ISSN 1831-9424

Behavioural Insights for public health in the EU

A case study in four Member States on embedding behavioural insights into public health policy-making

De Vries, D.H., Stok, M., Nohlen, H., De Bruin, M.,
Kinsman, J., Sivelä, J., Baggio, M.

2024

Joint Research Centre

EUR 31964

This document is a publication by the Joint Research Centre (JRC), the European Commission's science and knowledge service. It aims to provide evidence-based scientific support to the European policymaking process. The contents of this publication do not necessarily reflect the position or opinion of the European Commission. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use that might be made of this publication. For information on the methodology and quality underlying the data used in this publication for which the source is neither Eurostat nor other Commission services, users should contact the referenced source. The designations employed and the presentation of material on the maps do not imply the expression of any opinion whatsoever on the part of the European Union concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Contact information
Name: Hannah U. Nohlen
Email: Hannah.nohlen@ec.europa.eu

EU Science Hub
https://joint-research-centre.ec.europa.eu

JRC137884

EUR 31964

PDF ISBN 978-92-68-17693-1 ISSN 1831-9424 doi:10.2760/4538 KJ-NA-31-964-EN-N

Luxembourg: Publications Office of the European Union, 2024

© European Union, 2024

The reuse policy of the European Commission documents is implemented by the Commission Decision 2011/833/EU of 12 December 2011 on the reuse of Commission documents (OJ L 330, 14.12.2011, p. 39). Unless otherwise noted, the reuse of this document is authorised under the Creative Commons Attribution 4.0 International (CC BY 4.0) licence (https://creativecommons.org/licenses/by/4.0/). This means that reuse is allowed provided appropriate credit is given and any changes are indicated.

For any use or reproduction of photos or other material that is not owned by the European Union permission must be sought directly from the copyright holders.
- cover page illustration, © rob z / stock.adobe.com

How to cite this report: European Commission, Joint Research Centre, De Vries, D.H., Stok, M., Nohlen, H., De Bruin, M., Kinsman, J., Sivelä, J. and Baggio, M., *Behavioural Insights for public health in the EU*, Publications Office of the European Union, Luxembourg, 2024, https://data.europa.eu/doi/10.2760/4538, JRC137884.

Contents

Abstract ... 2
Acknowledgements ... 3
Executive summary ... 4
1. Introduction: the BI4EU project ... 7
2. Methodology ... 9
3. Findings ... 11
3.1. How behavioural insights can help address public health challenges ... 11
3.2. Existing behavioural insights functions at institutions and stage of development ... 11
3.3. Challenges of and barriers to institutionalisation ... 12
3.3.1. Organisational challenges ... 13
3.3.2. Lack of capacity and resources ... 13
3.4. Factors contributing to institutionalisation ... 15
3.5. The role of the EU in institutionalising behavioural insights ... 16
3.6. Visions for the future ... 17
4. Discussion, recommendations and conclusions ... 19
4.1. Discussion ... 19
4.2. Recommendations ... 19
4.3. Conclusions ... 20
References ... 22
Abbreviations ... 24
List of boxes ... 25
List of tables ... 26
Annexes ... 28
Annex 1. Informed consent form (EN) ... 28
Annex 2. Interview guidelines ... 28
Annex 3. Stages of development of behavioural insights units ... 31
Annex 4. Recommendations derived from findings, with added impact and feasibility estimates ... 33

Abstract

In response to the COVID-19 pandemic, many countries in the EU / European Economic Area have established applied behavioural and social science, or 'Behavioural Insights' (BI), units or networks to make recommendations to decision-makers on actionable policy and communications. On the basis of key-informant interviews in four EU Member States with different administrative systems – Spain, Italy, Portugal and Slovenia – this report (1) explores good practices in establishing and maintaining effective national BI units/networks and activities; (2) identifies barriers to and facilitators of the implementation of BI research findings; and (3) explores how to support efforts to retain and institutionalise BI expertise developed in the wake of the COVID-19 pandemic. The qualitative assessment concludes that BI units in the public health area are still in the early stages of development in the countries participating in this study. Key informants in our case study feel that decision-makers' support still depends on individual people and BI is not yet fully embedded in the decision process. Efforts by BI units and larger organisations may be needed to facilitate an increased speed at which the institutionalisation of BI can be achieved. Based on the interview findings, the authors make some recommendations to support this process.

Acknowledgements

The authors acknowledge the contributions of all key informants.

Authors

Danny H. de Vries, Marijn Stok, Hannah Nohlen, Marijn de Bruin, John Kinsman, Jonas Sivelä and Marianna Baggio.

Executive summary

The BI4EU project aimed to identify and explore good practices in establishing and maintaining effective national behavioural insights (BI) units or networks and activities in the EU / European Economic Area (EEA). The research included key-informant interviews in four EU Member States with different administrative systems (Spain, Italy, Portugal and Slovenia) and entailed a qualitative assessment of the barriers to and facilitators of effective implementation of the findings from social and behavioural research conducted primarily, but not exclusively, over the course of the COVID-19 pandemic.

Policy context

The COVID-19 pandemic made it clear that public health efforts are more likely to succeed if they actively consider social, cultural and behavioural contexts. Many countries in the EU/EEA have therefore established BI units or networks ('infrastructures') that apply behavioural and social science methods to make recommendations to decision-makers on actionable policy and the planning of actions, policies and communications.

However, many BI infrastructures have faced challenges across the EU/EEA. Different countries have prioritised working with BI to different extents, and capacity is not evenly distributed across countries. Even in countries in which working with BI is prioritised more, BI infrastructures have faced difficulties in effectively disseminating their insights to the appropriate people. Furthermore, there is evidence that some of the BI infrastructures that were established during the pandemic are currently being removed or downgraded. Thus, there is a risk of losing the expertise and organisational capacity that have been gained and would be valuable in the event of any future infectious disease outbreaks'. In addition, Member States risk losing the ability to extend this expertise to other public health priority areas, such as cancer prevention and the digital healthcare transformation.

By synthesising findings from key informants working in the area of BI for public health in four Member States, the BI4EU project explores challenges and opportunities in the development and maintenance of BI infrastructures at the national level. The project complements a post-COVID after-action review conducted in four Member States with well-established BI structures (Finland, Ireland, the Netherlands and the United Kingdom) (De Vries et al., 2023). This study provides an additional assessment of a selection of Member States that had not yet been included in similar studies, and where efforts were made to include behavioural science support during the COVID-19 emergency (Spain, Italy, Portugal and Slovenia).

Key conclusions

BI teams that the 11 key informants were aware of in their respective countries were perceived to be in the early stages of development, in either the 'initiation' or the 'early adoption' phase.

Good practices in establishing and maintaining BI units included consistent collaboration between external academic institutions and public health institutes to solve long-term capacity issues at public health institutes. Other good practices included sustained advocacy by BI champions to motivate political support for the behavioural science approach during meetings, a broadening of the scope of BI units beyond public health, and the support of international institutions through international meetings and recognition.

A lack of available in-service training opportunities and well-trained BI experts was noted as a challenge. Behavioural scientists do not have easy access to the public health field, given recruitment and hiring practices aimed at hiring predominantly professionals in epidemiology. The limited budget that is generally allocated to public health hinders further integration of new perspectives in the public health system. There is a need for better integration and recognition of applied health psychology (or equivalent behavioural science) in university curricula to train new generations of behavioural scientists. Although once they have been introduced to behavioural sciences many decision-makers seem to support its use in this field, initiatives are often dependent on the commitment and effectiveness of individual people rather than BI expertise being systematically embedded in decision-making processes.

Participants identified an important role for EU organisations in furthering the development of BI units. EU organisations can connect experts and stakeholders for the exchange of knowledge and experience, develop

EU-wide knowledge platforms or communities of practice, and advocate and support the development of global resolutions on behavioural change expertise.

The overall recommendation emerging from the findings in these four countries is the urgent need to ensure that behavioural expertise (including its social science elements) becomes an integral discipline in public health institutes and policymaking.

Based on the findings, a list of recommendations was compiled by the authors of this report.

Three recommendations have a high estimated impact and high feasibility:

- explore alternative, more dispersed organisational methods of incorporating BI expertise in contexts where separate BI units are not feasible or desired, for example a group of BI experts that collaborates in a network across regions or departments;
- support the development and implementation of basic BI in-service training on knowledge and methods as a core competence for public health professionals, including advocacy and communication skills, and evidence-based policymaking;
- strengthen cooperation between public health institutes and designated external academic centres with BI expertise, for example by supporting internships, graduate work and grants for short-term engagements with behavioural science experts.

Six recommendations that have a medium estimated impact but high feasibility include:

- identify BI champions and support their outreach and advocacy efforts;
- explore the feasibility, institutional place and implications of a BI unit that is integrated across different sectors;
- in countries with a decentralised governance structure, explore a collaborative model where different regional BI units collaborate on different projects;
- organise regular meetings for knowledge exchange and networking, including smaller satellite meetings with country experts;
- further strengthen international initiatives to foster exchange on BI for public health;
- advocate, support and implement global resolutions on behavioural change expertise.

Finally, five recommendations have a high estimated impact and medium feasibility:

- prearrange rapid scalability of BI units in the cold phase, for example by assessing bureaucratic burdens and developing pre-agreed protocols.
- promote (pre-service) behavioural science curricula across learning institutions.
- advocate new professional standards for public health that include behavioural expertise.
- raise awareness of the cost savings connected to prevention research and increase advocacy for public health.
- facilitate policies that enhance flexible recruitment profiles, which are needed to better include behavioural science in this field.

Methodology

Key informants were identified by the research team. These informants were either experts working in or affiliated to regional or national public health institutes, or academic professionals working to support public health institutes through their own external behavioural science teams or units.

After the JRC identified and provided contact details for key informants and set up meetings with them, the responsibility for conducting the interviews and managing any resulting information fell to the contractors.

In total 11 key informants participated in this study. The interviews were conducted in English by video conferencing and lasted between 60 and 90 minutes. Interviews were conducted in a semi-structured way, allowing the interviewer to follow up on topics that emerged during the interview. The interviews included open-ended questions, probes and prompts to encourage the key informant to provide detailed and insightful responses.

