Name: Tiago Correia

Adult Immunization Board

Country: Portugal

Affiliation: NOVA Institute of Hygiene and Tropical Medicine

Function: Professor/Principal Investigator

Main expertise: coordination of EU-level projects in vaccine hesitancy (Horizon Europe, EU4Health, ECDC)

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Portugal's relationship to vaccinations and factors associated with vaccine hesitancy

Tiago Correia, PhD. Hab

NOVA Institute of Hygiene and Tropical Medicine

tiago.correia@ihmt.unl.pt

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Key Evidence-Informing Projects

VAX-TRUST
ADDRESSING VACCINE HESITANCY IN EUROPE

This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 965280.

- Understand vaccine hesitancy in Europe
- 7 countries (PT, IT, EN, FI, BE, PO, CZ)

Tampere University · Universidade Nova de Lisboa · Uniwersytet Jagielloński w Krakowie · Universiteit Gent · Univerzita Karlova · Finnish institute for health and welfare · University of Nottingham UK | CHINA | MALAYSIA · Università degli Studi di Torino · Instituto de Ciências Sociais · Universitas Studiorum Casinas

VAX-ACTION
CO-FUNDED BY THE EUROPEAN UNION

- Understand the effectiveness of interventions on vaccine hesitancy in Europe
- 5 countries (PT, IT, FR, RO, CZ)

Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa · ASPHER The Association of Schools of Public Health in the European Region · Institutul National de Management al Serviciilor de Sănătate INMSS · Institut Pasteur · ISPUP Instituto de Saúde Pública da Universidade do Porto · Università di Pavia · UniSR Università Vita-Salute San Raffaele · Università Cattolica del Sacro Cuore

Background – Vaccination in Portugal

Strategy

National Vaccination Programme

Comprehensive life-long approach to vaccination schemes initiated in 1965

Annual-based campaigns

Target-groups (flu, covid, etc)

Principles

- Accessible to everyone living in the country
- Free of charge (non-eligible groups may acquire through OOP)
- Non-mandatory (exception of tetanus and diphtheria, and indirectly during the COVID-19 pandemic)
- Regular updates based on impact monitoring, epidemiology of diseases, evidence updates, and cost-effectiveness analysis
- Administered in primary healthcare units complemented by community pharmacies, by qualified professionals (nurses, pharmacists)

Background – Vaccination in Portugal

A case of success

Portugal's public has above-average confidence in vaccines
- Higher than EU average on importance of vaccines (+0.18)
- Only 3.5% of Portuguese think vaccines are 'probably not effective'

Childhood vaccination coverage has been consistently high (≥95%) over the years

With challenges

Full adherence to the National Vaccination Programme decreases with age among children and adolescents

Local pockets of lower coverage:
- Second (last) dose of measles, mumps, and rubella for children born in 2011 (6 years old in 2017): Lisbon North: 85.5% | Cascais: 86.7% | Amadora: 88%
- COVID-19 hesitancy levels (Dec 2020): 33% hesitant (vs EU average 31%)
- Measles outbreaks (2017–2018)

Portugal

Literature review: **Vaccine hesitancy does not yet threaten overall coverage** (Miranda, 2018)

Parents' willingness to vaccinate:
- 9.8% had delayed a vaccine
- 5.4% had refused a vaccine
- Among vaccines in the National Vaccination Programme:
  - 47.8% worried about adverse reactions
  - 31.5% doubted efficacy
  - 26.1% doubted safety

(Roldão, 2017)

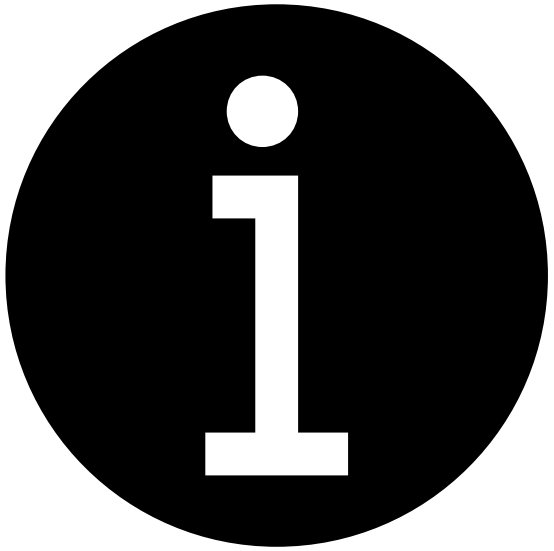
Parental beliefs and attitudes:
- 5.4% had delayed vaccination at least once for reasons other than illness/allergy
- 3.1% said they would not vaccinate a future child.
- Refusal:
  - fear of adverse effects
  - unsafety of vaccines
  - vaccines not being a priority
  - by parents with an academic degree

