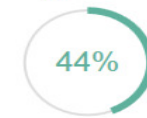
Vaccine Characteristics

Effectiveness of vaccination

30%   50%   70%   90%   `80` %

Out-of-pocket costs of vaccination (in euros)

0 €   50 €   100 €   `50` €

Safety

	Unknown, but expected to be safe	Unknown, no experience with similar vaccines yet
Safety of vaccination	◉	○

Advice regarding vaccination (choose one option out of the following)

	recommend	discourage
Family & Friends	☐	☐
Your Doctor	☑	☐
Government & National Institute for Public Health	☐	
International organizations	☐	

Media coverage about vaccination (choose one option out of the following)

	positive	negative
Traditional media	☑	☐
Social Media	☐	☐

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Susceptibility to the disease	50 out of 1 000 people will get sick
Severity of the disease	25% of all sick people will get severe symptoms

Pandemic scenario

You can choose the following 3 options, what do you choose?

	No vaccination	Vaccination A	Vaccination B
Effectiveness of vaccine	n.a.	30%	70%
Safety of the vaccine	No side effects	Unknown, but expected to be safe	Unknown, no experience yet
Advice about the vaccine	n.a.	Recommended by your doctor	Recommended by family and friends
Media coverage about the vaccine	n.a.	Radio, newspapers and television positive	Blogs, Twitter and social network sites positive
Out-of-pocket costs	0 euro	50 euros	100 euros

Alternatives

Attribute levels

Attributes

What do you choose for yourself? (please tick one box only)

	☐	☐	☐

Implications

- **Our findings may facilitate responses to future influenza pandemics with different levels of seriousness;**

- **The availability of an effective pandemic vaccine is of paramount importance to reach certain coverage levels;**

- **Responsible authorities should align with other important stakeholders in the country and communicate in a coordinated manner.**

The rose in the vineyard

WP6. Undervaccinated Groups

Nelly Fournet, EPIET trainee and **Liesbeth Mollema**, EPI/RIVM, the Netherlands

Collaborators who contributed to the report (alphabetical order):

Franklin Apfel, World Health Communication Associates, United Kingdom
Gratiana Chicin, National Institute for Public Health, **Romania**
Jean-Yves Durand, Instituto de Ciências Sociais - Universidade do Minho, CRIA, **Portugal**
Jeff French, Strategic Social Marketing, United Kingdom
Irene Harmsen, Epidemiology and Surveillance Unit, RIVM, the Netherlands
Manuela Ivone Cunha, Instituto de Ciências Sociais - Universidade do Minho, CRIA, Portugal
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Edith Smith, Persuasive communication Department - University of Amsterdam
Jim van Steenbergen, Preparedness and Response Unit, RIVM, the Netherlands
Paula Valente, Direcção-Geral da Saúde, Portugal
Marius Wamsiedel, Romani CRISS, Romania
Piotr Wysocki, European Centre for Disease Prevention and Control (ECDC) Sweden

Aims

- **Aim 1**
  Identify and describe Under Vaccinated Groups in Europe

- **Aim 2**
  Develop evidence-based Communication and Behaviour Influence Tactics for UVGs
  …that can be used effectively by health professionals and agencies throughout Europe, in the framework of countries own NIP, and in case of major epidemic outbreaks of VPDs.

Methods

- **Method 1. Literature search** for
  - outbreak reports among UVG
  - vaccination uptake, participation, and serprevalence studies among UVG
  - perception and belief studies among UVG

- **Method 2.** After selecting three EUcountries (Romania, Portugal, Netherlands)
  - identification of **existing research groups** studying UVGs
  - bringing them together to **collect and combine** findings
  - **analyse and report** on findings for groups and determinants

- **Method 3.**
  - Selection of **determinants** for (non)vaccination
  - Defining **Performance objectives**
  - Drafting **Potential Communication and Behavioural Influence Tactics**

Findings I

- In three countries we identified 6 groups:
  1. Anthroposophists, 2. Orthodox Protestant Denominations,
  3. Anti-Vaccination Societies, 4. Roma community,
  5. The 'Macrobiotics' and 6. The 'Critical citizens'