Main findings

BI has not yet reached a level of steady, sustainable existence (i.e. stage 5 in Annex 3) in the studied countries, and BI units are not yet fully institutionalised. Institutionalisation of BI units refers to the process of allocating (sustained) funding, formally including BI expertise in an organisational structure and assembling a team of staff members engaged specifically in BI activities, all within the framework of an official mandate. As a result of few in-house behavioural science capacity in public health institutions, much of the work is carried out externally through project work by BI units located within academic institutions, also referred to as a 'hub and spoke model' (COSSI CDC Working Group, 2023). Advocacy for BI is done by both the outside academic partners and BI champions within public health institutes. The small number of experts within public health institutes slows down the required dialogue with the collaborative partners.

A lack of available in-service training opportunities for people working in BI was identified, and, across all four participating countries, a relatively low number of well-trained BI experts in the public health field was noted as a challenge. Behavioural scientists are not common in the field of public health, which has traditionally been an area of expertise for people coming from disciplines such as medicine, nursing, epidemiology, virology, pharmacy and veterinary sciences. Behavioural scientists do not have easy access to the public health field, given recruitment and hiring practices that cater predominantly for professionals in epidemiology. The limited budget that is generally allocated to public health hinders further integration of new perspectives in the public health system. There is a need for better integration and recognition of applied behavioural sciences, such as health psychology, in university curricula to train new generations of behavioural scientists.

Many decision-makers who are introduced to behavioural sciences seem to support the use of BI in the field of public health. However, key informants in our case studies feel that decision-makers' support still depends on individual people and is not yet systematically embedded. Thus, it is important for large international organisations to facilitate an increased speed at which the institutionalisation of BI can be achieved at various levels. This is particularly the case for countries with less formal institutionalisation of BI or countries with a decentralised governance system where many smaller BI units may emerge that are not well connected. Promoting training and the creation of networks of professionals for the exchange of experiences and good practices can facilitate greater implementation of behavioural sciences in the public health sector.

The contributions that EU organisations can make to further encourage a further institutionalisation of BI units and activities include connecting experts and stakeholders, developing communities of practice, advocating and supporting global resolutions, financing pilot projects and supporting translation of knowledge into different EU languages. BI units can themselves facilitate advocacy for the relevance of behavioural and social sciences. They can also serve as gatekeepers and feedback channels to academic collaborators, address the lack of training opportunities both before and in service, and help change recruitment and hiring practices from within the governance system.

1. Introduction: the BI4EU project

Behavioural sciences – including disciplines such as psychology, sociology, anthropology, communication science and behavioural economics – are increasingly being used to inform a wide range of policy areas within and outside the EU ([1]). Applied behavioural sciences, also referred to as 'applied behavioural and social sciences' or 'behavioural insights' (BI), investigate the cognitive, social and environmental drivers and barriers influencing behaviours. Applied behavioural science evidence can contribute to and complement other public health efforts through aiding the design of policies and programmes, communications, and products and services. The idea that behavioural evidence is crucial for advancing the goal of good health for all has been gaining traction in recent decades and became abundantly clear during the COVID-19 pandemic (e.g. Byrne-Davis et al., 2022; Ruggeri et al., 2023). Recognising the central importance of behavioural sciences, many countries in the EU / European Economic Area (EEA) have established BI units or have conducted BI research activities. The World Health Organization (WHO) established a permanent BI unit ([2]) and a Technical Advisory Group on Behavioural and Cultural Insights for Health ([3]) during the pandemic. Based on the experience of setting up a behavioural science unit in Romania, in 2022 WHO Europe published a number of points for consideration when setting up BI units for improved health outcomes (WHO Europe, 2022).

However, these initiatives have faced challenges (e.g. Jones et al., 2021; McDavid and Henderson, 2021; Chadborn et al., 2023). Different countries have prioritised working with BI to different extents, and capacity is therefore not evenly distributed across countries. BI units and networks, which we refer to here together as 'BI infrastructures', have also faced difficulties in effectively disseminating their insights to the appropriate people as indicated by a survey conducted by the European Centre for Disease Prevention and Control (ECDC) in 2021. Furthermore, there is anecdotal evidence that some of the BI infrastructures that were established during the pandemic are being removed or downgraded in post-COVID-19 times (De Vries et al. 2023). Several (post-)COVID-19 studies on the role of BI in providing advice regarding COVID-19 policies showed that, while scientific advice was used to inform communication and implement policy, important behavioural science insights were still not picked up sufficiently, or in good time (Boin et al., 2020; Altieri et al., 2021; Cairney, 2021; Brusselaers et al., 2022; Byrne-Davis et al., 2022; Tasker and Irvine, 2022; De Vries et al., 2023). Behavioural scientists experienced resistance to including perspectives other than the medical/epidemiological approach and were included in the pandemic response to only a limited extent, with few opportunities to engage in dialogue with policymakers or explain advice at the table where decisions were made. In addition, as a result of sharply declining funding now that the acute stage of the pandemic has passed, there is an urgent need to safeguard the knowledge and structures generated during the crisis period.

One solution that has been proposed is the funding of sustainable independent behavioural science units that can scale up quickly in times of a pandemic or crisis. But what is the best way to go about this? The BI4EU project aimed to:

- explore good practices in establishing and maintaining effective national BI units and activities;
- identify barriers to and facilitators of implementing social and behavioural research findings within the administrative system of specific countries;
- explore ways of providing support to retain and institutionalise BI expertise[4] in EU Member States that was established before or during the COVID-19 pandemic crisis.

The research entails a qualitative assessment of these aspects through key-informant interviews in four Member States with different administrative systems (Spain, Italy, Portugal and Slovenia).

([1]) See, for example, initiatives at the European Commission (https://knowledge4policy.ec.europa.eu/behavioural-insights_en), World Health Organization (WHO) (https://www.who.int/initiatives/behavioural-sciences/tag-on-behavioural-insights-and-sciences-for-health) and European Centre for Disease Prevention and Control (https://www.ecdc.europa.eu/en/publications-data/behavioural-insights-research-support-response-covid-19).

([2]) https://www.who.int/initiatives/behavioural-sciences.

([3]) https://www.who.int/europe/groups/technical-advisory-group-on-behavioural-and-cultural-insights-for-health-tag-bci.

([4]) Institutionalising refers to the process of allocating (sustained) funding, formally including BI expertise in an organisational structure and assembling a team of staff members engaged specifically in BI activities, all within the framework of an official mandate.

This project is distinct from but complementary to work by the ECDC, which in May 2024 launched a framework for the prevention of communicable diseases, with a specific focus on social and behavioural sciences. While the ECDC is establishing a networking and training activity, BI4EU provides an understanding of the factors that support the effective development and maintenance of BI units and activities at the national level. This also complements the work of the WHO Regional Office for Europe, which has published a set of points for consideration when starting up BI units and activities. By exploring practical and real-world challenges, the BI4EU project provides pointers on how EU organisations can support the establishment of BI units at the national level, supporting the implementation of public health policies and promoting collaboration between countries in the event of an emergency.

2. Methodology

This project is based on a qualitative investigation, which included a set of key-informant interviews with behavioural science experts from four Member States: Spain, Italy, Slovenia and Portugal. Key-informant interviews are a qualitative research methodology that involves obtaining insights from individuals who have specific knowledge or experience relevant to the research question or topic (Tremblay, 1957) – in this case good practices in establishing and maintaining effective national BI units and activities. The purpose of key-informant interviews is to gather in-depth information and perspectives and insights that may not be easily obtained using other research methods.

A first draft of the interview guidelines, including questions and probes, was developed by experts from the Joint Research Centre (JRC) Competence Centre on Behavioural Insights in Brussels, Dr Marianna Baggio and Dr Hannah Nohlen (project leads), together with a team of senior experts in behavioural sciences, including Professor Marijn de Bruin (Department of Behaviour and Health, National Institute for Public Health and the Environment (RIVM), Netherlands), Dr John Kinsman (Expert, Social and Behaviour Change, ECDC, Sweden) and Dr Jonas Sivelä (Cultural, Behavioural and Media Insights Centre, Finnish Institute for Health and Welfare, Finland). Two external academic experts were then contracted by the JRC to carry out the interviews for this study, analyse the results and lead the writing of the report: Dr Danny de Vries (Department of Anthropology, University of Amsterdam, Netherlands) and Dr Marijn Stok (Department of Interdisciplinary Sciences, University of Utrecht, Netherlands). The contracted experts established a system for storing and organising the collected data, including backup and confidentiality measures, and ensured that the study was carried out in an ethical manner, including obtaining informed consent from participants, protecting participant confidentiality and addressing any potential ethical concerns arising from or during the interviews. The informed consent form is presented in Annex 1.

Discussions were held with the entire team to select countries and identify key informants with knowledge and relevant experience of the topic. These individuals were either experts working at or affiliated to regional or national public health institutes, or academic professionals working to support public health institutes through their own external behavioural science teams or units. The JRC initially identified key informants for the selected Member States from networks involved in past events and collaborations. The first key informants identified then suggested colleagues or collaborators to expand the initial selection. The JRC provided the contact details for the key informants to the experts and arranged meetings with the key informants on behalf of the contractors. After the JRC identified the key informants, provided their contact details and set up meetings with them, the responsibility for conducting the interviews and managing the resulting information fell to the contractors. The specific responsibilities of the external experts in this regard are detailed in this document.

In total, 11 key informants participated in this study. The list of participants, by professional title and country, is shown in Table 1. In the decentralised countries of Spain and Italy, the participants represented regional health systems. All key-informant interviews were conducted in English by means of video conferencing using Microsoft Teams. Interviews were conducted in a semi-structured way, allowing the interviewer to follow up on topics that emerged during the interview. The interviews included open-ended questions, probes and prompts to encourage the key informant to provide detailed and insightful responses. The full interview scheme is shown in Annex 2. All interviews were recorded and lasted 60 or 90 minutes. Most interviews lasted 1 hour, with the exception of the group interview in Slovenia, which was attended by multiple people who had similar roles and shared similar responsibilities at the same institution. That interview lasted 90 minutes.

