Health Information and Quality Authority

An tÚdarás Um Fhaisnéis agus Cáilíocht Sláinte

Analysis of a public consultation survey to inform the work of the Public Health Reform Expert Advisory Group – Individual Responses

Submitted: 22 April 2022

Published: 06 September 2023

Table of Contents

About the Health Information and Quality Authority

The Health Information and Quality Authority (HIQA) is an independent statutory authority established to promote safety and quality in the provision of health and social care services for the benefit of the health and welfare of the public.

HIQA's mandate to date extends across a wide range of public, private and voluntary sector services. Reporting to the Minister for Health and engaging with the Minister for Children, Equality, Disability, Integration and Youth, HIQA has responsibility for the following:

- **Setting standards for health and social care services** — Developing person-centred standards and guidance, based on evidence and international best practice, for health and social care services in Ireland.
- **Regulating social care services** — The Chief Inspector within HIQA is responsible for registering and inspecting residential services for older people and people with a disability, and children's special care units.
- **Regulating health services —** Regulating medical exposure to ionising radiation.
- **Monitoring services** — Monitoring the safety and quality of health services and children's social services, and investigating as necessary serious concerns about the health and welfare of people who use these services.
- **Health technology assessment** — Evaluating the clinical and cost-effectiveness of health programmes, policies, medicines, medical equipment, diagnostic and surgical techniques, health promotion and protection activities, and providing advice to enable the best use of resources and the best outcomes for people who use our health service.
- **Health information** — Advising on the efficient and secure collection and sharing of health information, setting standards, evaluating information resources and publishing information on the delivery and performance of Ireland's health and social care services.
- **National Care Experience Programme** — Carrying out national service-user experience surveys across a range of health services, in conjunction with the Department of Health and the HSE.

List of abbreviations used in this report

CIDR	Computerised Infectious Disease Reporting
COVID-19	coronavirus disease 2019
EPHF	Essential Public Health Function
GDPR	General Data Protection Regulation
HIQA	Health Information and Quality Authority
HSE	Health Service Executive
ICT	Information and Communications Technology
OCIO	Office of the Chief Information Officer
PH	Public Health
PHREAG	Public Health Reform Expert Advisory Group
WHO	World Health Organization

Acknowledgements

HIQA would like to thank the Department of Health for providing the survey data analysed within this report.

Members of the Evaluation Team

Natasha Broderick, Karen Cardwell, Marie Carrigan, Paul Carty, Fearghal Comaskey, Patricia Harrington, Jingjing Jiang, Louise Larkin, Gwinyai Masukume, Cillian McDowell, Michelle Norris, Mark O'Loughlin, Michelle O'Neill, Máirín Ryan, Debra Spillane, Susan Spillane, Conor Teljeur, Barrie Tyner.

Not all members of the Evidence Synthesis Team are involved in the response to each research question.

Conflicts of interest

None declared.

Key points

Survey Respondent Characteristics:

- Ninety survey respondents were included within this survey analysis. Survey respondents frequently worked:
    - within public health in Ireland (99%)
    - in the Dublin region (52%)
    - in a HSE Public Health Department (44%)
    - in a medical role (41%)
    - in their current role for less than two years (42%).
- Additionally, 14% of survey respondents indicated that they work in more than one organisation.

Assessment of Essential Public Health Functions (EPHFs) undertaken:

- When asked which EPHFs they undertake in their current role, 81% of survey respondents indicated that they undertake more than one.
- Fifty-six percent of survey respondents indicated they undertook EPHF 5 - *Protecting populations against health threats, including environment and occupational hazards, food safety, chemical and radiation hazards* and/or EPHF6 - *Promoting prevention and early detection of diseases including non-communicable and communicable diseases* in their current role.
- Following this, the most regularly identified EPHFs which survey respondents undertake in their current role were EPHF 1 - *Monitoring and evaluating populations health status, health service utilisation and surveillance of risk factors and threats to health* (51%), EPHF 2 - *Public health emergency management* (47%) and EPHF3 - *Assuring effective public health governance, regulation, and legislation* (43%).

Strategic Challenges for the Delivery of EPHF into the Future:

- When considering the EPHFs delivered by survey respondents in their current role, delivery of the majority of EPHFs (58%) was identified to have been "Average", **before the pandemic**.
    - Twenty survey respondents identified they deliver EPHF 9 – *Ensuring adequate quantity and quality of public health workforce* in their current role, with 55% of these respondents indicating it had "Poor" delivery,

before the pandemic and 25% of respondents indicating it had "Very poor" delivery before the pandemic.

- When asked had their views on the delivery of the EPHFs changed in **light of the COVID-19 pandemic experience**, "Stayed the same" was the most frequently identified answer in 92% (11/12) of the EPHFs. The delivery of EPHF 9 - *Ensuring adequate quantity and quality of public health workforce* however, was viewed by 50% of respondents who undertake EPHF 9 as being "Somewhat Better".

- When asked about key lessons learned during the pandemic, seven themes were identified:
  - leadership, management and governance
  - health service and delivery
  - workforce issues
  - emergency preparedness and management
  - ICT, data collection and research
  - communication
  - legislation and regulation.

- Respondents most often reported the key lessons learned under the theme of leadership, management and governance. They stated that a holistic societal approach, including consideration of the unintended consequences of actions, is required in national public health decision-making and that greater clarity on governance structures and procedures within Public Health systems is needed.

- When asked to expand on changes required to improve the delivery of EPHFs in the future, seven themes were identified:
  - workforce issues
  - ICT, data collection and research
  - broaden the focus and/or scope of PH
  - legislation and regulation
  - leadership, management and governance
  - communication
  - coordination of public health delivery.

- To improve the delivery of EPHFs in the future, respondents most frequently noted the need to integrate Public Health across the wider health system (broaden the focus and/or scope of PH), increase collaboration across Public

Health bodies (coordination of Public Health delivery), improve outdated ICT systems and data collection systems (ICT, data collection and research).

- When asked about the barriers to achieving change in the delivery of EPHFs, and the actions to overcome these barriers, nine themes were identified:
  - the workforce
  - leadership, management and governance
  - integration, collaboration and teamwork
  - ICT, data collection and research
  - embracing multifaceted Public Health
  - funding and system capacity
  - the culture
  - the "change process"
  - communication.

- More specifically, respondents identified low staff morale, inadequate ICT and unclear Public Health governance structures as barriers to change. Staff engagement and supports, improved data surveillance capabilities and clarity around the Public Health reform were also identified as actions to overcome these barriers.

- Themes around the workforce; leadership, management and governance; ICT, data collection and research; and communication were reoccurring across respondent comments and, therefore may be key areas of consideration when guiding the work of the Public Health Reform Expert Advisory Group.

1 Introduction

Public health, as defined by Donald Acheson (UK Chief Medical Officer) in 1988, is "the science and art of preventing disease, prolonging life, and promoting health through the organized efforts of society".[1] Public health is vital to protecting, promoting and restoring the public's health and combines science, skills and beliefs, culminating in the maintenance and improvement of population health through collective or social actions.[2]

In Ireland, the Sláintecare report (May 2017) identified that the reorientation of the model of care in Ireland towards primary and community care would seek to ensure that the majority of people's health needs could be met locally, thereby ensuring equal access to health services for everyone.[3] This led to the development of the 2018 Sláintecare Implementation Strategy and the Sláintecare Implementation Strategy & Action Plan 2021 — 2023; Prevention and Public Health is identified as one of the eight key principles within both documents. Never has this prioritisation of Public Health been more important than in the last number of years, where the coronavirus disease 2019 (COVID-19) pandemic has caused unprecedented pressure on public health and required extraordinary mobilisation of healthcare systems.[3, 4]

To identify lessons from the Public Health response to the COVID-19 pandemic in Ireland, on 25 January 2022 an independent expert group, the Public Health Reform Expert Advisory Group (PHREAG), was established by the Minister for Health. The PHREAG is focussing on identifying learnings from the COVID-19 pandemic which will strengthen health protection and increase future pandemic preparation.[5] To inform the work of the PHREAG, the Department of Health designed a public consultation survey which was distributed among individuals working in public health (any capacity) in Ireland.[5] The aim of this survey was to:

- gain insights from respondents' around their experience of the delivery of Essential Public Health Functions (EPHFs) before and in light of the COVID-19 pandemic in Ireland
- identify the key lessons from the COVID-19 pandemic
- gain insights from respondents on how delivery of EPHFs can be improved in the future.

At the request of the Department of Health, the Health Information and Quality Authority's (HIQA) undertook an analysis of the public consultation survey to inform the work of the PHREAG.

2 Methods

The current report presents survey data collected by the Department of Health from 2 March 2022 to 23 March 2022 of individuals working within Public Health.

2.1 Survey details

The survey, designed and distributed by the Department of Health consisted of the following three sections:

- Section 1: Survey respondent characteristics
- Section 2: Assessment of Essential Public Health Functions (EPHF) in survey respondent's current role
- Section 3: Strategic challenges for the delivery of EPHFs into the future.