- **UVG's**
  - **share determinants** for (non)vaccination and
  - have group specific determinants

- UVG's share determinants for (non)vaccination with the **general public**

Findings II
Determinants and Performance Objectives Matrix

Table 2. Determinants and performance objectives matrix

Performance objectives UVGs:	Determinants				
	Perceived severity of the disease and its possible complications	Vaccine safety	Vaccine Effectiveness	Attitude of HCWs	Trust government and Health authorities
Have all the information they need	- Provide complete data on the severity of the disease, its transmission, its symptoms... and possible complications (with examples) - Make sure it is understandable for all (literacy, language)	- Provide complete data on how the vaccine was made, list of components, clinical-trials and all tests that were done, side effects - Make sure UVGs understand risk and benefits	- Provide complete data on all studies that were done on vaccinated vs. non vaccinated - Make sure UVGs understand the effectiveness of both preventive action and treatments	- Make sure UVGs feel confident to have discussion with HCWs - Ensure HCWs have the tools they need (ECDC toolkit) and know how to communicate with different groups	- Demonstrate transparency in various steps of the vaccine: introduction into schedule, procurement etc. (Pharmaceutical contracts, components of the vaccine...)
Making a well-considered/informed decision (vaccination or not)	- Interpret, compare and verify whether the UVGs have all info they need to make the decision re severity. - Make sure UVGs have enough information - Make sure UVGs know the advantages > disadvantages of the disease	- Interpret, compare and verify whether they have all info they need to make the decision re safety. - Ensure UVGs are confident and have enough information - Ensure UVGs are aware of advantages > disadvantages	- Interpret, compare and verify whether they have all info they need to make the decision re effectiveness. - Are confident having enough information - Aware of advantages > disadvantages	- HCWs are aware of UVGs and their beliefs - HCWs know how to identify UVGs and their beliefs - HCWs have access to communication tools	- Demonstrate that there is government integrity in communication related to severity, safety and effectiveness of vaccines
Get the vaccination	- Make sure UVG's have enough information on severity of the disease - Provide information on where to get the vaccine, what the costs are, how many shots are needed ...	- Ensure UVGs are confident having enough information on vaccine safety	- Ensure UVGs are confident having enough information on VE	- Having a positive attitude toward vaccination and be able to communicate about vaccination with confidence	- Taking the vaccine is the best thing to do, no other conflicts of interest

Findings II "SMART"
Determinants and Performance Objectives Matrix

Table 3. The determinants and performance objectives matrix (SMART matrix)

Performance objectives UVGs:	Determinants				
	Perceived severity of the disease and its possible complications	Vaccine safety	Vaccine Effectiveness	Attitude of HCWs	Trust in government and Health authorities
Have all the information they need	IPH provides existing data (by literature review, experts, outbreak data) on: - severity of the disease - symptoms - possible complications - differentiated disease and complication risk by age and high risk groups 90% of individuals of the UVGs have access to the information As soon as possible and at least weekly update during the outbreak Cell 1	IPH provides existing data (literature review, reports on all studies that were done) on: - vaccine production - list of vaccine components - clinical-trials and clinical tests - possible side effects - risk analysis for protection and side effects 90% of individuals of the UVGs have access to the information As soon as possible, but at least at start of vaccination, at least monthly update during the outbreak. Cell 2	IPH provides existing data (literature review, reports on all studies that were done on VE (VE in % for various age groups) 90% of individuals of the UVGs have access to the information As soon as possible before vaccination, at least monthly update during the outbreak. Cell 3	HCW (involved in vaccination) know the beliefs of the different UVGs (IPH should provide data on beliefs and how to communicate with these groups -> this report) HCWs use each individual healthcare consultation as an opportunity to discuss vaccination concerns with people from UVGs who do not vaccinate. Before and during the outbreak. Cell 4	IPH starts and maintains a relationship with (leader) members from UVGs Government and health authorities show transparency in all steps of the vaccine development & procurement: - pharmaceutical contracts - Components of the vaccine - give all available information of the epidemiology of the disease (number of cases, mortality rates). Before and at least weekly update during the outbreak and also after the outbreak. Cell 5