Data analysis was conducted manually. All interview recordings were transcribed. The data were then categorised based on emerging themes and predetermined, theoretically driven topics. Both experts were involved in collating the results into a master document. The results were then summarised and submitted to the research team for initial reaction and review. After this, a draft document with results was written and shared among the interview participants and then the wider research team for further comment.

Table 1. Key informants who participated in the interviews, by country and title

Country	**Professional title**
Spain	Coordinator, Behavioural science research centre
Spain	Public health researcher, Catalonia Public Health Institute
Italy	Public health researcher, Tuscany Regional Health Agency
Italy	Public health researcher, Tuscany Regional Health Agency

Portugal	Behavioural science researcher, Public health centre
Slovenia	Head of a Department, National Institute of Public Health Slovenia
Slovenia	Head of a Department, National Institute of Public Health Slovenia
Slovenia	Public health researcher, National Institute of Public Health Slovenia
Slovenia	Public health researcher, National Institute of Public Health Slovenia
Slovenia	Public health researcher, National Institute of Public Health Slovenia
Slovenia	Public health researcher, National Institute of Public Health Slovenia

3. Findings

Findings are described by first reviewing what participants noted to be the value of BI to address public health challenges and review their assessment of the level of development of BI infrastructures in their country. Then the challenges and barriers to further institutionalisation are described (organised by organisational challenges and capacity issues), followed by factors that contributed to encouraging institutionalisation. Finally, contributions that EU organisations can make to further encourage institutionalising BI infrastructures is commented upon.

Note that all these findings reflect the observations of interview participants in the selected countries alone.

3.1. How behavioural insights can help address public health challenges

Participants were asked about the impact of BI on both policy and public health interventions, what opportunities they see for BI in the area of public health, and how they think BI could contribute to addressing public health challenges.

Generally, participants defined behavioural science as a multidisciplinary field of science focusing on behavioural change or how to influence human behaviour. They typically mentioned the central roles of health psychology, communication science and behavioural economics, complemented by broader health sciences and some social sciences, such as anthropology. For participants, the pandemic was a unique opportunity to work together across disciplines. For example, in Spain, an interdisciplinary project was launched that focused on the reasons why people use face masks, and in Italy an international project investigated the barriers to and facilitators of COVID-19 vaccination uptake among health professionals. Particularly in countries with a more decentralised governance structure, such as Spain and Italy, many behavioural scientists supported regional and local authorities in developing communication material. In fact, such multidisciplinary inquiries predated COVID-19, with a long history in the field of HIV/AIDS (human immunodeficiency virus / acquired immunodeficiency syndrome) prevention in particular. Box 1 shows some examples of other projects that were identified by participants in the study. Since the COVID-19 emergency, behavioural scientists have increasingly been asked, for example by hospitals, to address specific problems, which provides opportunities to include BI in a 'bottom-up' approach and showcase its relevance more broadly.

Box 1. Examples of BI projects

Examples of BI projects identified by study participants:

- identifying reasons why people use face masks;
- investigating barriers to and facilitators of COVID-19 vaccination uptake among health professionals;
- exploring ways to reduce antibiotics prescriptions by health professionals;
- addressing the gap between available mobile health technologies and the use of these technologies;
- conducting focus groups to assess reasons for vaccine hesitation among young people and find out what kind of messages could be useful for increasing vaccination uptake;
- experimenting with online interventions to motivate people to stop smoking as an alternative to typical face-to-face efforts;
- increasing influenza vaccination uptake among health operators in nursing homes.

Impacts on policy were harder to formulate for participants. Some felt that they were still some distance away from reaching this goal. Others mentioned that, while results were often used for communication purposes, they were used less in the policy realm. One participant commented: 'For sure it was one of our frustrations, because we expected maybe more.'

3.2. Existing behavioural insights functions at institutions and stage of development

Participants were asked what kind of BI function existed at their institution ('How large is the BI team/function in your country, either specific to public health or in general?') and, using the reference model 'Stages of

development of BI units' (Fig. A1) that was sent to participants in anticipation of the interview, what stage of development they felt that their unit was at (see Annex 3 for details):

- stage 1 – initiation
- stage 2 – early adoption
- stage 3 – institutionalisation
- stage 4 – scaling and integration
- stage 5 – continuous improvement.

There was a common perception among the key informants that the BI teams or units in their country, whether within a public health institute or academic institution, are all in the early stages of development – either the initiation phase (stage 1) or the early adoption phase (stage 2). Across the different public health institutes that participants in the four countries spoke about, a formal BI 'unit' exists only in Portugal. Before the pandemic this unit existed as a 'health literacy' unit; during the pandemic its scope was extended to become a broader BI unit. What motivated this move was the observation that the temporary COVID-19 BI Task Force, which was organised through the prime minister's office during the pandemic, needed a more politically independent and sustainable organisational location, less dependent on who was in office. The temporary COVID-19 BI Task Force wrote a policy brief pitching this idea, and this led to changing the health literacy office to a BI unit, 'because I think they realised that this was much needed', as a participant put it.

At the regional public health institutes in Spain (Catalonia) and Italy (Tuscany), no formal BI units exist, and participants noted that they believed the picture is similar in other regions and at the national level. At the Slovenian national public health institute, behavioural expertise is not organised in the form of a clearly distinguishable 'unit'. Rather, working groups use BI when exploring specific topics, with informal support from the institute director. Staff join from different departments, usually from inside the institute but also sometimes from other institutions or the Ministry of Health.

This does not mean that BI is not seen as important in Spain, Italy or Slovenia. In Tuscany, for example, efforts have been made to 'put a bit of behaviour in all projects'. BI is explicitly included in the formal research plans that are presented to the regional government, and there is a specific administrative code assigned to behavioural science, so that BI projects can be identified and classified as such in financial and other administration. Much of the actual work, however, is carried out externally through **project work by BI units** located **within academic institutions**. In most cases, the reason for this is a lack of staff at the public health institute as well as the desire to be able to provide independent, evidence-based support. Even the more formal BI unit in Portugal is so small (with only three staff members) that the work largely depends on collaboration with academic institutions. This can include internships or graduate work at the regional public health institutes and short-term engagements with behavioural science experts. One important area of collaboration that was highlighted by participants is BI support in the mathematical modelling and surveillance of COVID-19.

At public health institutes, **advocating BI is done by outside academic partners and champions** – specific individuals who have picked up on the significance and relevance of behavioural sciences. In Spain, Behavioural Design Lab staff engage in a lot of advocacy at regional and national meetings to explain what BI can do. In Italy, the small team at the Tuscany Regional Health Agency' organises an annual day focused on the use of behavioural science in health in Tuscany, to make the movement grow and connect the people working in this field. One participant commented: 'Attention for this "nudge day" is growing every year.'

3.3. Challenges of and barriers to institutionalisation

Participants were asked about the challenges of and barriers to institutionalising BI expertise in providing advice related to public health in their country. Institutionalising refers to the process of allocating (sustained) funding, formally including BI expertise in an organisational structure and assembling a team of staff members engaged specifically in BI activities, all within the framework of an official mandate. This section summarises the answers provided in two main categories mentioned by participants: organisational challenges and a lack of capacity and resources.

3.3.1. Organisational challenges

When reflecting on the idea of establishing a BI unit, which not all participants viewed as self-evidently a goal, institutional histories and structures challenge decisions about what the best organisational location for a BI unit may be. In the more centralised Slovenian governance structure, BI experts are distributed across various centres working on, for example, health analysis. One participant said:

> *And it's a million-dollar question of how to organise an institute [such] as ours, because you either go with the different health topics, disease groups, behaviours, public health approaches, etc. So we could have a behavioural insight unit, but then we would also probably need to reorganise the other centre units in the institute. And we've never done that. We're sticking with what we currently have.*

This issue was also mentioned by a Spanish participant. Should there be a BI unit within each specific government department (e.g. Social Affairs, Health, Education) and, if so, how should they be coordinated? One model that was noted was the BI unit in the United Kingdom, which is housed within the Cabinet Office and works in different fields. A Spanish participant noted that this issue is even more complicated in decentralised countries such as Spain or Italy. A collaborative model where different regional BI units collaborate on different projects was suggested as a solution.

Related to this, participants emphasised the importance of BI units having the ability to set their own research agenda. In Slovenia for example, the National Institute of Public Health works with annual working plans, rather than 3- or 5-year plans. Key informants felt that, because the institute is closely linked to the policy cycle, their working plans can change more or less overnight whenever ministers change. A participant commented:

> *There are a lot of things that are happening in the government part that affect what happens within the technical parts [independent public health institutions], and we know it shouldn't be like that. But that's kind of the reality. And I think that's one of the main barriers that they [public health institutions] have, is that they have a lot of different pressures of things that they kind of need to do because someone decides there [at the ministry] that is relevant, while this may not necessarily be the case.*

At a more processual level, another organisational challenge commented upon by participants in a university setting was the **extent to which bureaucratic procedures slow down BI initiatives or demotivate the people involved**. Obviously, this is specific to each country's governance system. In the academic sector in Portugal, it was noted that even getting someone to help with small tasks, such as procuring materials, organising events or getting a space to work in turned out to be very complicated. A participant commented: 'Certain things can be authorised within the institute. Other things must go to the higher level at [the] university, so even capacity in terms of, you know, space organising things, being more dynamic, everything [i.e. capacity] is low and it's very slow.' In a situation where BI involvement is rapidly needed owing to an outbreak event or other crisis, bureaucratic procedures can reduce people's capacity to contribute to a project.

Finally, a further organisational challenge that was noted is the linguistic and conceptual difficulty of **translating and describing behaviour insights accurately**. For example, in Slovenia there is no uniform translation for 'we are working with behavioural insights'. Although people in the professional environment engage in practices related to BI, these activities are often not recognised as such. This also relates to the extent to which the label 'behavioural insights' refers to the same thing as 'behavioural sciences', or the extent to which social sciences are seen to be included (or not) under this label. Generally, participants saw BI as a more inclusive label than 'behavioural sciences' ([5]).