Section 1 questions were multiple choice or "tick all that apply", the Section 2 question was "tick all that apply" and Section 3 questions were Likert scale, "tick all that apply" or open-ended (Table 1 and Appendix 1).

Table 1: Survey sections and associated questions

Section	Questions
Section 1	**Q1.** Do you work in public health in some capacity in Ireland? **Q2.** Where are you predominantly based in your current role? **Q3.** What organisation do you work for? Tick all that apply. **Q4.** What is your principal role? **Q5.** How long have you been in your current role? Tick the box below.
Section 2	**Q6.** Which of the following EPHF's do you undertake in your current role? Tick all that apply.
Section 3	**Q7.** Only considering the individual EPHFs that you deliver as part of your current role, what were your views on the delivery of these EPHFs before the pandemic? 1- Very Poor; 2- Poor; 3- Average; 4- Above Average; 5- Excellent **Q8.** Only considering the individual EPHFs that you deliver as part of your current role, have your views on the delivery of these EPHFs changed in light of the COVID-19 pandemic experience? Consider whether delivery is

	1– Much worse; 2- Somewhat worse; 3- Stayed the same; 4- Somewhat better; 5- Much better **Q9.** What are the key lessons from the pandemic? (Please identify which EPHF(s) you are specifically referring to in your answer) **Q10.** What should change to improve the delivery of the essential public health functions in which you work in the future? Tick all that apply. Please elaborate further. **Q11.** Are there any barriers to achieving these changes? If so, what actions might help to overcome these barriers?

The 12 EPHFs included within the survey are those proposed by the World Health Organization to support and strengthen a resilient public health system (Table 2).[6]

Table 2: Twelve Essential Public Health Functions (EPHFs)

EPHF	Description
EPHF 1 (Surveillance)	Monitoring and evaluating population health status, health service utilisation and surveillance of risk factors and threats to health
EPHF 2 (Emergency Management)	Public health emergency management
EPHF 3 (Governance and Regulation)	Assuring effective public health governance, regulation, and legislation
EPHF 4 (Planning and Financing)	Supporting efficient and effective health systems and multisectoral planning, financing, and management for population health
EPHF 5 (Health Threats)	Protecting populations against health threats, including environment and occupational hazards, food safety, chemical and radiation hazards
EPHF 6 (Disease Prevention)	Promoting prevention and early detection of diseases including non-communicable and communicable diseases

EPHF 7 (Health Promotion)	Promoting health and wellbeing and actions to address the wider determinants of health and inequity
EPHF 8 (Engagement)	Ensuring community engagement, participation and social mobilization for health and wellbeing
EPHF 9 (Adequate Workforce)	Ensuring adequate quantity and quality of public health workforce
EPHF 10 (Quality and Access)	Assuring quality of and access to health services
EPHF 11 (Research)	Advancing public health research
EPHF 12 (Medicines Access)	Ensuring equitable access to and rational use of essential medicines and other health technologies

2.2 Data analysis and presentation

On receipt of survey results, the data were reviewed for clarity and missing data (item (question) non-response). The following exclusion criteria was then applied to the data: Responses that did not provide any information, or which did not answer a minimum of one question within Section 3 of the survey, were excluded. This resulted in the exclusion of one response and a final dataset of 90 survey responses. Data and graphical analyses were undertaken in Microsoft Excel 2013.

Data analysis was performed in two steps. First, graphical analysis was conducted to present respondent characteristics in pie charts, bar charts, and column charts, where appropriate. Following this, thematic analysis was undertaken, using NVivo software, to identify themes within open-ended survey questions (Q9. Q10. and Q11. within Section 3 of the survey). When undertaking thematic analysis, the Braun & Clarke 6-step guide was followed:[7]

- Step 1 - Familiarisation: The researchers familiarised themselves with the survey results, through reading and re-reading of the data collected.
- Step 2 - Coding: These researchers independently derived initial codes, using mixed deductive and inductive coding, where the survey questions aided in the identification of relevant information, and the researchers were open to

the identification of additional codes within the data. These initial codes were discussed. Codes were finalised to create a codebook which subsequently facilitated data coding.

- Step 3 - Theme development: All researchers generated initial themes.
- Step 4 - Theme review: All themes were reviewed, modified and developed to ensure they were accurate.
- Step 5 - Theme refinement: All themes were refined to derive the finalised set of themes and identify subthemes and categories (where required).
- Step 6 - Write up: Data write-up was undertaken and representative survey respondent quotes were selected to elicit the findings.[7]

3 Survey results

Analysis of survey data focused on the three outlined sections:

- Section 1) Survey respondent characteristics
- Section 2) Assessment of EPHF in survey respondent's current role
- Section 3) Strategic challenges for the delivery of public health functions into the future.

3.1 Section 1 – Survey respondent characteristics

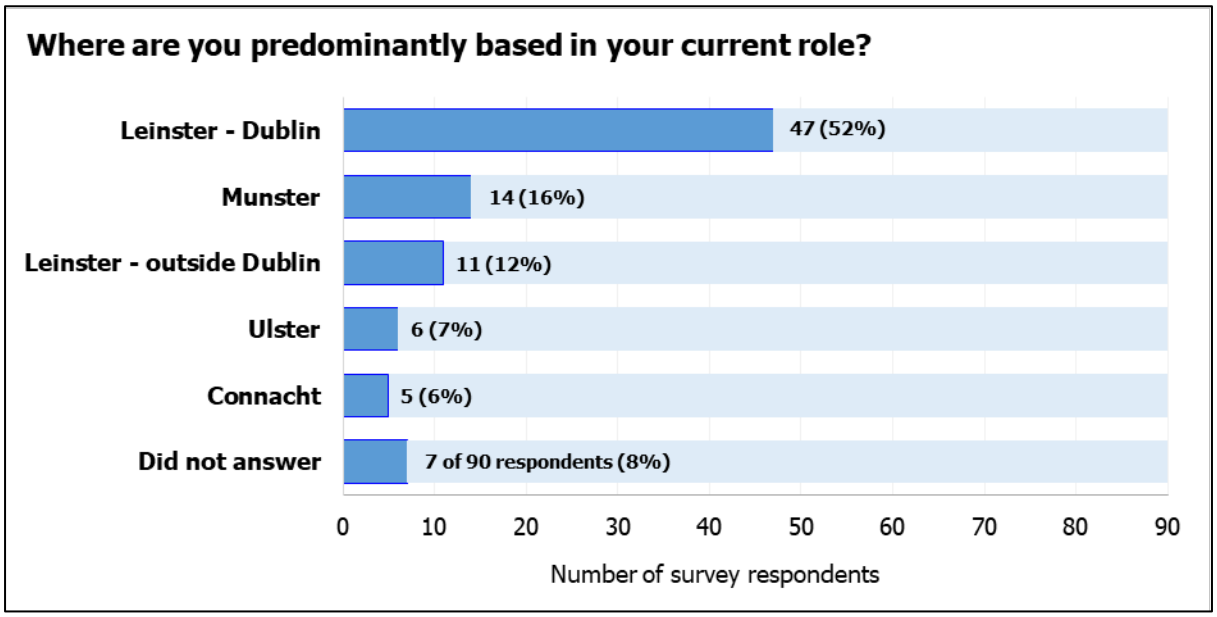
3.1.1 Public Health domain

In response to question one, "Do you work in public health in some capacity in Ireland?" 99% (89/90) of respondents indicated they work in public health, with one respondent answering "No". All respondents answered the question (100% response rate).

3.1.2 Location

In response to question two, "Where are you predominantly based in your current role?" 52% of respondents (47/90) indicated they were predominantly based in Leinster-Dublin, 16% (14/90) in Munster and 12% (11/90) in Leinster – outside of Dublin (Figure 1). Respondents who were predominantly based in Ulster and Connacht accounted for 7% (6/90) and 6% (5/90), respectively. Eight percent of respondents (7/90) did not answer the question (92% question response rate).

Figure 1: Summary of responses to question two.