ECOM   **Findings III** Example tactics Cell 1

Performance objective: Ensure parents have all the information they need
Perceived severity of the disease and its possible complications

Communication tactics:
- Use traditional mass media to explain to the public: Symptoms Severity,
  Transmission
- Have senior scientists ready to answer questions and provide guidance.
- Use digital media to both provide official information and to act as a method of
  tracking online concerns and issues that may need a response.
- Set up press and web-based communication channels.
- Develop and promote, using all forms of media, a national Q&A service for people
  with concerns about severity and risks.

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Implications
"be happy with the rose provided"

- UVG's can act as **sentinel** for early warning of **circulation of VPD**

- UVG's can act as **sentinel** for early warning of **determinants for non-vaccination**

- THUS ..... **in interpandemic periods**....
  - **get in contact with your under vaccinated groups**
  - **liaise with key persons from these groups**
  - **set up communication channels**

Influencing behaviour

is not for dummies

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WP(3) Social Marketing analysis of vaccination behaviour, audience segmentation, and service delivery

Team:

Preffessor Jeff French
Anne Willis BA
Dr peter Duncan
Adam Crosier Msc BSC
Dominick McVey. Msc BA
Dr Thomas French
**Andrew Willis BA, MA**
Dr Alison Thorpe

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Aims

1. Guidance on using behavioural influencing approaches including incentives and disincentives

2. Analyse current vaccination promotion service delivery in different European countries from a customer perspective.

3. Prototype audience segmentation model.

4. Assess and develop behavioural goals that can act provide impact metrics for different phases of a pandemic influence programmes.

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Output:

**6 Reports
and
23 tools
and
checklists**

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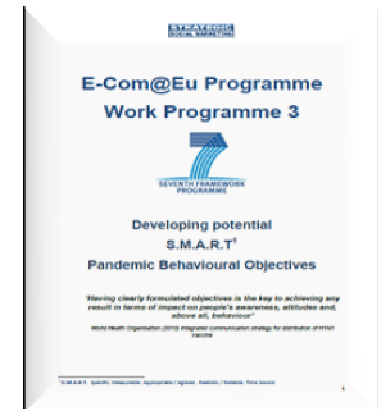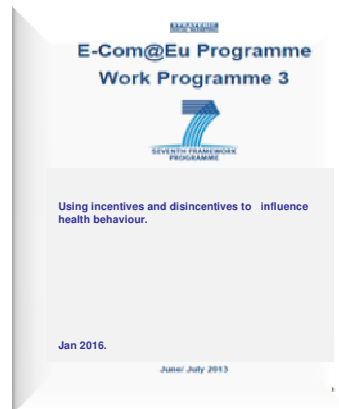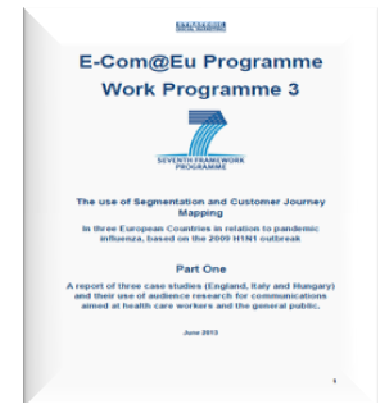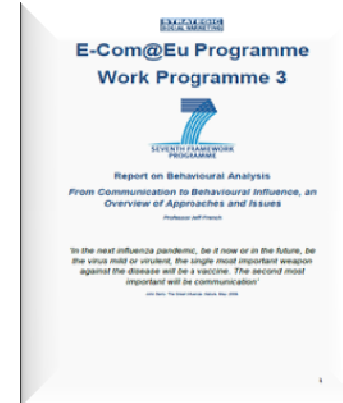
Findings I

1. **The behaviour challenges associated with pandemic events highlight the** limits of conventional communication approaches

2. Multiple systemic **interventions are more successful at influencing behaviour**

3. Humans are not entirely rationa**l when making health choices and this understanding needs to be reflected in pandemic programmes**

4. Behavioural models & theory together with planning models **strengthen pandemic communication and behavioural programmes**

5. It is not sufficient to consider an individual's voluntary behaviour **change in isolation from social and environmental factors.**

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Findings II

1. **Poor and confused objective setting**

2. **Lack of audience research** to inform communications strategies.