3.3.2. Lack of capacity and resources

Across the four countries, the lack of well-trained BI experts was noted as a challenge. The increased recognition of BI over the course of the pandemic saw BI teams and centres flooded with proposals for projects from, for example, hospitals and public administration bodies. An academic participant said: 'I am the only one in my team, [but] I have now a colleague. I have only doctoral students and a few master's degree students [to assist me].' As already noted, this is also a problem at understaffed public health institutes,

([5]) Generally, participants saw 'behavioural insights' as a label that refers to evidence-based practices that have less methodological rigour than 'behavioural science'. In addition, for both BI and behavioural science, participants tended to see psychology, communication sciences and behavioural economics as the core disciplines, with less emphasis on social sciences.

which turn to academic partners to do much of the work. Speaking about the BI unit at Portugal's public health institute, a participant noted that 'all the specific projects are in collaboration with different groups and teams because there isn't an in-house resource'. In Slovenia, this was expressed as a choice: 'It is a situation where we have to decide between having less projects that are a bit more advanced in terms of methodology or serving more topics but with more basic approaches. The latter is the one we have gone with up till now.' When working on different topics and contributing to international and national projects, dedicating enough time to BI topics is challenging.

In addition, participants identified a **lack of available in-service training opportunities** for people working in BI. An Italian participant said: 'I try to read a lot and we connect with the different experts from the universities … but if I had the time and resources, I would take an academic course on behaviour. … If we could receive extra training that would make our knowledge base more solid, that would be helpful.' It was proposed that basic BI knowledge and methods should be a core competence in training for public health professionals. Participants suggested that there are gaps in training on generative artificial intelligence, advocacy and communication skills (i.e. the ability to explain why the inclusion of BI is important) and gaps in knowledge of how best to inform policymakers'.

Moreover, with respect to pre-service training, even in the field of behavioural science itself, several academic participants argued for **better integration and recognition of applied health psychology in university curricula** to train new generations of behavioural scientists. One participant said:

> *We don't teach about that in our undergraduate courses or in even in the master's degree courses. In our university, we need to create a specific master's degree about behavioural science in this way. Apply it to solve the challenges that we face … this gap between the applied behavioural science and the theoretical behavioural science is very difficult to overcome.*

It was also argued that the problem is linked to a lack of general awareness among behavioural scientists that public health is a relevant area of work, just as clinical psychologists are employed in the field of mental health. One participant said: 'The idea of health for many behavioural scientists is probably quite limited until now.' This bias was also reflected in the presumptions of policymakers, who early on in the pandemic invited the Portuguese Psychologists Association to help with mental health. In contrast, using behavioural science to help with broader public health issues got to the political table only through advocacy by external academics unsatisfied with the biomedical approach.

Involving external academics to solve the capacity problem also brings challenges, as the small number of people in public health authorities with knowledge of or expertise in BI slows down the required dialogue with collaborative partners. In Spain, it was noted:

> *… if we are specialists in behavioural design and science, and you don't find anyone on the other side, it will be difficult to connect … . The first step is to help them to arrive to this ontology and communicational level. The communication could be impossible because they don't understand what you are talking about.*

In all countries, **behavioural scientists are not common in the field of public health**, which has traditionally been an area of expertise for people coming from disciplines such as medicine, nursing, epidemiology, virology, pharmacy and veterinary sciences. Behavioural scientists have not been given easy professional access to the field of public health. Some of the participants who noted that they served as advocates and gatekeepers to bring in outside academical expertise in BI also noted that they themselves were not trained in behavioural sciences. The general lack of knowledge about BI within the field of public health is a barrier to the effective integration of BI because traditional stereotypes about the limited application and scope of behavioural sciences continue to dominate. An example was given by one participant who mentioned that, when it comes to communication, the idea that communication equals political marketing persists:

> *Explaining to citizens that our government is wonderful and cares for people's health and whatever to some extent is just political advertisement, or propaganda. It is not well understood that helping people to have access to vaccination activities or explaining [to] people how to wear a face mask to protect them from an infectious disease is a different area.*

A key reason for these challenges is the small budget that is generally allocated to public health. In Catalonia in Spain, for example, the money devoted to public health amounts to about 2 % of the health budget and is mostly earmarked for financing vaccination programmes. If the public health sector is underfunded, it is then

difficult to integrate new professional jobs. In Slovenia, the small budget allocated by the Ministry of Health was also commented upon. Salaries are also relatively lower in the academic sector of the countries studied compared to salaries received in companies. This means that a lot of BI experts are being recruited by companies that provide better career prospects. As a Portuguese participant noted: 'So I think that that is really a huge challenge that we have, especially when we want to attract international people.' An additional challenge is that many people in the academic system are funded on temporary contracts. This means that, when the project ends and there is no additional funding, the person and their experience are lost.

3.4. Factors contributing to institutionalisation

Participants were asked about the key factors that they believe can contribute to the success of institutionalising BI expertise in public health policymaking. The answers they provided were closely related to the barriers noted in the previous section. For this reason, some issues are discussed in less detail here. The focus is on how participants framed and prioritised the contributing factors.

The most commonly noted factor was **improved collaboration**. For example, in Spain, an opportunity exists for improved collaboration between behavioural scientists and communication professionals and journalists, to show them the benefits of a behavioural science approach. Participants from Italy and Portugal expressed a need for **more formal partnerships with universities** to encourage more regular collaboration with the same people. One participant said: 'If you have groups that you work [with] regularly…, then it's easier than if you just go and hire or contact different groups all the time.' Without such formal partnerships, small BI public health teams would most likely not be able to work efficiently with academic partners. This is important, because it was noted that investing in relationships with universities means that public health institutes can utilise research and science to back up their work.

To facilitate such collaboration, it is necessary to have a **BI expert interlocutor available at the public health institute who can facilitate integration**, according to participants. As an academic partner noted:

> *For me, the dream is somebody there [at the public health institute] who understands behavioural science and comes and can help to establish a common ontology. An interlocutor. Someone with [whom] I can talk about behavioural design, behaviour in a theoretical way, not only about general questions.*

Similarly, for academic partners it would also be very beneficial to receive **feedback from the public health institute about why certain decisions were made and/or what is being prioritised internally**. For outside partners it can be difficult to understand why certain recommendations are not taken up, or why certain decisions are made. Often, such explanations are seen to have been made for political or bureaucratic reasons. COVID-19 was an important lesson, as it showed the importance of feedback from public health institutes regarding what they are working on and how external collaborators can contribute in these areas. A study participant commented:

> *And I think that's the only way we can actually, you know, inform more knowledge translation and do research that is more applied is if we have this kind of collaboration, because otherwise, you know, it is just us guessing what they need and what is needed. And sometimes it's not the reality.*

For academic partners, another beneficial factor noted was the involvement of **international networks** in establishing the political position of BI units at universities. Connecting with international groups and networks provides prestige within the academic world and also benefits exchange of knowledge and scaling-up of what is developed in different contexts. An example is WHO collaborating centres ([6]). Within this context, explicit mandates or top-down support were also mentioned as being really important for increasing the visibility and recognition of BI activities.

With respect to human resources, in academic BI units in particular, if they were less dependent on project work and thus had **more continuity of staffing** it would facilitate building the expertise and knowledge that support gradual institutionalisation. It was noted that practices for **recruiting and hiring professionals in public health** need to be addressed, with a focus on including disciplines other than biomedical sciences

([6]) WHO collaborating centres are institutions such as research institutes, parts of universities or academies that are designated by the Director-General to carry out activities in support of the organisation's programmes. Currently, there are over 800 WHO collaborating centres in over 80 UN member states working with WHO in areas such as nursing, occupational health, communicable diseases, nutrition, mental health, chronic diseases and health technologies (https://www.who.int/about/collaboration/collaborating-centres).

such as epidemiology and microbiology. While there is a lot of interest in widening recruitment to ensure a more multidisciplinary approach, this has not yet translated into expanding job profiles to include other disciplines. Removing legal barriers to recruiting non-biomedical staff and assessing opportunities for task shifting would help behavioural scientists become part of the public health field and work in any region of their country.

Finally, a possible beneficial factor that was noted was a **broadening of the scope of BI beyond public health**. Many BI activities, even those that were carried out prior to the pandemic, are in the field of public health. Wider implementation to include other fields, such as environmental hazards, would be beneficial to show the broader potential of the field of behavioural science and hence attract more sustainable financing.

Interestingly, in all countries **political support** was not mentioned as an issue of concern; rather, it was noted as a facilitating factor. Key informants noted that, after decision-makers are introduced to BI work, they often wholeheartedly support further initiatives, with a common response being 'we need to talk and to touch base, and to stay in touch'. Since the start of the COVID-19 pandemic, as already noted, BI experts have seen a large increase in demand for their expertise. One participant noted that this also includes demand from other – typically more biomedical – disciplines:

> *And I also think that from people working from other disciplines we are becoming more, more and more popular. I mean there is an interest in behavioural sciences or in their role … . That physicians and other traditional public health workers tend to consider potentially useful the collaboration of other professional profiles or other disciplines. Even though there is a risk of overestimation of our capabilities, but then the trend is probably good.*

That said, owing to the historical lack of recognition of the relevance of behavioural science in policy and practice, **integration still occurs ad hoc, depending on individual people** who champion its relevance, rather than on systems that are built to provide BI expertise on an ongoing basis. While some decision-makers say they really want to invest in integrating BI, others take the opposite position, arguing that it is not a priority. In Spain, participants said they actively reach out at meetings with different regional public health institutes and explain what behavioural science can provide for them. One participant said: 'And I try always to participate, speaking about behavioural design, behavioural science. And after these meetings, there is a connection between us. They ask me about questions, they invite me to other conference[s]. I think that is a very hard path, but we are working all together.'

3.5. The role of the EU in institutionalising behavioural insights

Participants were also asked about the role of EU organisations in supporting the institutionalisation of BI expertise in public health policymaking and what support EU organisations can provide.

Most frequently mentioned was the ability of the EU to **connect experts and stakeholders to exchange knowledge and experience**. Several participants mentioned the benefits of past meetings organised by the European Commission. The following are some examples.