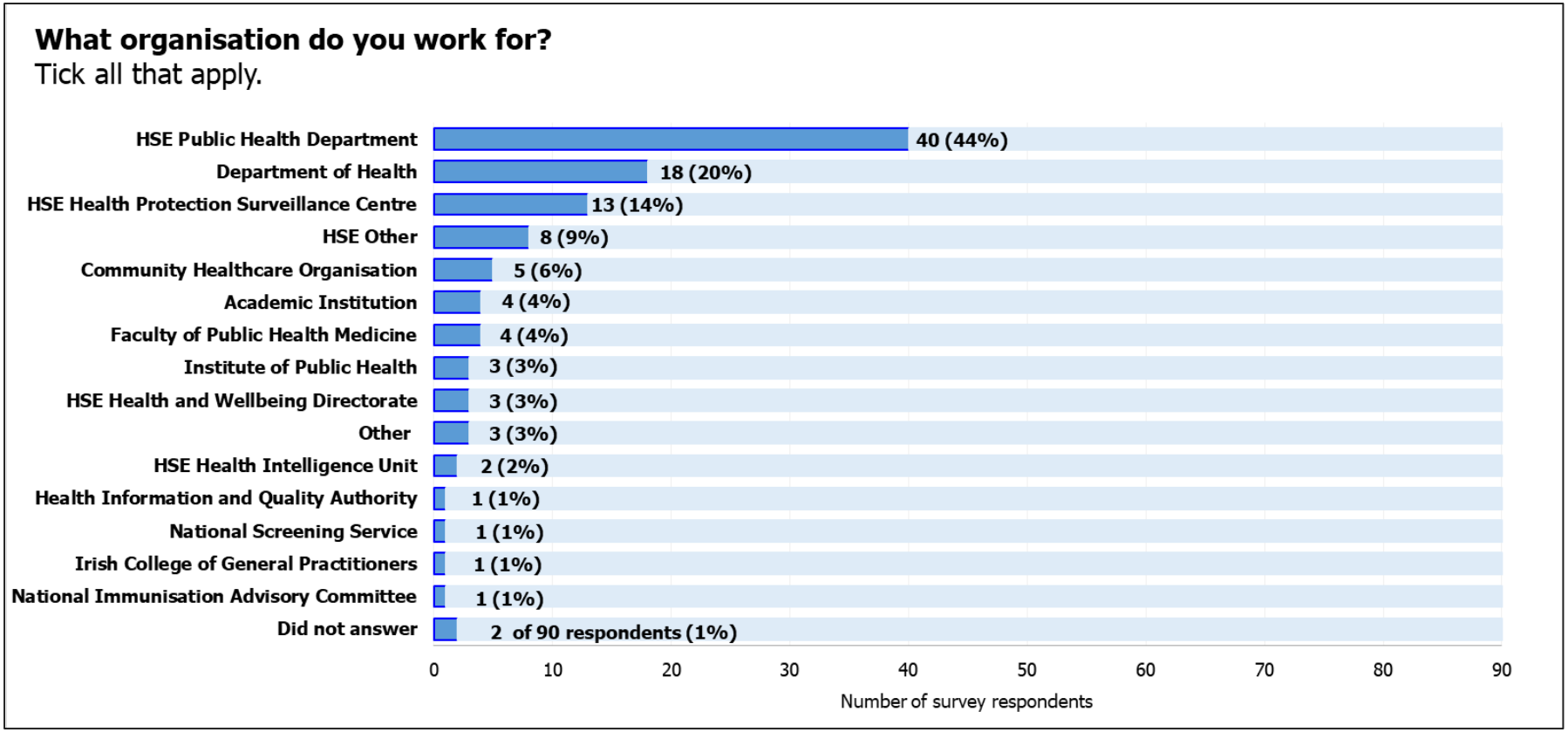
3.1.3 Organisation where respondents worked

In response to question three, "What organisation do you work for?", 44% of respondents (40/90) indicated that they work in a HSE Public Health Department, 20% (18/90) in the Department of Health, 14% (13/90) in the HSE Health Protection Surveillance Centre and 6% (5/90) in Community Health Organisations (Figure 2). Twelve percent of respondents (11/90) indicated they worked in "Other" organisations/professions (HSE Other – 9%, 8/90, Other – 3%, 3/90) these included:

- National Immunisation Office (3%; 3/90)
- General Practitioners (2%; 2/90)
- HSE Office of National Director Health Protection (1%; 1/90)
- Occupational Medicine Consultant (1%; 1/90)
- Office of the Chief Clinical Officer (1%; 1/90)
- Mental Health Services (1%; 1/90)
- HSE National Quality & Patient safety Directorate (1%; 1/90)
- HSE Contact Management Programme (1%; 1/90).

There were 14% (13/90) of respondents who indicated they worked in more than one organisation. Two percent of respondents (2/90) did not answer the question (98% question response rate).

Figure 2: Summary of responses to question three.



Note: The overall percentage does not add up to 100% as respondents could tick more than one option.

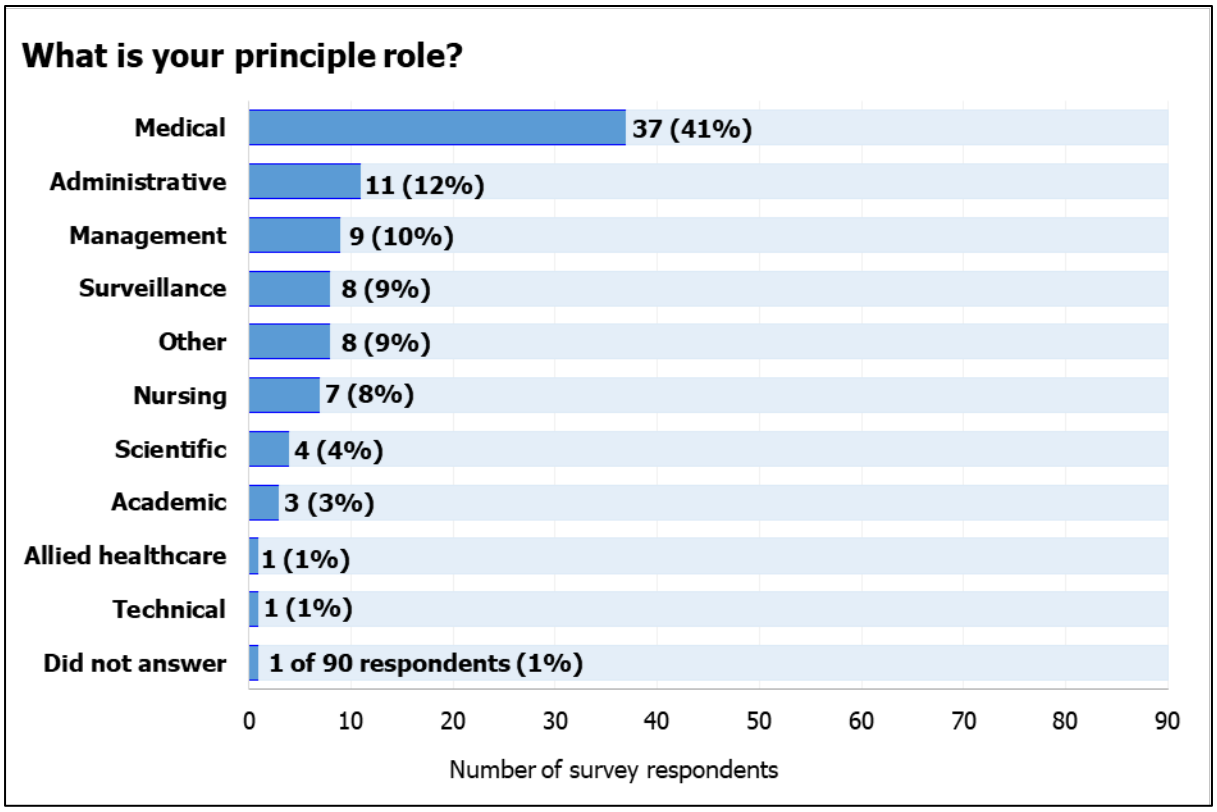
3.1.4 Principal role

In response to question four, "What is your principal role?", 41% of respondents (37/90) indicated they worked in a medical role, 12% (11/90) in an administrative role and 10% (9/90) in a management role (Figure 3). Nine percent (8/90) of respondents answered "Other" and this comprised those working in:

- policy (3%; 3/90)
- research (2%; 2/90)
- communication (1%; 1/90)
- IT (1%; 1/90)
- exposure investigation and outbreak identification (1%; 1/90).

One respondent did not answer the question (99% question response rate).