Fonseca et al. (2018)

- Vaccine safety was the most cited factor in hesitancy
- Parental risk perception of adverse reactions can reduce compliance

Fernandes (2018)

HCPs may be hesitant:
- Hepatitis b (De Almeida and Gomes, 2009) and Flu (Carvalheiro, 2016), acceptance higher among physicians compared to nurses or assistants
- doubts regarding vaccine's effectiveness, fears of side effects, failures in production (Ribeiro, 2010)



- **What is vaccine hesitancy?**
- **What drives vaccine hesitancy – globally and in Portugal?**
- **How to better cope with vaccine hesitancy?**

What is vaccine hesitancy?

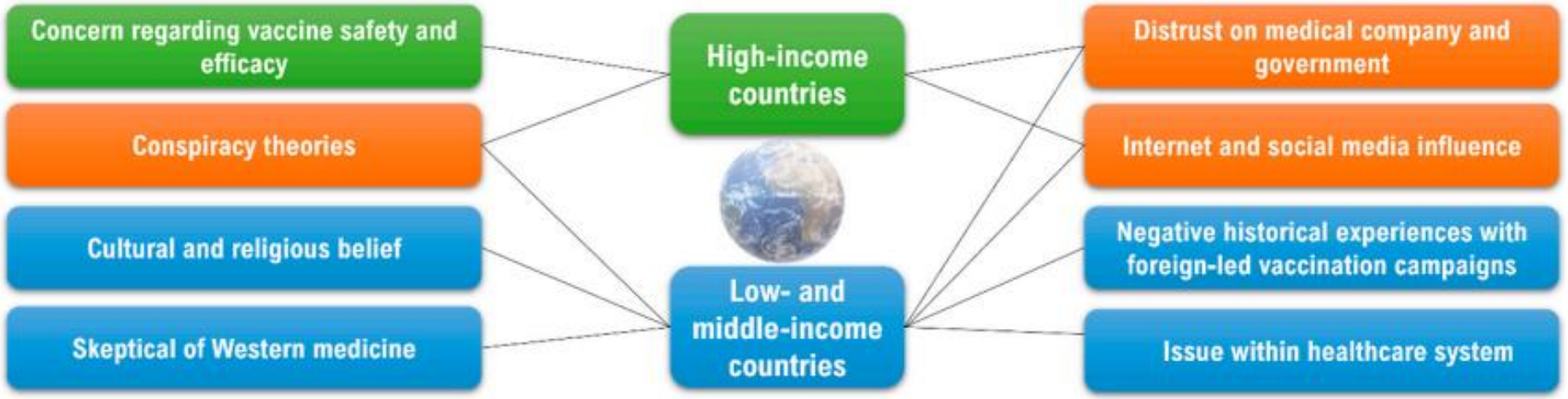
- **It refers to doubts and indecision about vaccines and people getting vaccinated despite vaccine availability**

- **It is a psychological state characterized by:**
  - **Questioning the necessity, benefits, safety, and efficacy of vaccines**
  - **It is influenced by individual, social, and information-related factors**
  - **Potentially resulting in acceptance, delay, or refusal of vaccination**

1. Evidence gaps

1. Causal relationships between **hesitancy** (psychological state) and **vaccine refusal** (decision)
2. When hesitancy follows more a **stable personal trait** or when it relates to **context-dependent events**
3. How in different persons **individual concerns, broader social, cultural, and institutional factors** combine to shape hesitancy
4. Whether hesitancy should be seen as a **problem to fix** or as intrinsic to contemporary societies (something to manage)
5. How to differentiate between **legitimate questions/doubts** and **ideological/populist opposition**?