- *I was in a meeting last year about vaccination in Brussels and they put together the heads of public health and behavioural designers in a shared house in Brussels. When we come back to our home country, we continue these relationships. Putting people in touch or helping them, for example.*
- *It will be really important for us to learn from experiences and knowledge from other countries. In the workshop [on] Friday [referring to a meeting with behavioural scientists from various countries on the organisation, role and impact of behavioural science during the COVID-19 pandemic], I had a lot of ideas about what we could do and small steps and changes [we could make]. These kinds of meetings are crucial. During the pandemic the WHO organised monthly meetings for countries to discuss, and for us it is very beneficial to be in such a broader group of experts sharing their experiences and knowledge.*
- *But I felt like also in bringing us together, I think that would be already a very good first step. There's so much interesting work happening in different countries, and, I mean, we get access to that because we know people and we reach out to them. But you know, the more this grows, the more there will be people that I don't know that are working on it. So it will grow beyond my contact list.*

Similarly, smaller **satellite meetings** with country experts were mentioned as beneficial for sharing best practices and disseminating findings. This also includes the benefits of knowing who is working on what and where, and being able to quickly pick up the phone to them.

Participants **emphasised the importance of large international organisations** in promoting networking events for BI experts in public health to accelerate institutionalisation of BI at various levels. This is particularly the case for countries with smaller public health budgets, less formal institutionalisation of BI or a decentralised governance system where many smaller BI units may emerge that are not well connected. These organisations could also provide small grants for networking so that potential partners not yet on the radar can also gain access to events.

At a more structural level, participants argued for the creation of an **EU-wide behavioural sciences competence centre or knowledge platform** with representation from all countries in Europe. This centre could organise and facilitate meetings for improved collaboration, facilitate and archive publications, provide access to lessons learned, organise in-service training, and advocate and lobby for recognition of the importance of behavioural science to national governments, for example through memoranda of understanding.

At a more political level, a key role of the EU that was mentioned was **advocating and supporting the development of behavioural change expertise**. An example of this is the first WHO global resolution on behavioural sciences for health, adopted at the 76th World Health Assembly on 29 May 2023 ([7]). For the southern European countries of our participants, such symbolic steps are very important for strengthening local efforts to further institutionalise BI units. A participant commented: 'We are very tiny with little voices, but if we can say that the EU is giving value to this topic, people would listen to us more purposefully and trust more what we do and give more value to our activities.' One participant suggested that this kind of symbolic capital was particularly important for smaller Member States:

> *It is a way of also helping countries within the European Union that have less national support to do this kind of things and, you know, honestly, it's us, the small countries, that benefit more from the support. I don't know how it is in other countries, but here it is a bit like if the EU says we do it in a certain way, we do it in this way. I'm exaggerating, but I think you understand.*

A participant from Spain noted: 'I think that that the EU has a potential influence on our national policies.' An example provided was the new United Nations 2.0 framework in which behavioural science was included as one subarea in the 'Quintet of Change' ([8]).

Finally, a further issue mentioned was the challenge of **translation of results and best practices across countries**. Because in many countries public health officials and policymakers often speak only the national language, sharing of training materials and best practices between countries is limited, and this was noted as a key issue that the EU could assist with.

3.6. Visions for the future

When participants were asked what visions they have for the future of BI in public health policymaking, a common response was the idea of a **collaborative network of satellite BI units at the regional level linked to a central BI unit at the federal level**. One participant from a public health institute noted that it is important to situate the BI unit within the public health administration, because people from outside the administration often have insufficient understanding of what is going on. They commented: 'Sometimes it's very difficult to listen to all the people that are outside the institution.' In complicated decentralised situations, it was noted that the way to achieve this vision could be **investing in pilot BI units** in some regions (e.g. Tuscany) and fostering close relationships with the European Commission and international networks. Key informants believe that other regions would quickly want to follow the same model, and lessons learned can then be used in these other regions to develop momentum. Similarly, successful models could also be exported internationally.

Participants also observed that **BI expertise will become crucial in assisting public health institutes and clinics to deal with the lack of clinical professionals worldwide, through task shifting**. In Catalonia, the Minister for Health decided in late 2021 to start incorporating other professionals into the

---

([7]) WHO, 'New global resolution calls for establishment of behavioural science units or teams' (https://www.who.int/europe/news/item/20-06-2023-new-global-resolution-calls-for-establishment-of-behavioural-science-units-or-teams).

([8]) UN, 'Forward-thinking culture and cutting-edge skills for better United Nations system impact' (https://www.un.org/sites/un2.un.org/files/2021/09/un_2.0_-_quintet_of_change.pdf).

primary healthcare system. This has included psychologists who do not have official accreditation to work as clinical psychologists but have specific training in health psychology – also called 'general health psychologists'. The expectation is that these professionals will be increasingly involved in community health, and particularly in the promotion of mental welfare. As a result, more and more primary healthcare centres in Catalonia will have behavioural scientists on their staff. This example shows that the effective institutionalisation of this disciplinary expertise is urgently needed, including the required legal adjustments to public health recruitment profiles.

4. Discussion, recommendations and conclusions

4.1. Discussion

The findings in this report need to be interpreted with caution. This qualitative study was based on a small sample size and cannot claim to be generalisable to other settings in the EU, or beyond the immediate context of the participants. By its very nature, the study relies on input from professionals working in academia and in national or subnational public health agencies. Many public health policies or policies with a potential impact on public health are implemented by health services, municipalities, non-governmental organisations or other sectors such as education, urban planning or transport. Some of these other stakeholders also promote actions aimed at changing health-related behaviours that may be informed by evidence provided by behavioural science and that may not have been addressed in this study.

However, the discussions with behavioural scientists and stakeholders in Spain, Italy, Portugal and Slovenia were rich, and their experience provided several key points and lessons learned that are useful for the future agenda on the institutionalisation of BI units and are in line with previous studies on the topic (ECDC, 2021; De Vries, 2023). In the study by Lecouturier et al. (2023) of 28 BI units, it was similarly found that most government BI units are partnered with academic institutions and that there is a strong need for self-promotion, with many missed opportunities. Similarly to our findings, BI unit coordinators indicated that they spend a lot of time explaining what BI is, including issues of labelling and language, and devising schemes to train and embed experts. BI units that have developed successful relationships have achieved this through word of mouth from policy partners championing their work.

Our findings also confirm some earlier critical observations that the attention given to BI units may be counterproductive in relation to the overall need to mainstream applied behavioural science into all standard processes (Byrne-Davis et al., 2022; Hallsworth, 2023). As an upsurge in the number of behavioural scientists working in the arena of public health is expected – driven by the success of the BI approach – it is not clear if ‘centres’ or ‘units’ are the best approach in the long term when mainstreaming in all areas is needed. The example of Slovenia serves to illustrate how different BI experts are recruited from various places and work together in teams on specific topics; this may serve as a more efficient model in some governance structures once behavioural scientists are truly present and integrated. As Hallsworth notes: ‘We should place greater focus on the institutional conditions and connections that support the direct and indirect ways that behavioural science can infuse organizations’ (2023, p. 312). In addition to that, the present study also pointed out that, in a decentralised governance structure, the question arises of what aggregated level a ‘central’ unit should be located at and what mandate this unit may have.

On the other hand, the fact that there is still a stark shortage of qualified behavioural scientists employed at both academic institutions and public health institutes does seem to suggest that, for now, the development of dedicated BI units may be a necessary step to facilitate further integration, where feasible. This includes ongoing and more formal collaborations with academic institutions, which are critical to supporting the surging demand for BI expertise. BI units can facilitate advocacy of the relevance of behavioural sciences, serve as gatekeepers and feedback channels to academic collaborators, address the lack of training opportunities both before and in service, and help change recruitment and hiring practices from within the governance system. Considering the increasing demand for this type of expertise post COVID-19, it looks as if there is a window of opportunity for further institutionalisation.

4.2. Recommendations

Annex 4 shows a comprehensive list of concrete suggestions for action based on the research findings, including their estimated impact and feasibility as well as possible limitations to their implementation. The list was compiled by the authors of this report. Only the recommendations with the highest estimated impact and feasibility are presented here.

Three recommendations have a high estimated impact and high feasibility:

— explore alternative, more dispersed organisational methods of incorporating BI expertise in contexts where separate BI units are not feasible or desired, for example a group of BI experts that collaborates in a network across regions or departments;

- support the development and implementation of basic BI in-service training on knowledge and methods as a core competence for public health professionals, including advocacy and communication skills, and evidence-based policymaking;
- strengthen cooperation between public health institutes and designated external academic centres with BI expertise, for example by supporting internships, graduate work and short-term engagements with behavioural science experts.

Six recommendations have a medium estimated impact but high feasibility:

- identify BI champions and support their outreach and advocacy efforts;
- explore the feasibility, institutional place and implications of a BI unit that is integrated across different sectors;
- in countries with a decentralised governance structure, explore a collaborative model where different regional BI units collaborate on different projects;
- organise regular meetings for knowledge exchange and networking, including smaller satellite meetings with country experts;
- further strengthen international initiatives to foster exchange on BI for public health;
- advocate, support and implement global resolutions on behavioural change expertise.

Finally, five recommendations have a high estimated impact and medium feasibility:

- prearrange rapid scalability of BI units in the cold phase, for example by assessing bureaucratic burdens and developing pre-agreed protocols.
- promote (pre-service) behavioural science curricula across learning institutions.
- advocate new professional standards for public health that include behavioural expertise.
- raise awareness of the cost savings connected to prevention research and increase advocacy for public health.
- facilitate policies that enhance flexible recruitment profiles, which are needed to better include behavioural science in this field.

4.3. Conclusions

In conclusion, these qualitative findings show that BI has not yet reached a level of steady, sustainable existence (i.e. stage 5 in Annex 3) in the EU countries participating in this study, and that BI units are not yet fully institutionalised. As a result of a low in-house behavioural science capacity in public health institutions, much of the work is carried out externally through project work by BI units located in academic institutions (the hub and spoke approach). An advantage is that academic institutions are seen to provide analysis independent from the policy cycle. A disadvantage of this approach is that advocacy is also largely in the hands of external partners, and initiatives and implementation become dependent on behavioural science champions within public health authorities. Additionally, projects and methodology are then also partly determined by the academic partners and their expertise in a particular topic or approach. Even among academic partners, a lack of available personnel and limited capacity means that projects with more basic approaches may be implemented at the expense of ones with more complicated methodologies.