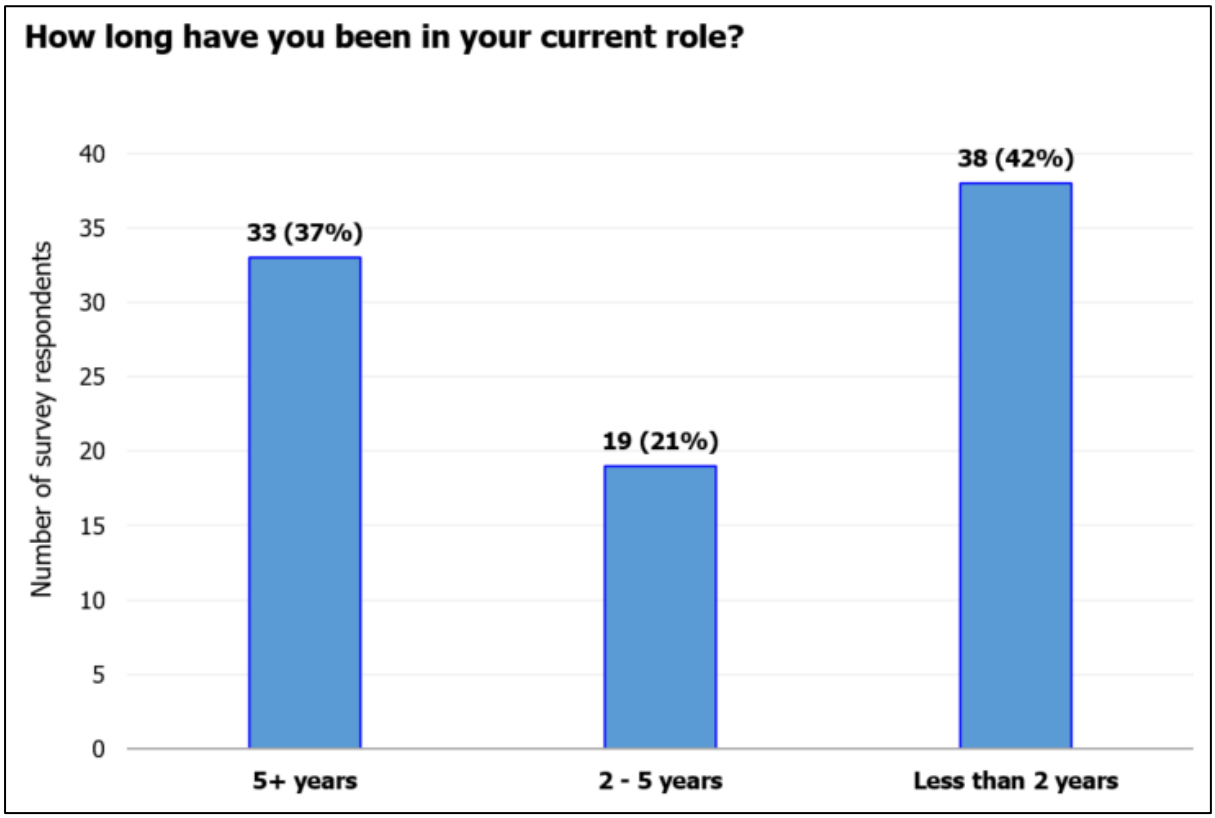
Figure 3: Summary of responses to question four.



3.1.5 Length of time in current role

In response to question five, "How long have you been in your current role?" 42% (38/90) of respondents indicated less than two years, 21% (19/90) two to five years and 37% (33/90) five or more years (Figure 4). All respondents answered the question (100% question response rate).

Figure 4: Summary of responses to question five.



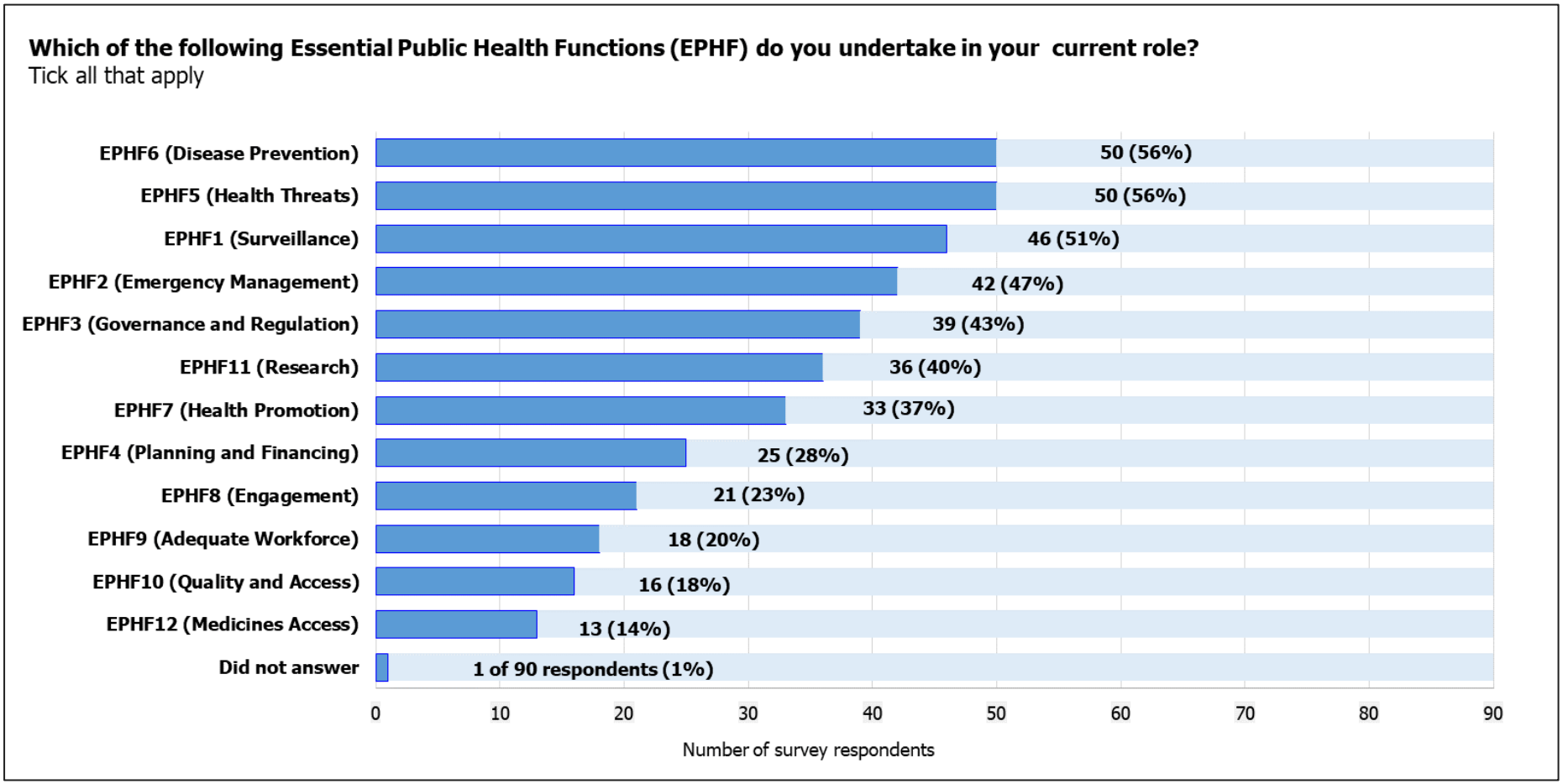
3.2 Section 2 – Assessment of Essential Public Health Functions (EPHF) in the respondent's role

3.2.1 EPHF undertaken in current role

In response to question six, **"**Which of the following EPHF do you undertake in your current role?" 56% of respondents (50/90) indicated they undertake EPHF 5 (Health Threats) and 56% of respondents indicated they undertake EPHF 6 (Disease Prevention) (Figure 5). Following this, 51% of respondents (46/90) indicated they undertake EPHF 1 (Surveillance), 47% (42/90) undertake EPHF 2 (Emergency Management) and 43% (39/90) undertake EPHF 3 (Governance and Regulation). Eighty-one percent of respondents (73/90) indicated they undertook more than one

EPHF in their current role. One percent of respondents (1/90) did not answer the question (99% question response rate).

Figure 5: Summary of responses to question six.



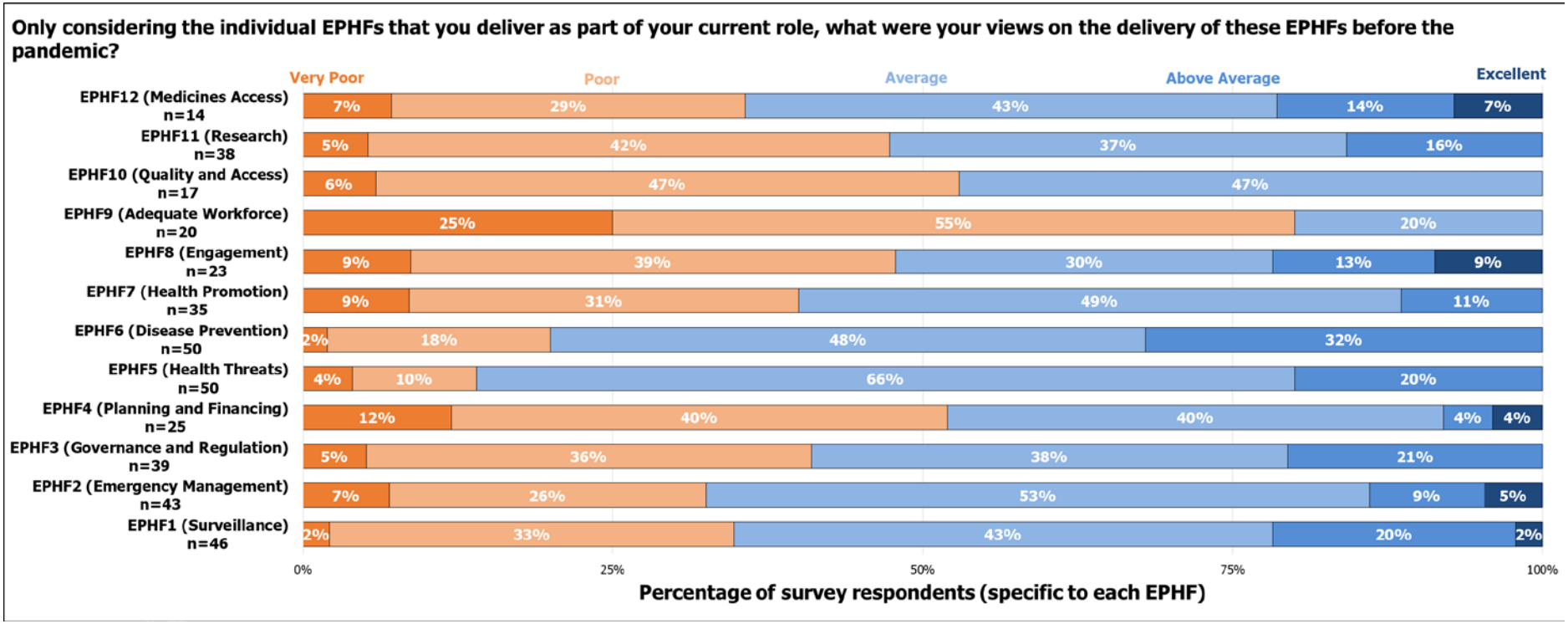
Note: The overall percentage does not add up to 100% as respondents could tick more than one option.