3. **Limited understanding & use of segmentation** . No use and little understanding of customer journey mapping.

4. **Limited use of behaviour theory** and health promotion planning models.

5. **Internet-based communication perceived to be problematic and under-developed, but** Oppositional/anti-vaccine groups much more effective in using social media/blogosphere.

6. **Limited evaluation of communication interventions and preplanning.**

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The ECOM Work Programme 3

Toolbox Compendium

Checklists, Reminders and Guides for planning and evaluating a more effective and efficient pandemic behavioural and communication programme

ECOM
Effective Communication in Outbreak Management for Europe

Professor Jeff French

CEO Strategic Social Marketing Ltd

Part of the ECOM Consortium

http://strategic-social-marketing.vpweb.co.uk/default.html

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List of tools in the compendium:

1. 30 Point Summary of Principles that Influence Behaviour
2. Behavioural Economics Principles Assessment Questions Checklist
3. Key Influencing Factors Check List
4. Guide to adopting a Goals and SMART objectives
5. Checklist of Potential ways to measure behaviour and behaviour change
6. Generic Programme Planning and Weaknesses Check List
7. Checklist for Assessing the Strength of Planning for a Behavioural Intervention
8. Senior Responsible Officer Review Checklist
9. Ensuring Effective Engagement in Pandemic Communication and Behaviour Influencing Programmes Checklist
10. When to use mass and digital media checklist
11. Checklist for Designing Information Programmes
12. The Cost-Value Matrix Tool
13. The deCIDES Framework
14. The Intervention Matrix Tool
15. Open Analysis guide to Selecting Models and Theories of Behaviour Change
16. Principles for Designing Interventions informed by Theory and Models of Behaviour Change
17. A Guide to Segmentation
18. Guide to constructing a customer journey map
19. Guide to Social Marketing Planning
20. Social marketing plan template

OK, LETS G

Erasmus MC

Methods

1. Systematic literature reviews

2. Interviews with key practicioner, policy and political informants

3. Policy reviews

4. Case study vusists ad meetings in three European contries, Italy, Hungary and the UK.

Implications

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1. Existing programmes focus on rational decision making and the transmission of scientific advice.

Implication: Develop interventions that also focus on non-rational decision making and behavioural influence factors.

2. There is poor programme planning , objective setting and evaluation

Implication:
Develop pandemic preparation planning guidance and tools that promote 'Comprehensive' strategic planning driven by SMART behavioural objectives.

3. Health communication & marketing is seen as a second order activity delivered by staff without sufficient authority to influence the total response effort.

Implication
Strengthen the resource base and organisational positioning of health communication and marketing staff.

WP 8: Testing effective behavioural intervention and communication strategies

Angie Fagerlin, University of Michigan and VA Ann Arbor

Aaron Scherer, University of Michigan

Enny Das, Radboud University Nijmegen

Megan Knaus, University of Michigan

Brian Zikmund-Fisher, University of Michigan

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Aims

- **Aim 1: To determine effective communication strategies across European countries.**

- **Aim 2: To determine whether effective communication strategies differs across participant characteristics across European countries.**

- **Countries surveyed**
  - Netherlands
  - Germany
  - UK
- **Countries to be surveyed**
  - Poland, Hungary or Czech Republic
  - Spain, Italy
  - Sweden, Denmark

ECOM Methods: 5 Internet Based Studies

- Study 1: What factors of a pandemic most influence participants' knowledge, risk perceptions, and behavioral intentions? (Conducted in Netherlands)

- Study 2: What is the best way to graphically communicate numerical information? (Conducted in UK)

- Study 3: Can including stories about affected patients influence participants' knowledge, risk perceptions, and behavioral intentions? (Conducted in Germany)