Two challenges that were noted across countries are the lack of available in-service training opportunities and the lack of well-trained BI experts in the public health field. Behavioural scientists are not common in the field of public health, which has traditionally been an area of expertise for people coming from disciplines such as medicine, nursing, epidemiology, virology, pharmacy and veterinary sciences. Behavioural scientists have little professional access to this field as a result of rigid recruitment and hiring practices that cater mostly for biomedical specialists such as epidemiologists. The limited budget that is generally allocated to public health hinders further integration of new perspectives in the public health system. There is a need for better integration and recognition of applied behavioural sciences, such as health psychology, in university curricula to train new generations of behavioural scientists.

Although, once introduced to it, many decision-makers seem to support the application of behavioural sciences in this field, continuous support still depends on individual people. The importance of large international organisations in advocating and promoting networking, thereby accelerating the process of

institutionalisation of BI, is particularly important for countries where public health is less well financed and countries with less formal institutionalisation of BI or with a decentralised governance structure, where many smaller, isolated BI units may emerge that are not well connected.

That said, many health service providers employ health professionals such as doctors, pharmacists and nurses who are close to retirement age. The lengthy training process for professionals in these disciplines will lead to challenges in meeting the increasing demand for staff to replace them. With a reimagining of the health system (e.g. orienting it towards disease prevention) and attention turning to task shifting, this trend may facilitate access to the public health field for professionals trained in behavioural sciences in the near future, or even demand it. Many of these changes involve a fundamental reappraisal of who does what within the health system and lead to the questions 'What is the optimal skills and staff mix?' and 'Who should be doing what, in what circumstances and context?' (European Commission, 2019). Promoting training and creating networks of professionals for the exchange of experience and good practices can facilitate greater implementation of behavioural science in the public health sector.

BI has not yet reached a level of steady, sustainable existence and continuous improvement (i.e. stage 5 in Annex 3) in the studied countries and behavioural science has not yet been truly integrated in the public health system. The contributions that EU organisations can make to further encourage this process are clear: connecting experts and stakeholders, facilitating communities of practice, advocating and supporting global resolutions, financing pilot projects and supporting translation of knowledge into different EU languages.

References

Adizes, I. (1989), *Corporate Life Cycles: How and why corporations grow and die and what to do about it*, Prentice Hall, Englewood Cliffs, NJ.

Altieri, E., Grove, J., Davies, L., Bach Habersaat, K., Okeibunor, J., Samhourif, D. and Bezbaruah, S. (2021), 'Harnessing the power of behavioural science to improve health', *Bulletin of the World Health Organization,* Vol. 99, pp. 754–754A (https://doi.org/10.2471/BLT.21.287375).

Boin, A., Lodge, M. and Luesink, M. (2020), 'Learning from the COVID-19 crisis: An initial analysis of national responses', *Policy Design and Practice*, Vol. 3, No 3, pp. 189–204 (https://doi.org/10.1080/25741292.2020.1823670).

Brusselaers, N., Steadson, D., Bjorklund, K., Breland, S., Sörensen, J. S., Ewing, A., Bergmann, S., et al. (2022), 'Evaluation of science advice during the COVID-19 pandemic in Sweden', *Humanities & Social Sciences Communications*, Vol. 9, 91 (https://doi.org/10.1057/s41599-022-01097-5).

Byrne-Davis, L. M., Turner, R. R., Amatya, S., Ashton, C., Bull, E. R., Chater, A. M. and Hart J. K. (2022), 'Using behavioural science in public health settings during the COVID-19 pandemic: The experience of public health practitioners and behavioural scientists', *Acta Psychologica*, Vol. 224, 103527 (https://doi.org/10.1016/j.actpsy.2022.103527).

Cairney, P. (2021), 'The UK government's COVID-19 policy: What does "guided by the science" mean in practice?', *Frontiers in Political Science,* Vol. 3, 624068 (https://doi.org/10.3389/fpos.2021.624068).

Chadborn, T., Sallis, A. and Porter, L. (2023), 'The world's first government behavioral insights team dedicated to public health: Ten lessons learned over a decade of experience', in *Behavioral Public Policy in a Global Context: Practical lessons from outside the nudge unit*, Springer International Publishing, Cham, Switzerland, pp. 97–109.

COSSI CDC Working Group (2023), *Embedding social science into public health and disease control: Informing best practice for a future Australian Centre for Disease Control*, July 2023 update on current activities, Collaboration on Social Science and Vaccination, Sydney School of Public Health, University of Sydney, Australia.

De Vries, D. H., Stok, M., De Valk, T. and De Bruin, M. (2023), *The organisation of behavioural sciences during the COVID-19 pandemic: Lessons learned from an international comparative case study*, policy brief to the Ministry of Health, Rijksintituut voor Volksgezondheid en Milieu, Bilthoven, Netherlands (https://www.rivm.nl/en/documenten/organisation-of-behavioural-sciences-during-covid-19-pandemic-lessons-learned-from).

ECDC (2021), *Behavioural insights research to support the response to COVID-19: A survey of implementation in the EU/EEA*, 17 February, European Centre for Disease Prevention and Control, Stockholm.

European Commission (2019), *Task Shifting and Health System Design: Report of the Expert Panel on effective ways of investing in health (EXPH)* (https://health.ec.europa.eu/system/files/2019-11/023_taskshifting_en_0.pdf).

Greiner, L. E. (1972), 'Evolution and revolution as organizations grow', *Harvard Business Review*, Vol. 76, No 3, pp. 55–67.

Hallsworth, M. (2023), 'A manifesto for applying behavioural science', *Nature Human Behaviour,* Vol. 7, pp. 310–322 (https://doi.org/10.1038/s41562-023-01555-3).

Jones, S., Head, B. and Ferguson, M. (2021), 'In search of policy innovation: Behavioural insights teams in Australia and New Zealand', *Australian Journal of Public Administration*, Vol. 80, pp. 435–452 (https://doi.org/10.1111/1467-8500.12478).

Lecouturier, J., Vlaev, I., Chadwick, P., Chater, A. M., Kelly, M. P., Goffe, L., Meyer, C., Tang, M. Y., Antonopoulou, V., Graham, F., & Sniehotta, F. F. (2024). The critical factors in producing high quality and policy-relevant research: insights from international behavioural science units. *Evidence & Policy*, 20(2), 141-162. Retrieved Oct 4, 2024, from https://doi.org/10.1332/17442648Y2023D000000001

McDavid, J. and Henderson, K. (2021), 'Hard won lessons learned in the evaluation field: Implications for behavioural insights practice', *Canadian Public Administration*, Vol. 64, pp. 7–25 (https://doi.org/10.1111/capa.12401).

Ruggeri, K., Stock, F., Haslam, S. A., Capraro, V., Boggio, P., Ellemers, N., Cichocka, A., et al. (2023), 'A synthesis of evidence for policy from behavioural science during COVID-19', *Nature*, Vol. 625, pp. 134–147 (https://doi.org/10.1038/s41586-023-06840-9).

Tasker, A. and Irvine, L. C. (2022), 'Embedded social science and the British government COVID-19 response: An ethnographic study', *Anthropology in Action*, Vol. 29, No 1, pp. 60–68 (https://doi.org/10.3167/aia.2022.290107).

Tremblay, M.-A. (1957), 'The key informant technique: A non-ethnographic application', *American Anthropologist*, Vol. 59, pp. 688–701 (https://www.jstor.org/stable/666104).

WHO Europe (2022), *Behavioural Insights Units – Setting up behavioural insights units for improved health outcomes: Considerations for national health authorities*, WHO Regional Office for Europe, Copenhagen.

Abbreviations

BI	behavioural insights
COVID-19	coronavirus disease 2019
ECDC	European Centre for Disease Prevention and Control
JRC	Joint Research Centre
RIVM	National Institute for Public Health and the Environment
WHO	World Health Organization

List of boxes

Box 1. Examples of BI projects 11

List of tables

Table 1. Key informants who participated in the interviews, by country and title 9

List of figures

Figure A1. Stages of development of BI units 30

Annexes

Annex 1. Informed consent form (EN)

Title of study: BI4EU

Researchers: Marianna Baggio (Joint Research Centre) – Marijn de Bruin (Department Behaviour & Health, RIVM) – John Kinsman (ECDC) – Hannah Nohlen (Joint Research Centre) – Jonas Sivelä (Finnish Institute for Health and Welfare).

Purpose of study: The purpose of this study is to gather information about (1) good practices in establishing and maintaining effective national BI units and activities and (2) the nature and extent of support required in retaining and institutionalising BI expertise in MS that was created during COVID-19 pandemic crisis

Procedures: You will be asked to participate in a key-informant interview. The interview will last approximately between 45–60 minutes, and will be audio recorded for transcription purposes. The interview will be conducted by Dr. Danny de Vries (University of Amsterdam, NL) & Dr. Marijn Stok (University of Utrecht & RIVM, NL). The questions will be related to the topic of the study, and you will be asked to share your thoughts and experiences related to the topic.

Confidentiality: All information collected during the study will be kept confidential. Your identity will not be disclosed in any publication or presentation of the results, unless you specifically request the researchers to do so. The audio recordings will be stored securely on a password-protected device and will be deleted at the end of the study.

Voluntary participation: Your participation in this study is voluntary. You may choose not to participate, or you may withdraw from the study at any time without penalty or consequence.

Risks and benefits: There are no known risks associated with participating in this study. The benefits of participating include contributing to the understanding of how behavioural insights can be further institutionalised across organisations in the EU, for the benefit of improving public health policies and practice.

Contact information: If you have any questions about the study or your rights as a participant, please contact Marianna Baggio at marianna.baggio@ec.europa.eu. If you have any concerns about the conduct of the study, please contact jrc-reb@ec.europa.eu, the Joint Research Centre Research Ethics Board.

Consent: I have read and understand the information above. I voluntarily agree to participate in this study and provide my informed consent.