3.3 Section 3 – Strategic challenges for the delivery of public health functions into the future

3.3.1 Delivery of EPHF – before the pandemic

In response to question seven "Only considering the individual EPHFs that you deliver as part of your current role, what were your views on the delivery of these EPHFs before the pandemic?", "Average" was the most frequently identified answer for seven of the 12 EPHFs (Figure 6). EPHF 9 - *Ensuring adequate quantity and quality of public health workforce*, was most frequently identified by the respondents as the EPHF with the most negative views regarding its delivery prior to the pandemic, with 55% (11/20) of respondents selecting "Poor" and 25% (5/20) of respondents selecting "Very Poor" (Figure 6). All respondents answered the question (100% question response rate).

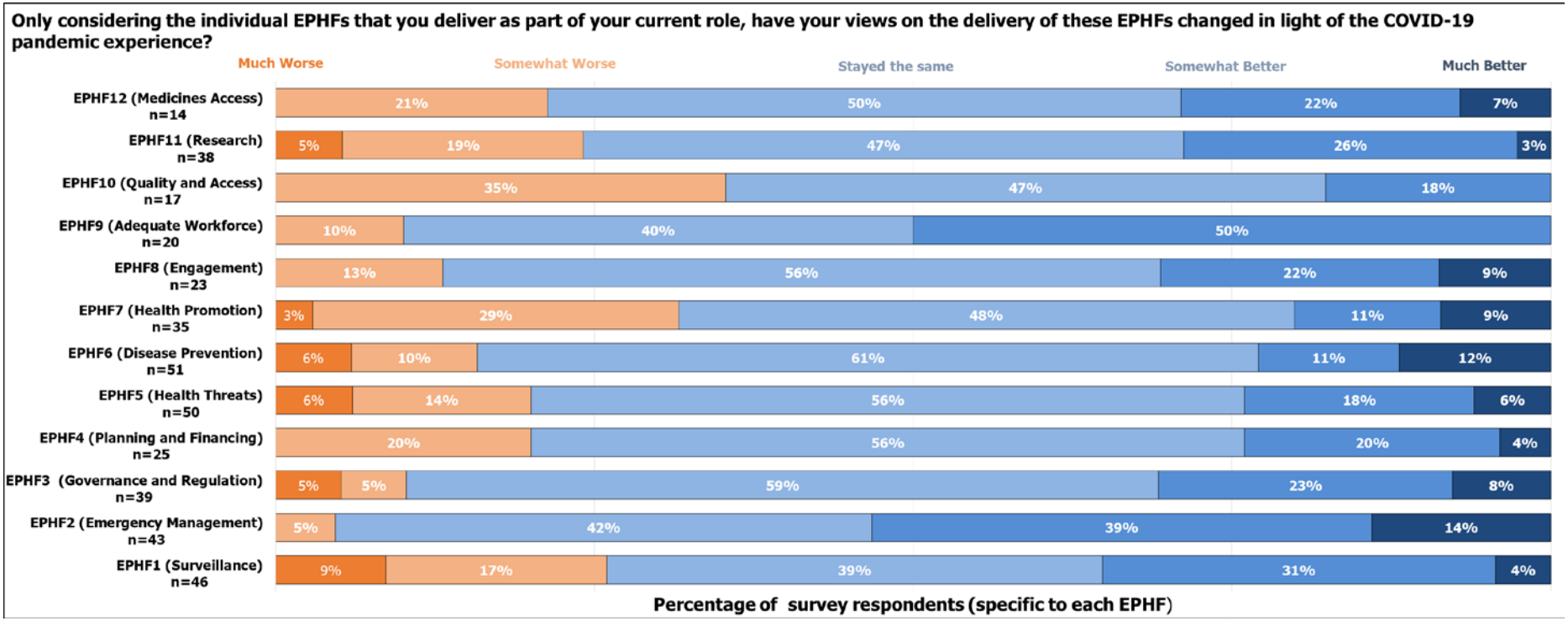
Figure 6: Summary of responses to question seven.



3.3.2 Delivery of EPHF – in light of the pandemic

In response to question eight "Only considering the individual EPHFs that you deliver as part of your current role, have your views on the delivery of these EPHFs changed in light of the COVID-19 pandemic experience?", "Stayed the same" was the most frequently identified answer in 92% (11/12) of the EPHFs (Figure 7). In EPHF 9 – *Ensuring adequate quantity and quality of public health workforce*, the most frequently identified answer was "Somewhat better" with 50% (10 out of 20) of respondents selecting this. Additionally, in EPHF 2 - *public health emergency management*, 53% of respondents who undertake this EPHF identified that it was delivered "Somewhat better" or "Much better", in light of the pandemic. All respondents answered the question (100% question response rate).

Figure 7: Summary of responses to question eight.



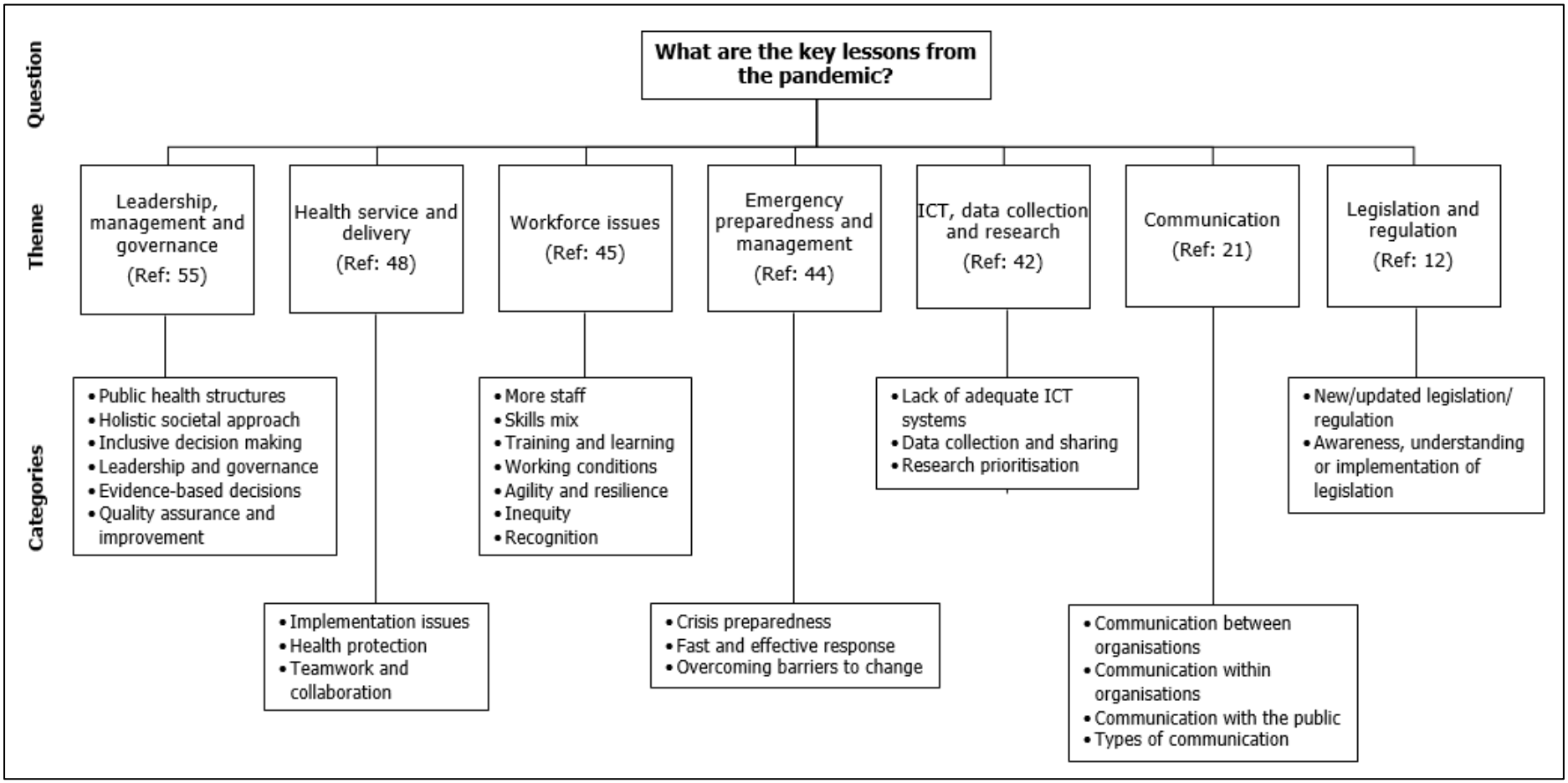
3.3.3 Lessons learned

In response to question nine "What are the key lessons from the pandemic?" seven themes were identified (Figure 9):

- leadership, management and governance
- health service and delivery
- workforce issues
- emergency preparedness and management
- ICT, data collection and research
- communication
- legislation and regulation.