- Study 4: How does the language used to describe influenza and vaccines influence participants' knowledge, risk perceptions, and behavioral intentions? (Conducted in UK)
  - Flu label (H11N3 influenza vs. Horse flu vs. Yarraman flu)
  - Vaccine: Technological vs. Natural, vs. None
  - Vaccine mechanism: Nasal spray vs Shot

- Study 5: Can the use of metaphors influence participants' knowledge, risk perceptions, and behavioral intentions? (Conducted in UK)
  - Weed vs. Army vs. No metaphor
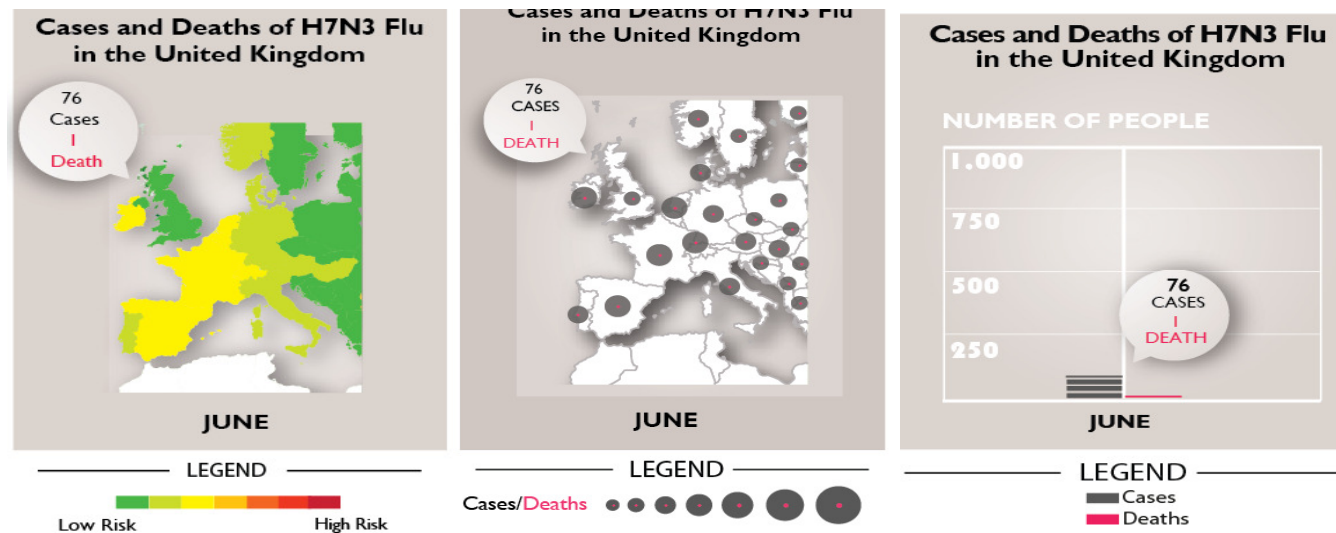
ECOM   Findings: Studies 1-2

Study 1 (Factors of virus):

- To encourage vaccinations, the most important piece of information to emphasize (of those we tested) is the severity of the average case of influenza.

- Neither quickness of spread nor severity of the most severe case influenced vaccinations. Similar findings for other health behavior intentions.

- Risk perceptions were most influenced by spread of disease, followed by severity of the average case of influenza.

Study 2 (Graphical communication of risk):

- The best graphical representation of risk is heat map, worst graphic is dot map.

Best and Worst Graphical Representation of Risk

ECOM   # Findings Studies 3

Study 3 (Use of stories):

•People were less worried about getting sick if told other people were vaccinated.

   •Belief in herd immunity to protect them

ECOM Findings Studies 4-5

Study 4 (Language)
• Flu label:
  - People in the horse flu condition perceived the flu as less of a threat, less likely to spread, and less severe than participants in the H11N3 and/or Yarraman flu conditions.
  - H11N3 had least impact on people's likelihood to read about the pandemic, think about or talk to others about the pandemic in order to protect one self.
  - No effect on preference for vaccination use.