Name (printed): ___________________________

Signature: ________________________________

Date: ____________________________________

Annex 2. Interview guidelines

Introduction

Behavioural insights is a rapidly growing field that has gained increasing attention in public policy. By providing an understanding of how people perceive and behave in response to different interventions and policies, behavioural insights can be leveraged to design more effective and efficient public policy programs. Incorporating an understanding of people's perceptions regarding health allows us to tailor these interventions and policies in a way that resonates with individuals and increases their likelihood of engagement and participation. Ultimately, this can lead to more impactful and sustainable outcomes in the realm of public health.

With this as background, it is clear that there is a need to **assess the stage of development of behavioural insights units or functions in different countries and contexts**, as well as to **identify the best practices for institutionalising behavioural insights expertise across EU Member States.** This is especially the case after the boost in behavioural insights application during the COVID-19 pandemic. To this end, the following interview guidelines aim to gain insights into **(1)** good practices in establishing and

maintaining effective, national BI units and activities and **(2)** providing support in retaining and institutionalising BI expertise in MS [Member States] that was created during the COVID-19 pandemic crisis.

Participant information and consent

The interviewer should read the following statement to the interviewee(s):

'*Before we begin the interview, I would like to thank you for taking the time to speak with us today. This study is funded by the Joint Research Centre of the European Commission. The purpose of this interview is to gather your knowledge and experiences regarding three objectives:*

- *What are barriers and facilitators to the implementation of social and behavioural research findings within the administrative system in your country,*
- *What are good practices in establishing and maintaining effective national BI units and activities, and*
- *How to retain and institutionalise BI expertise in your country gained before or during the COVID-19 pandemic crisis. This may be BI expertise gained with regard to the pandemic response or unrelated BI expertise.*

The information you provide will be used to inform policy and practice related to behavioural insights. The interview is expected to last between 60 and 90 minutes, and you may ask any questions you have at any time during the interview. Please note that your name will not be mentioned in the report unless you explicitly request it. We will guarantee complete anonymity. We will record the interview to ensure accurate documentation, and the recording will be kept confidential. If at any time you feel uncomfortable or wish to withdraw from the interview, please let me know.

Again, thank you for your participation and for sharing your valuable insights with us. *I will now ask you to read and sign the informed consent form. Please take your time*.'

The interviewer should then obtain informed consent from participants (informed consent form in English attached in Annex I).

Background and expertise of interviewee(s)

(The following set of questions explore the expert's background and expertise in / related to behavioural insights for public policy / public health.)

We would like to start with your background and expertise.

1. Can you tell us about your background, job, and expertise? How would you assess your own level of expertise in behavioural insights for public policy / public health specifically?
2. What opportunities do you see for behavioural insights in the area of public health? How do you think behavioural insights could contribute to addressing public health challenges?
3. What kind of BI functions do you have at your institution? How large is the BI team/function in your country, either specific to public health or in general?

Background on the application of behavioural insights in your country, to the best of the key informants' knowledge

We will continue with some questions on how behavioural insights have been applied in your country.

4. In advance, we have sent you a reference model on 'BI Units Stages of Development'. It contains the following stages:
   - Stage 1 – Initiation
   - Stage 2 – Early Adoption
   - Stage 3 – Institutionalisation
   - Stage 4 – Scaling and Integration
   - Stage 5 – Continuous Improvement.

   At what stage of development do you think the behavioural insights activities are in [country/context](exchange with country name)?
   a. How has the unit reached its current level of development?
   b. Are there specific events, initiatives, or leadership efforts that have shaped its progress?
   c. Are there any plans or strategies in place to expand the application of behavioural insights in policymaking in [country/context] / to take the next step in the model?
5. What specific BI skills have been developed or enhanced during the COVID-19 pandemic crisis?

6. Can you describe the extent of collaboration of your BI team/function with academic institutions, authorities and international agencies implementing and advancing BI initiatives during the pandemic? Can you provide any specific examples (partnerships, collaborative projects)?
7. Can you share any examples of how behavioural insights have been applied in public health interventions, either in relation to the COVID-19 response or to another health threat, in ('this country/context' exchange with country name)? Was this application of behavioural insights instigated by your team?
8. Can you share any examples of how behavioural insights have been applied in public health policies in ('this country/context' exchange with country name)? What role did your BI team play in this process?

Establishing and maintaining effective BI Units and activities

The following set of questions explores the barriers and challenges in institutionalising BI units in your country, and the potential good practices you think need to be promoted.

9. In your opinion and experience, what are the key challenges or barriers to institutionalising behavioural insights expertise in policy making related to public health in your country? By institutionalising, we refer to the process of allocating funding, formally including BI expertise in the organisational structure and assembling a team of staff members specifically engaged in BI activities, all within the framework of an official mandate.
10. What are the key factors that you think can contribute to the success of institutionalising behavioural insights expertise in public health policy making? Can you provide any examples, if not from your own, also from other countries?
11. Are there any notable skills gaps or areas where additional training or expertise is needed to effectively institutionalise BI practices in the country?
12. How do you envisage the future of behavioural insights in public health policy making in ('this country/context' exchange with country name)?
13. How do you see the role of the European Union in supporting the institutionalisation of behavioural insights expertise in public health policy making, if any? What support can the EU provide to institutionalising behavioural insights expertise?
14. What are your recommendations for how to institutionalise behavioural insights expertise in public health policy making in ('this country/context' exchange with country name)?

Internal political support

15. What is the level of political support within your country for BI initiatives particularly in the context of the public health policies? For example, have any policy decisions or official statements been made that demonstrate support for BI and its potential in addressing crises like the pandemic? Alternatively, in some countries, support may be more behind the scenes rather than through public statements or policies. If this is the case in your context, could you also provide insights on any potential behind-the-scenes support for BI in your country?

Awareness and potential in official circles

16. How would you assess the general awareness of the importance and potential of BI among officials and decision-makers in the country?
17. Following the previous question, have any efforts been made to raise awareness or promote understanding of BI concepts and applications among officials and decision-makers?

Concluding question

Are there any other points you would like to add regarding good practices, or anything you would like to stress regarding facilitators and barriers in establishing and maintaining effective, national BI units and activities?

Thank you for your time and insights!

Annex 3. Stages of development of behavioural insights units

In this brief document, we provide a descriptive model that outlines the stages of development of behavioural insights (BI) units, comprising five steps ([9]). It is important to note that, while these steps provide a structured framework, not all units need to progress through every stage. The pace of progress can vary, and some units may find their optimal position at different points along the continuum. This model serves as a practical guide, enabling organisations to navigate their journey towards establishing and advancing their BI units, ensuring a systematic and well-informed approach. Each stage of development is briefly described, shedding light on the key characteristics, milestones and considerations.

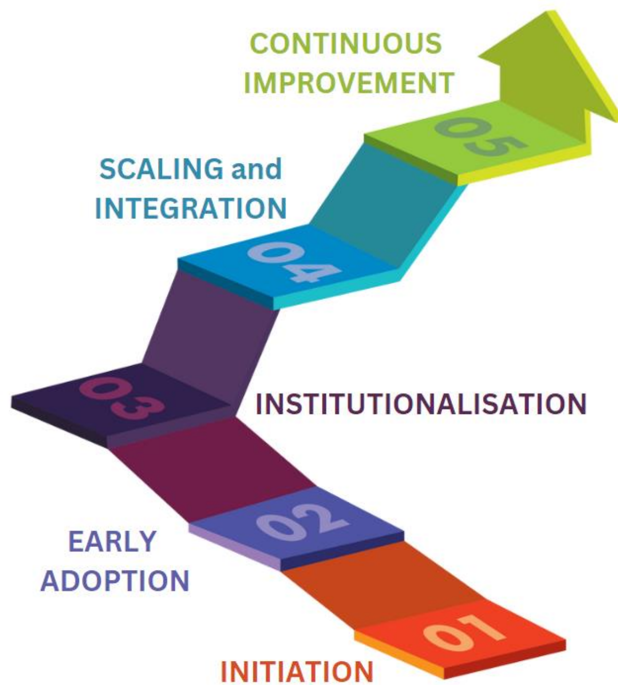

Figure A1. Stages of development of BI units

Stage 1 – initiation:

- the initial stage involves the establishment of the BI unit/function within an organisation;
- it may begin with a small team or individual championing the integration of BI into decision-making processes;
- at this stage, there is often a focus on raising awareness about the value and potential of BI.

Stage 2 – early adoption:

- in this stage, the organisation starts actively incorporating BI into select projects or initiatives;
- initial successes and positive outcomes help generate enthusiasm and buy-in from key stakeholders;
- the unit/function may expand its team and resources to accommodate growing demand and demonstrate the impact of BI.

Stage 3 – institutionalisation:

([9]) Multiple studies have delved into the life cycles of organisational development, often centring on a widely recognised five-step model (e.g. Adizes, 1989; Greiner, 1972). We applied this classic organisation and tailored it to suit the context of BI units.

- at this stage, the integration of BI becomes more widespread and embedded within the organisation's practices;
- the unit/function gains recognition and support from top leadership, leading to the development of formal processes and structures;
- dedicated budget allocations, training programmes and collaborations with other departments are established to further advance BI.

Stage 4 – scaling and integration:

- this stage involves expanding the reach and impact of BI across the organisation;
- the unit/function collaborates with various departments and stakeholders to mainstream BI into decision-making at all levels;
- emphasis is placed on building internal capacity, fostering a culture of evidence-based decision-making and continuously learning from behavioural interventions.

Stage 5 – continuous improvement:

- in this final stage, the unit/function focuses on refining and advancing its practices;
- it actively seeks feedback, evaluates the effectiveness of behavioural interventions and iterates them based on insights gained;
- the unit/function becomes a centre of expertise, sharing knowledge and best practices both internally and externally, and contributing to the broader field of behavioural science.

Annex 4. Recommendations derived from findings, with added impact and feasibility estimates

Study findings were classified, and **initial recommendations** were developed by the core study team, taking into account suggestions from the study participants. After this, two online consultative sessions and written review rounds were used to refine the recommendations based on the expert opinions of the broader study team. The broader study team included behavioural and social science experts with first-hand experience of setting up a BI unit (Netherlands, Finland) and conducting studies on the integration of BI in policymaking, and with European-level experience in supporting the integration of BI during the COVID-19 pandemic.