Twenty-seven percent of respondents (24/90) did not answer the question (73% question response rate).

Figure 8. Themes and categories identified in response to question 9



Key: ICT – Information Communication Technology; Ref – number of references to this theme in the survey responses.

Leadership, management and governance

Six categories were identified in relation to leadership, management and governance (Figure 8):

- public health structures
- holistic societal approach
- inclusive decision making
- leadership and governance
- evidence-based decisions
- quality assurance and improvement.

Respondents stated that there was a lack of clarity on governance structures and procedures (for example, decision-making responsibility), particularly at the outset of the pandemic. This may have occurred due to a lack of communication and or a lack of visibility of new structures. These issues presented challenges to efficient working and resulted in decreased staff morale.

"Clear governance is needed from the beginning… who gives expert advice and who gives final approvals, what each function has responsibility and accountability for, clear communications is vital even if it's just to say "work is in progress"."

Respondents emphasised the importance of adopting a holistic societal approach in decision-making, including transparent consideration of the potential harms that may arise from public health decisions.

"…pandemic preparedness requires a whole of Government, whole of society approach. In advance of this pandemic, we failed to appreciate the diversity of risks and did not see beyond the costs of lives and health and plan for the impact a pandemic could have on economies, livelihoods, psychosocial wellbeing and civil liberties. What is required is a toolbox of flexible strategies that can be adjusted/developed in a particular epidemiological, social/cultural, economic context. Solidarity is an important lens through which we should plan for future pandemics. The outbreak of holistic disease requires a holistic response in which we address the links between health crises, poverty and structural inequalities."

"From the outset, consider harm restrictive measures are doing and whether that harm is justified. A lot of harm was avoided due to measures but an enormous amount of harm was also caused. It's easier and more acceptable to quantify and justify the Covid harm that was avoided. It's more difficult to quantify the harm

caused by measures. At times the exceptionalism around Covid was difficult to witness - could we apply some of that unity of purpose and urgency to other, more neglected health/societal issues?"

Respondents highlighted the importance of inclusive decision-making, such as using the experience and insights of front line healthcare workers to greater effect, noting that *"those in more senior 'leadership' [and] management roles do/did not listen to those on the ground with the knowledge [and] expertise in managing/delivering acute public health protection response [and] who had/have the intelligence from the front line of the PH response."*

Other respondents highlighted the need for evidence-based guidance to inform the delivery of public health services, with one specific example noting that it *"led to the establishment of a dedicated health protection guidance unit which provided for the very efficient, effective and responsive development of high-quality evidence informed guidance for the public health management of the pandemic. The development of high quality evidence informed guidance across the public health protection domain which can then support audit, quality assurance and quality improvement has been shown during the pandemic to be of high value and should expand across all domains in the future."*

Further categories related to leadership, management and governance included evidence-based decisions, public health structures and quality assurance and improvement. Respondent quotes representative of these categories are provided in Appendix 2.

Health service and delivery

Three categories were identified in relation to health service delivery (Figure 8):

- implementation issues
- health protection
- teamwork and collaboration.

The importance of population health protection and promotion, in terms of the structural paradigm of public health and the delivery of the health service, was often reflected in the responses from survey respondents. In particular, respondents highlighted that pre-existing health inequalities were exacerbated during the pandemic.

"The fact that vulnerable groups were affected greatly by the pandemic highlights to me the need to address the wider determinants of health through cross-sectoral

work with different organisations and disciplines. Inequalities have been [exacerbated] by the pandemic I feel and need constant and urgent attention."

Some comments pointed to unintended harms which resulted from the public health measures introduced. One respondent noted that although *"...restrictions work to save lives in terms of reducing exposure to infection, particularly the most vulnerable... there are also negative impacts on social isolation and poor mental health as a result".*

The need to address and reduce health inequalities by adopting a more proactive whole-society approach which promotes health equality was highlighted. Respondents outlined the importance of the social determinants of health and health deprivation, which contribute to an individual's health status.

"an equitable public health approach is required. Targeting all individuals in society regardless of social class or stature. A successful public health approach is one which elevates the public health of a whole society, not just certain elements."

Respondents commented on implementation issues, such as system fragmentation, that have hindered public health's ability to improve population health and which should be addressed.

"There has been a disconnect between HSE and general practice to date which has disadvantaged population health. Public health models of care have operated in a silo. This is a cultural problem and it hasn't been solved by the pandemic although it is more obvious now and there is an awareness of the need for cultural change."

The need for teamwork and collaboration in health service delivery, particularly in regard to multidisciplinary teams was also identified by respondents.

"The pandemic highlighted the need for national structures and processes to support multidisciplinary public health teams working with Public Health Medicine consultant physicians at national and regional level and in specialist centres such as the HPSC."

Workforce issues

Seven categories were identified in relation to workforce issues (Figure 8):

- more staff
- skills mix
- training and learning
- working conditions

- agility and resilience
- inequity
- recognition.

Respondents frequently spoke of the need for additional staff within the health system, noting that the lack of appropriate staffing levels commonly led to low morale, fatigue and burnout.

"Severe lack of staff and unable to manage workload at many stages during pandemic. Many staff burnt out from long hours over long period of time. More staff recruited during pandemic but remained very understaffed at many stages during pandemic – no surge capacity for busy periods."

It was frequently stated that any recruitment of additional staff should focus on ensuring that the mix of skills and expertise of public health staff is appropriately balanced.

"It is not just about increasing numbers of staff. [The] skill mix must be right. Too many [administrative and] nursing management positions. We need more staff for clinical (non-management roles), research, analytical, anthropological, peer support work, community health work, etc..."

The need for continued training of public health staff was also highlighted.

"Insufficient trained public health staff, both medical and other disciplines – need for formal training for people with qualifications other than medicine."

Respondents identified that working conditions, in general, also need improvement, with one respondent commenting that recruitment to senior posts could be facilitated with increased remuneration and better collaboration with academic institutions.

"Need to make senior posts in Public Health (National and Area Director of [Public Health]) far more attractive – more academic links and remuneration - otherwise we have not learned from the past – Director of [Health Protection Surveillance Centre] vacant for years despite international attempts to recruit."

Other categories related to workforce issues included agility and resilience of the workforce, staff inequity and recognition (Appendix 2).

Emergency preparedness and management

Three categories were identified in relation to emergency preparedness and management (Figure 8):

- crisis preparedness
- fast and effective response
- overcoming barriers to change.

Survey respondents highlighted the need for a greater focus on ensuring that Public Health is adequately prepared to respond to future public health emergencies. Responses described a variety of related challenges, including the mobilisation of the workforce and clarity regarding the deprioritisation of regular work, the importance of a whole of society response, and horizon scanning with an emphasis on scenario planning for potential threats.

"our systematic preparedness was weak, poorly documented and unformalised. We did not have a recent pandemic plan in place. We did not make full use of the structures associated with the Government Taskforce on Emergency Planning – why not? These may not be fit for purpose."

However, respondents also commented that despite this lack of overall preparedness, the Public Health response was fast and effective. As with other elements of the Public Health response, unity of purpose, as demonstrated by collaboration between national experts, was a crucial attribute of the response.

"despite not having formalised systems in place we stood up a very good response to the COVID-19 pandemic. The high degree of collaboration from national experts was very helpful. Also the high level of public solidarity, support and social cohesion compensated for the lack of formalised plans and approach."

In addition to the importance of a collaborative national approach, respondents noted that international collaboration was essential, particularly in ensuring access to COVID-19 vaccines and therapies.

"we were reliant on international collaboration for resources including procurement of vaccines, therapeutics etc. We should invest in our international engagement e.g. with EU, WHO and others to lay good foundations for managing future cross-border health emergencies."

Respondents also commented on the challenges associated with overcoming barriers that may prevent a rapid and effective response.