• No effects of natural vs. technological language or vaccine mechanism

Study 5 (Metaphors)
• No main effect of metaphor use or type

• The weed metaphor works best for people high in naturalist orientation

• Army metaphor works best for people high in aversion to war and for people high in naturalist orientation

Individual Characteristics

Measures typically included in all studies
- Literacy
- Trust
- Minimizer/maximizer
- Be-the-one

Results
- No consistent finding across every study.
- Study 1 (severity of cases): Higher literacy individuals were more influenced by the average case information.
- Study 4 (language study):
  - Those higher in literacy were more likely to get vaccinated when called H11N3 influenza and when natural language is used.

- Study 5 (metaphor study):
  - Those higher in literacy were more likely to get vaccinated when received weed metaphor.

Implications

- **Information to focus on in communicating to the public:**

    - **Severity of AVERAGE case (not most severe case)**

    - **Need to better communicate about herd immunity**

- **Even though dot maps look cool, they are the least trusted and least effective methods to communicate risk information. Heat maps were more effective.**

- **More technical language (e.g., H1N1) may not be the most effective method of communicating about a infectious disease to the public.**

- **The risk message we tested seem to work equally well (or equally poorly) across audiences (but many more analyses need to be done before can say with certainty)**

It takes two

to tango

The current reality

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Public health institutes and officials:

➢ bombard health care workers with an overload of information

➢ ignore feedback from local health care staff

➢ provide inconsistent messages in the media

➢ use the media insufficiently

➢ maintain a non-transparent decision process for control measures

Consequence:

Decreased population acceptance of proposed measures

ECOM   It takes two to tango

Public health authorities have a tendency to rely on one-way communication.

Our advice:

1. Local and national public health authorities should prepare for meaningful communication with front line health care staff and the media, and adjust the communication messages, strategies and policies accordingly.

2. Invest in new and effective communication systems and technologies, which help minimising information overload and burden on the limited time in crisis situations.
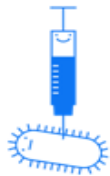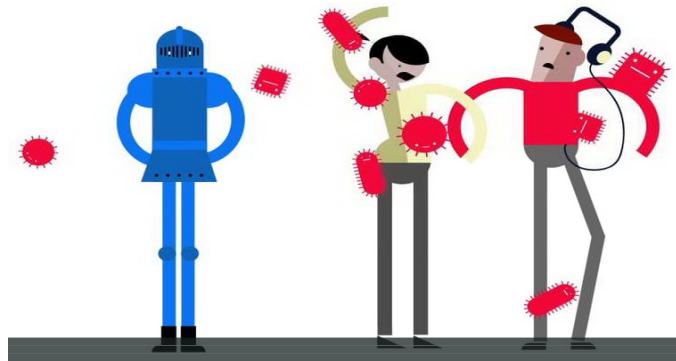
A new reality

➢ Action is taken **ahead of time** through the development and maintenance of productive communication channels and partnerships. Thus optimal use is made of the spotlight moment when media attention for threatening outbreaks is at its height.

➢ There will be ongoing and evolving knowledge on sentiments regarding vaccination in the population and divergent opinions would not be seen as threats but as **opportunities** for timely strengthening of public health responses during pandemics.

➢ Communication of interventions requiring behavioural changes are handled at the **highest** policy level with sufficient means to convey coordinated, trustworthy and consistent messages and plans of action.

➢ Full use is made of a **modern** system of online and interactive communication channels to support professionals at all levels to do their job effectively and help them through the forest of information overload.

Tool box demonstration

1. Tools to assess disease characteristics and risk perception of the public (checklists, standard questionnaire)   Hélène

2. Tools to estimate vaccination uptake and quantifying vaccination preferences (online calculator, guideline how to perform a DCE)   Domino

3. Tools to review your preparedness: Identify your options, Set up your plan, Specify objectives (Cost-Value Matrix, STELa tool, Behavioural Goals)   Jeff

4. Journey through a flu pandemic (infographic poster)   Amena

5. Personal Information & Life Assistant (prototype smartphone-App)   Andreas

ECOM Symposium

Stockholm, 10 November 2015