Section of report	Study finding	Recommendation	Impact	Feasibility	Limitations or constraints
Existing BI functions at institutions and stages of development	The impacts of BI on policy were hard for participants to formulate.	Develop mechanisms to measure the impact on policymaking.	Medium	Low	Measuring impacts on policy is challenging scientifically because of the indirect impact of advice. In general, there is no easy methodology for assessing the impact of most behavioural interventions in real-world settings.
Existing BI functions at institutions and stages of development	All BI units from the participating countries are perceived to be in the early stages of development, either the ‘initiation’ phase (stage 1) or the ‘early adoption’ phase (stage 2).	Support institutionalisation of BI units (stage 3 and beyond).	High	Low	Not all countries have passed earlier stages yet (e.g. stage 1 ‘initiation’, stage 2 ‘early adoption’), and countries have developed BI units at different administrative levels and places (e.g. academic versus within public health).
Existing BI functions at institutions and stages of development	In one participating country, behavioural expertise is not organised in the form of a clearly distinguishable ‘unit’. Rather, working groups use BI when exploring specific topics, with informal support from the institute director.	Explore alternative, more dispersed organisational methods as a possible model for further mainstreaming of BI.	High	High	This becomes more important in contexts where integration is more advanced, and streamlined across all levels and sectors, possibly making the concept of a ‘unit’ counterproductive.
Existing BI functions at institutions and stages of development	Academic partners explicitly include behavioural science in formal research plans that are presented to the regional	Ensure that behavioural science contributions are made explicit and separate from biomedical work to	Low	Medium	Administrative adjustments may encounter some resistance because they entail revisioning the

Section of report	Study finding	Recommendation	Impact	Feasibility	Limitations or constraints
	authorities, and there is a specific administrative code assigned to behavioural science by the regional authorities to facilitate this.	make it more visible. For example, use a special administrative code to indicate contracts that include behavioural science.			importance of certain types of expertise, possibly at the expense of other competing disciplines.
Existing BI functions at institutions and stages of development	Much of the actual research work is carried out externally through project work by BI units located within academic institutions.	Strengthen cooperation between public health institutes and designated external academic centres with BI expertise, for example by supporting internships, graduate work and grants for short-term contracts with behavioural science experts.	High	High	This does not help to build BI capacity inside the public health institutions, but rather supports the wheel and spoke option.
Existing BI functions at institutions and stages of development	Advocating BI is done by both the outside academic partners and the BI champions.	Identify BI champions and support their outreach and advocacy efforts.	Medium	High	This remains reliant on individuals, who without broader networking will remain isolated.
Organisational challenges	It is difficult to set up a special BI unit, because BI needs mainstreaming within many specific government departments (e.g. social affairs, health, education).	Explore the feasibility, institutional place and implications of a BI unit that is integrated across different sectors.	Medium	High	This will require intersectoral coordination.
Organisational challenges	In decentralised countries, regions often want to maintain control over their own decisions, which means many BI units are needed.	In decentralised countries, explore a collaborative model whereby different regional BI units collaborate on different projects.	Medium	High	This requires a clear definition of BI units at different levels in order to conduct a broad inventory of their locations and collaborative capacity.
Organisational challenges	It is important that BI units are politically independent.	Explore combinations of different BI advisory infrastructures that best facilitate political connection while maintaining scientific independence. This needs to	Medium	Low	There is an inherent tension between the need for BI advisors to be politically engaged and scientifically independent. This is also entrenched in long-standing

Section of report	Study finding	Recommendation	Impact	Feasibility	Limitations or constraints
		be addressed to maintain public trust in advisory infrastructures.			political governance cultures, which may not be amenable to change. A combination of various BI advisory infrastructures requires additional coordination.
Organisational challenges	In a situation when BI involvement is rapidly needed because of an outbreak event or other crisis, bureaucratic procedures can block efficient project work.	Prearrange rapid scalability of BI units before a crisis starts, for example by assessing bureaucratic burdens and developing pre-agreed protocols.	High	Medium	Preparedness planning has been underprioritised and underfunded, because as soon as an emergency is over people tend to forget. Moreover, changing existing emergency processes or introducing new processes may run into resistance because it changes the ownership of responsibilities.
Organisational challenges	An organisational challenge noted is the difficulty of accurately translating and describing what BI can do and how it works.	Support translation of knowledge and concepts.	Medium	Medium	This may require an EU-wide knowledge management platform which will require considerable staff support from the EU for facilitation.
Lack of capacity and resources	Across countries, the lack of well-trained BI experts was noted as a problem.	Promote (pre-service) behavioural science curricula across learning institutions.	High	Medium	This requires learning institutions to adjust their curricula.
Lack of capacity and resources	A lack of available in-service training opportunities for people working in BI was identified.	Develop basic BI in-service training on knowledge and methods as a core competence for public health professionals. Include generative artificial intelligence, advocacy and communication skills, and evidence-based policymaking.	High	High	This requires integration in established in-service training programmes.

Section of report	Study finding	Recommendation	Impact	Feasibility	Limitations or constraints
Lack of capacity and resources	There needs to be better integration and recognition of applied behavioural sciences, such as health psychology, in university curricula to train new generations of behavioural scientists.	Promote applied behavioural (including social) sciences within academic curricula	Medium	Medium	This requires learning institutions to adjust their curricula.
Lack of capacity and resources	The small number of experts in public health authorities and among policymakers slows down the required dialogue with collaborative partners.	Ensure that BI experts are installed in public health institutes to liaise with and facilitate work with external partners.	Medium	Medium	This requires sustained advocacy at higher levels to change hiring practices.
Lack of capacity and resources	Behavioural scientists are not common in the field of public health, which has traditionally been an area of expertise for people coming from disciplines such as medicine, nursing, epidemiology, virology pharmacy and veterinary sciences.	Advocate new professional standards for public health that include behavioural expertise.	High	Medium	This requires sustained advocacy at higher levels to change hiring practices.
Lack of capacity and resources	A small budget is generally allocated to public health.	Raise awareness of the cost savings connected to prevention research and increase advocacy for public health.	High	Medium	Government departments compete for spending, and this varies by country.
Factors contributing to institutionalisation	It is very beneficial to receive feedback from the public health institute about why certain decisions were made and/or what is being prioritised internally.	Promote transparency in decision-making among external partners, including behavioural scientists.	Medium	Medium	These practices may be entrenched in long-standing political governance cultures that may not be amenable to change. However, with the right person, right place, right time and proof of

Section of report	Study finding	Recommendation	Impact	Feasibility	Limitations or constraints
					concept, established things can change.
Factors contributing to institutionalisation	Recognition of BI work by external partners (e.g. a university partner) is important for establishing the political position of the BI unit at the university, particularly in countries with fewer resources.	Provide continued international recognition of the value of behavioural science by recognising centres of excellence, etc.	Low	High	Symbolic endorsements are not always aligned with financial support.
Factors contributing to institutionalisation	There is a need to improve practices for recruiting and hiring in the public health sector, to include non-biomedical professionals and remove legal barriers.	Facilitate policies that enhance flexible recruitment profiles, which are needed to better include behavioural science in this field.	High	Medium	This requires sustained advocacy at higher levels to change hiring practices.
Factors contributing to institutionalisation	Integration into decision-making and general buy-in still depends on individuals (champions) promoting the relevance of BI, rather than on systems.	Recruit more behavioural experts within public health institutes and provide training to decision-makers on the relevance of BI to public health.	Medium	Low	There are limitations to the recruitment of BI experts and the availability of decision-makers for training.
Role of the EU in institutionalising BI	Experts and stakeholders should be connected for exchange of knowledge and experience.	Organise regular meetings for knowledge exchange and networking, including smaller satellite meetings with country experts.	Medium	High	This needs further follow-up development of communities of practice across countries.

Section of report	Study finding	Recommendation	Impact	Feasibility	Limitations or constraints
Role of the EU in institutionalising BI	Large international organisations are important in promoting networking events to speed up institutionalisation of BI at various levels. This is the case in countries where public health receives limited financing, countries that have little formal institutionalisation of BI and countries with a decentralised governance system where many smaller BI units may emerge that are not well connected.	Provide additional support for underfunded public health systems and/or countries with a more complex decentralised governance system, for example through the development of communities of practice.	Medium	Medium	This requires coordinated efforts and funding at the international level.
Role of the EU in institutionalising BI	Create an EU-wide behavioural sciences competence centre or knowledge platform with representation from all countries in Europe.	Further strengthen initiatives such as those initiated by the EU Policy Lab: Foresight, Design and Behavioural Insights (EC JRC) and the ECDC's communities of practice on prevention.	Medium	High	There are many such initiatives across the EU, and more coordination may be needed.
Role of the EU in institutionalising BI	The EU needs to advocate, and support the development of, global resolutions on behavioural change expertise.	Advocate, support and implement the development of global resolutions on behavioural change expertise.	Medium	High	This requires continued agenda setting and advocacy, and particular attention to implementation.

GETTING IN TOUCH WITH THE EU

In person

All over the European Union there are hundreds of Europe Direct centres. You can find the address of the centre nearest you online (european-union.europa.eu/contact-eu/meet-us_en).

On the phone or in writing

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

— by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),

— at the following standard number: +32 22999696,

— via the following form: european-union.europa.eu/contact-eu/write-us_en.

FINDING INFORMATION ABOUT THE EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website (europa.eu).

EU publications

You can view or order EU publications at op.europa.eu/en/publications. Multiple copies of free publications can be obtained by contacting Europe Direct or your local documentation centre (european-union.europa.eu/contact-eu/meet-us_en).

EU law and related documents

For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex (eur-lex.europa.eu).

Open data from the EU

The portal data.europa.eu provides access to open datasets from the EU institutions, bodies and agencies. These can be downloaded and reused for free, for both commercial and non-commercial purposes. The portal also provides access to a wealth of datasets from European countries.

Science for policy

The Joint Research Centre (JRC) provides independent, evidence-based knowledge and science, supporting EU policies to positively impact society

EU Science Hub

Joint-research-centre.ec.europa.eu