"With regards monitoring of threats to health - greater agility and the resources to respond in a timely fashion are needed. Too much bureaucratic red tape to effect change, and when change is finally greenlit, the resources to respond appropriately and effect change are not available within the health service. With the reform of Public Health on the agenda and the recognition of non-medical specialties forming part of that reform, greater involvement and inclusion of these resources in the health system should be prioritised."

ICT, data collection and research

Three categories were identified in relation to ICT, data collection and research (Figure 8):

- lack of adequate ICT systems
- data collection and sharing
- research prioritisation.

Respondents often felt that the current ICT infrastructure was unsuitable and not fit-for-purpose. Key issues included the lack of linked health data records, the lack of linked surveillance systems and the need to upgrade hardware and software. Specific comments were made in relation to the Health Protection Surveillance Centre's Computerised Infectious Disease Reporting (CIDR) database, with respondents stating that it lacked user-friendliness, did not perform well under pressure, was unable to meet the demands of epidemiological reporting of COVID-19 and needed upgrading. Other specific comments included identifying the need for a case and incident management system, national immunisation system, contact tracing system and an overarching national integrated health information system.

"Recognition of the need for step change in [ICT] to support public health. This needs to be followed through as quickly as possible in the case and incident management system and national immunisation system. Integration of data, taking info directly from GP systems…and all data being [individual health identifier] matched should be implemented. Need strong ICT department maybe central and only for public health and they must be led by the business needs rather than settle for minimum viable product as was done for COVAX."

Respondents outlined that a key lesson from the pandemic was that data collection requires improvement to facilitate data-driven research and policy, noting that

Ireland lagged behind other countries in this regard. Respondents generally acknowledged that this would require significant investment, while others suggested using payment-related incentives to improve the quality of data currently collected (for example, from GP data systems).

"The pandemic highlighted the importance of basic and applied public health research. Our response to the pandemic was hampered by the limited quality of evidence on core issues of direct relevance to the management of the pandemic. Specifically in Ireland we lacked the research infrastructure and capacity to conduct large scale population surveys similar to the UK's [Office of National Statistics] surveys addressing the incidence of Covid-19 and associated morbidity, the effectiveness of Covid vaccination and related questions."

Another category identified related to ICT, data collection and research was research prioritisation (Appendix 2).

Communication

Four categories were identified in relation to communication (Figure 8):

- communication between organisations
- communication within organisations
- communication with the public
- types of communication.

Respondents generally reported that communication within and between public health organisations was poor. It was frequently suggested that communication from leadership and upper management was not forthcoming or lacked clarity (for example, communicating changes regarding the operating frameworks).

"Lack of coordination initially. Lack of integration… each acting independently of each other, often leading to duplication in work. People working on ground in Departments often finding out changes in relation to isolation/contact management/location specific changes on 6 o'clock news."

On a positive note, some respondents also stated that new lines of communication were created between people and departments within the health system, which should be fostered into the future.

"In the COVID-19 vaccine programme many links were made between people and departments in the HSE which will assist in usual work. The central operations role was essential and this should be expanded for usual immunisation programmes."

Respondents reported that the value of effective communication to the public was demonstrated by the general public's adherence to public health measures. Others noted the importance of citizen information campaigns in ensuring public trust, which was reflected in the high vaccination rates achieved. This type of public outreach will help to achieve the goals of Public Health.

"Public Health works across all sectors of the health services and its advocacy voice needs to heard more strongly going forward to ensure the mental and physical health and wellbeing of the people of Ireland from the cradle to the grave. Prevention is always better than cure!"

Another category identified was types of communication used (Appendix 2).

Legislation and regulation

Two categories were identified in relation to legislation and regulation (Figure 8):

- new or updated legislation or regulation
- awareness, understanding or implementation of legislation.

Respondents stated the need to strengthen existing legislation to protect population health, support emergency Public Health functions and enable a rapid response to future pandemics.

"Stronger legislation to protect population health and greater awareness of legislation that is already in place to protect public health… corporations such as tobacco, alcohol and gambling industries…have slowed down progressive public health initiatives."

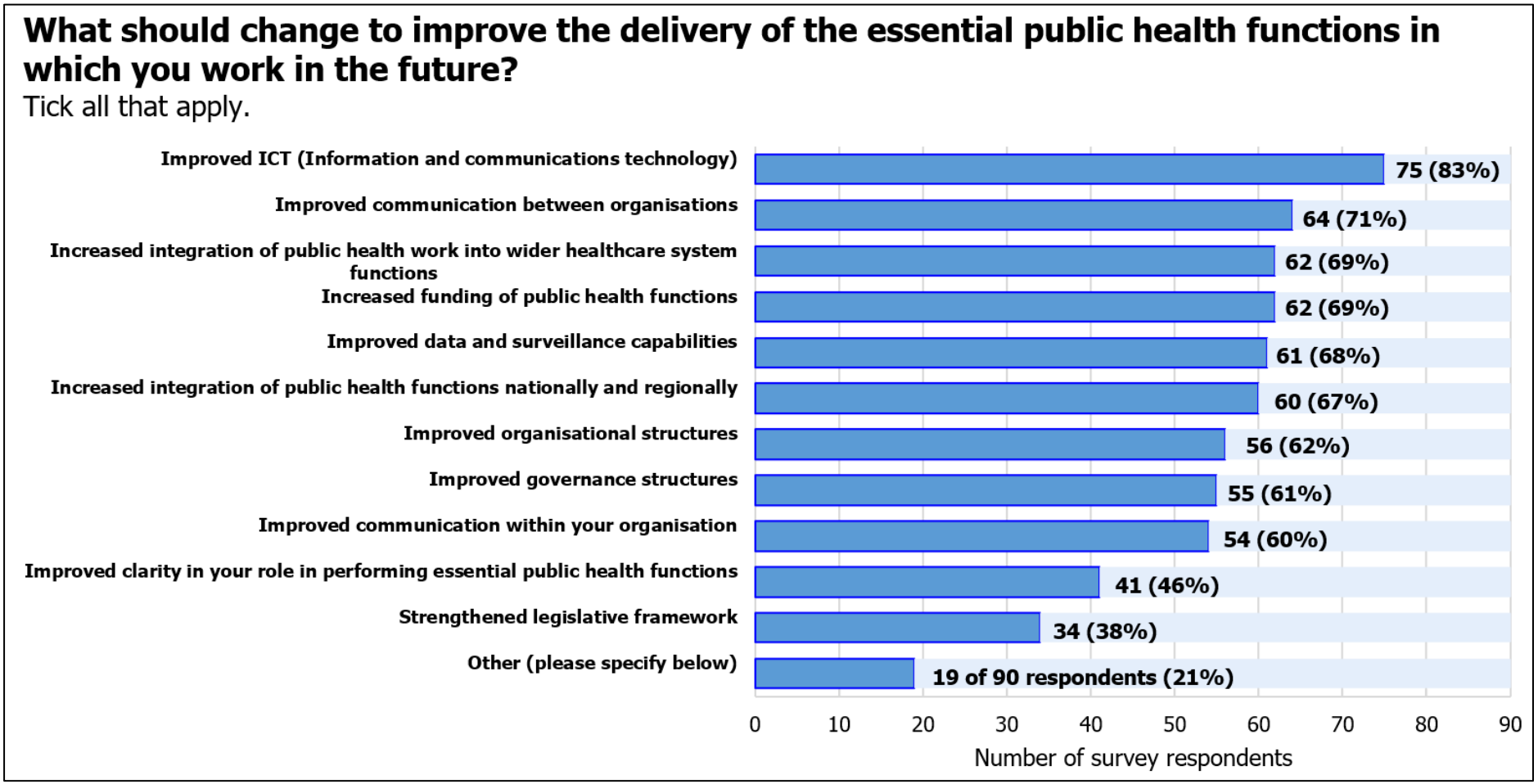
The importance of effective implementation of existing regulations was also emphasised.

"Assuring effective public health governance, regulation, and legislation – we have not fully implemented the International Health Regulations, leaving some gaps and risks in terms of national level operations needed to support some of the [emergency public health functions]."

3.3.4 Change required

In response to question ten, “What should change to improve the delivery of the essential public health functions in which you work in the future?”, 83% of respondents (75/90) selected “Improved ICT”, 71% (64/90) selected “Improved communication between organisations”, and 69% (62/90) selected “Increased integration of public health into the wider healthcare system function” (Figure 9). Ninety-seven percent of respondents selected more than one of the options for change presented (87/90), while 21% (19/90) selected “Other”. All respondents selected at least one of the twelve options presented (100% question response rate).

Figure 9: Summary of responses to question 10.



Note: The overall percentage does not add up to 100% as respondents could tick more than one option.