2. Complex combinations of hesitancy drivers | zooming in…



2. Complex combinations of hesitancy drivers | zooming in…

Individual-level determinants

Risk perception of diseases

Knowledge and trust about vaccines

Past experiences with vaccination services

Political ideologies

Lifestyles

Vaccine specificities

Target groups (children, elderly)

Recently or long-approved vaccines

Clinical characteristics of pathogens (pathogenicity, transmissibility, susceptible population)

Documented side-effects (post-license monitoring)

Healthcare system factors

Actors involved in vaccination

Coercive means of vaccination

Socio-demographic factors

Values, religious beliefs and ethnical convictions

Gender

Having children (age and number)

Age

Educational level

2. Complex combinations of hesitancy drivers | zooming in…

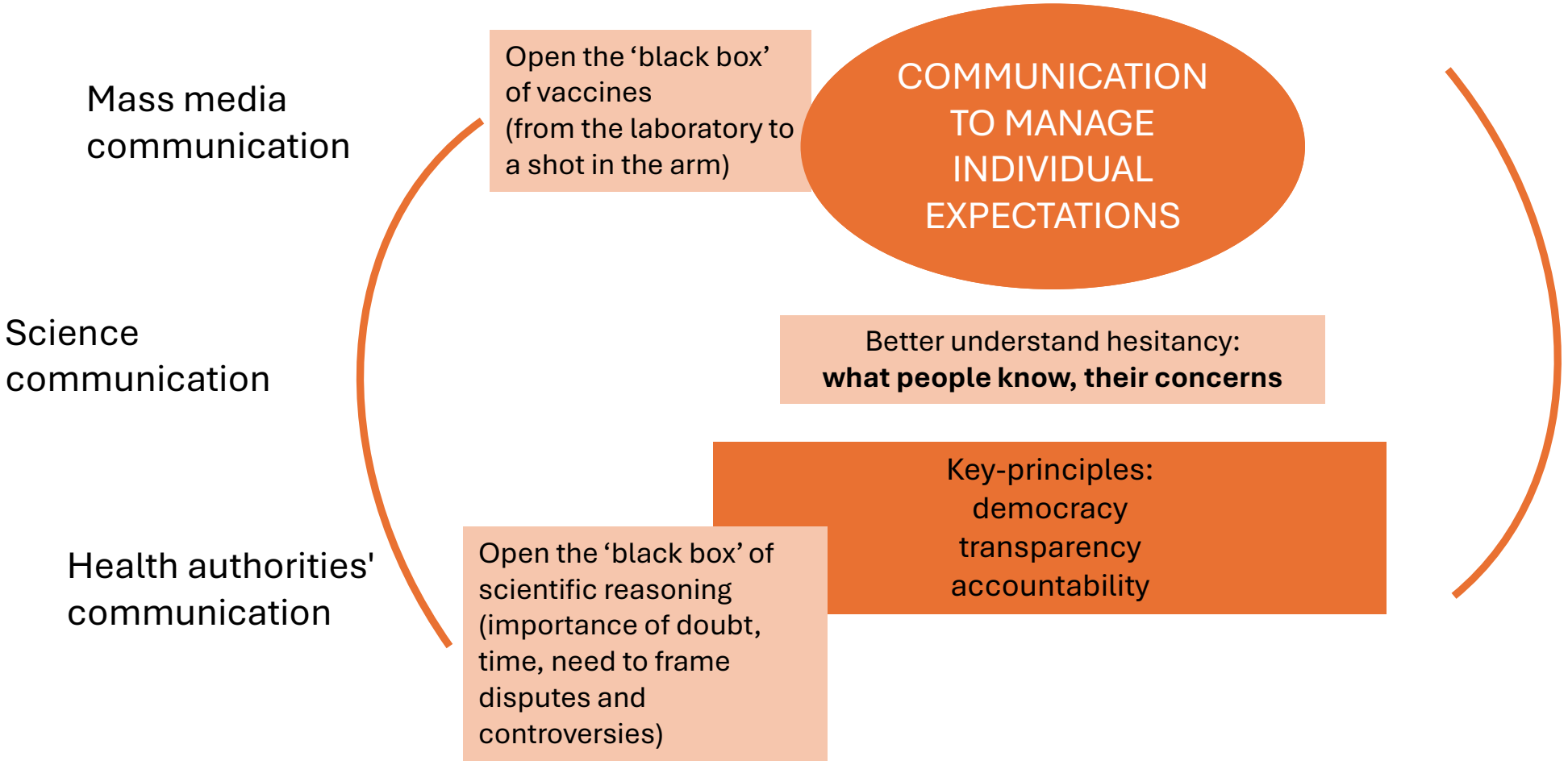
- **Safety concerns (dominant)**
- **Efficacy doubts**
- **Education effects**
- **Nationality effects**
- **Trust in HCW as key factor**

How to better cope with vaccine hesitancy?

How to better cope with vaccine hesitancy?

Pitfalls in communication: Healthcare workers' training needs	Omissions in presenting vaccines to users
	Disregard concerns about vaccines side effects
	Inability to manage users' emotions related to vaccines (fear, anxiety)
	Negative reactions to lifestyles, lay conceptions of vaccines and diseases
	Little use of pain management strategies (children and disabled people)
Pitfalls in policy and management: Lack of institutional support	Organizational constraints: lack of time, resources, professionals
	Lack of investment in health professionals' training
	Lack of planning and technologies to overcome cultural and linguistic hurdles
Pitfalls in available scientific knowledge: loose parts	Lack of knowledge on how to turn evidence into practice
	Limited scope of interventions (e.g., short length, limited number of participants, lack of evaluation (processes and outcomes), lack dissemination)

How to better cope with vaccine hesitancy?



Take home messages: what to address to improve communication and training

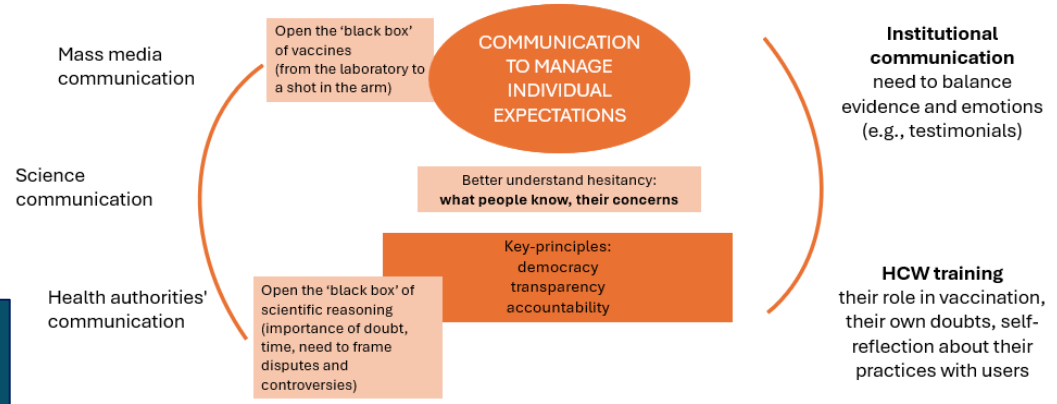
Trust building
- In institutions, authorities, and pharma companies
- Importance of trusted interpersonal relationships (GPs, nurses)
- Trust is multi-layered: institutional, interpersonal

Information overload
- Difficulty navigating contradictory information
- Fatigue with rapidly changing recommendations
- Perception of “lack of transparency” or “overconfidence” from authorities

Role of emotions, fear, and embodied experiences
- Emotional reactions (fear of side effects, fear of disease)
- Personal or family experiences with health systems or adverse events
- Social belonging (identity, group norms)

HCW hesitation and communication discomfort
- Feel pressured by institutional expectations
- Support in data/evidence interpretation
- Training to deal with hesitant people

Importance of contextual sensitivity in interventions
- No “one-size-fits-all” solutions
- Interventions must be culturally appropriate and context-specific
- Citizens reject communication perceived as moralising or overly authoritative



Thank you!

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