For respondents who selected "Other", the following responses were outlined:*

- "Recognise cross Government aspect to much of public health"
- "Clinical autonomy, Regional control & authority, Regional input into national policy & strategy"
- "Public health policy needs more visibility and attention, more shared ownership across government"
- "A focus on intersectional health inequalities"
- "More service-academic linkages with more joint posts, more involvement in community development."
- "Improved international collaboration - need more opportunities but also more efficiency"
- "Better education, training and upskilling of public health doctors and nurses."
- "Commissioning levers to ensure that [Community Healthcare Organisations] are held to account for the services they deliver"
- "Consider establishing an independent Public Health institute as has happened in many jurisdictions."
- "Move from governance by boards and turn agencies into divisions of the [Department of Health]"
- "Interfacing and integration of the public health into wider healthcare policy and services"
- "More diversity in public health workforce, including senior opportunities for non-medical"
- "A department should always strive to improve"
- "Improved communication (respect) in terms of contract duration and extension"
- "Improved staff engagement should be a priority. This is a mostly hands on service, remember that."
- "More proactive advocacy in all fields of relevance e.g. urban mobility, climate change"

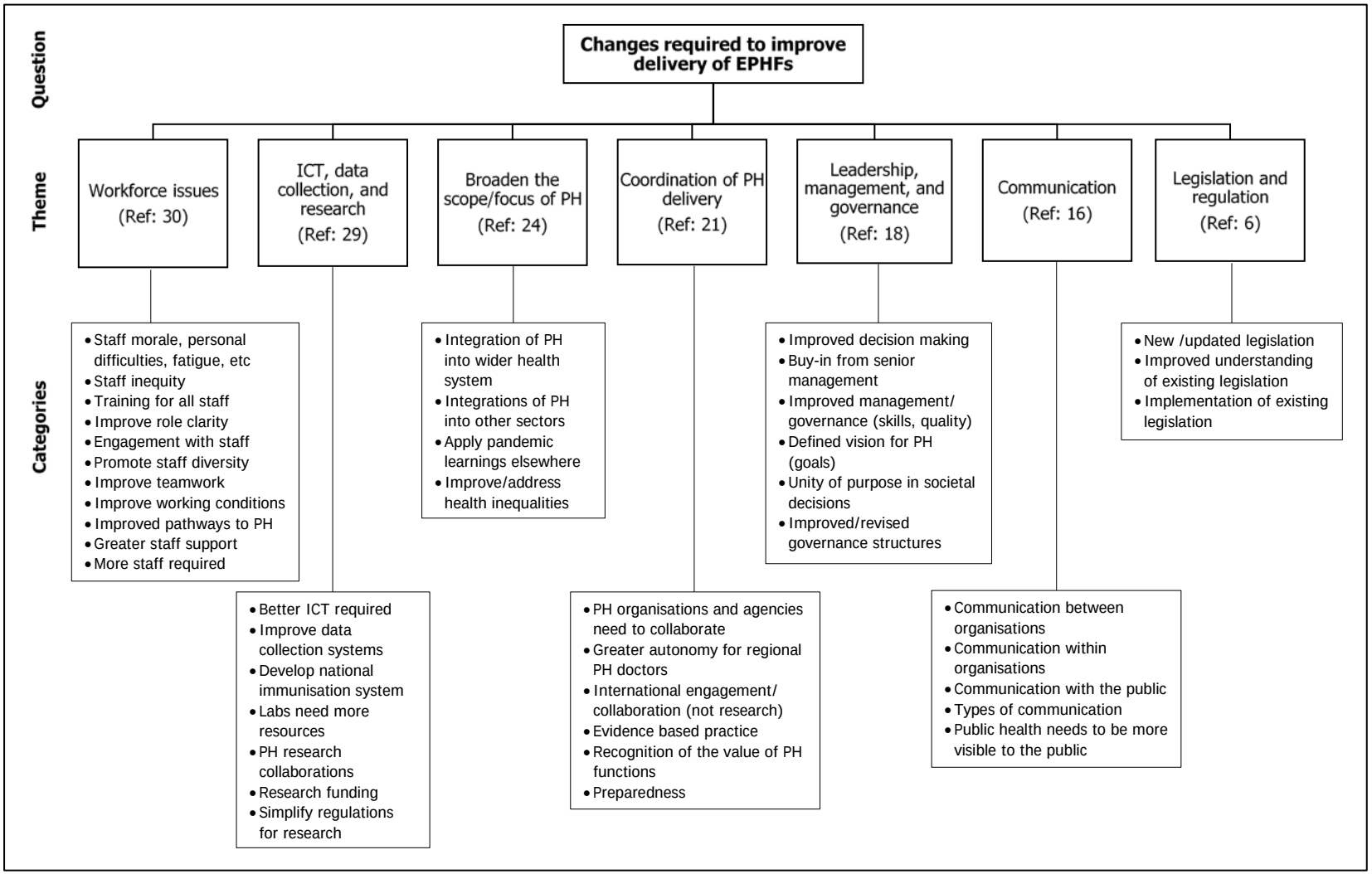
- "Support for [Public Health] as the third pillar of Management in Sláintecare Regional Areas (with [Hospital Groups] and [Community Healthcare Organisations])."
- "Better integration of health intelligence function with clinical programs"
- "Recognition of the importance of the role that public health plays in quality and patient safety"
- "A basic level of respect for each other would be helpful."
- "Public Health Service led by trained Public Health professionals and not clinicians."
- "Strengthened links between service-based public health teams and key academic partners"
- "Improved workforce planning; protected funding; establishment of a public health institute"
- "Improve knowledge and understanding of best practice in management sciences."

** 5 additional survey respondents outlined "Other" changes, despite not having selected "Other" previously.*

When asked to expand on their response to question ten, "What should change to improve the delivery of the essential public health functions in which you work in the future?", 48% percent of respondents (43/90) did not answer the question (52% question response rate). Out of the responses received, seven themes were identified (Figure 10):

- workforce issues
- ICT, data collection and research
- broaden the focus and/or scope of Public Health
- coordination of Public Health delivery
- leadership, management and governance
- communication
- legislation and regulation.

Figure 10. Themes and categories identified in response to question ten



Key: ICT – Information and Communications Technology; PH – Public Health; Ref - number of references to this theme in the survey responses.

Workforce issues

Eleven categories were identified in relation to workforce-related issues (Figure 10). The most commonly identified issue was a lack of clarity around job roles; however, some respondents noted either that this was understandable due to the pandemic or that they were now starting to receive greater job role clarity.

"...more clarity would be good but [the] current fuzziness [is] understandable."

Additionally, the need for more staff before and during the pandemic was frequently identified, with one respondent describing Public Health as *"absurdly"* understaffed. Relatedly, fatigue and overworking among respondents and their colleagues was also noted. Respondents also identified the need to employ staff with diverse professional backgrounds. Specifically, it was noted that Public Health is currently too medic-focused.

"Public Health needs to develop a more inclusive attitude to other specialists."

"At this growth stage, steps should be taken to promote diversity. There is a very strong medical model in the HSE, which is being replicated during public health reform."

Respondents identified the need for improved professional development opportunities and pathways in Public Health. Specific suggestions on areas in which training should be offered were mostly not provided, although one respondent noted the need for more support staff to *"be trained to document not only [terms of reference] and steering group meeting minutes but processes and supports."*

"Continuing professional development [CPD] opportunities should be available across the public health workforce and public health related CPD for others in both health and other sectors."

One respondent also highlighted the need for *"investment and support for undergraduate, postgraduate and doctoral training programmes in core public health disciplines."* Further categories related to workforce issues were the need to engage with staff working on the front line, to address interpersonal difficulties within organisations, to improve staff support, for greater equity across staff working in Public Health, to improve teamwork, and to improve working conditions (Appendix 3).

ICT, data collection and research

Seven categories were identified in relation to ICT, data collection, and research (Figure 10). ICT systems were described as outdated and as an obstacle to efficient work throughout the pandemic.

"The ICT systems are archaic, and I am surprised that Public Health can function given how basic the tools used are."

"Old and poorly integrated ICT has been a major barrier to working efficiently before and during COVID."

Respondents also identified the lack of integrated IT systems as an obstacle to effective data collection. In particular, issues with the CIDR database were noted, with one respondent stating that its lack of integration with the contact response management (CRM) information system *"has caused a disgraceful waste of resources (staff time, consultancy fees etc.)"*.

"A striking feature throughout the pandemic was the lack of integrated IT systems which hampered our ability to collect granular data and to link data sets required to support decision making."

The need for improved data collection systems was noted, as was the need to improve the linkage of population health and health service data. Respondents suggested a universal health identifier, similar to Denmark or Sweden. One respondent noted the potential benefits of such an identifier:

"This would allow chronic diseases to be monitored along a pathway from diagnosis, referral for treatment, treatment uptake, treatment outcome and overall outcome. Infectious disease data could be linked to hospitalisation data, cancer registries, pharmaceutical data, organ transplant data and data on deaths to give a fuller picture of the morbidity and mortality associated with each disease."

Another respondent noted that to implement this, additional work is required *"to ensure appropriate legal and ethical frameworks that support access, sharing and linkage of population health and health service data..."* The benefits of improved population health and health service delivery data collection were noted. Regarding public health research, respondents noted the need for increased funding, the simplification of regulations, and the alignment of research goals across institutions and organisations. In particular, one respondent noted the need for greater collaboration across institutions to effectively co-produce questions and solutions.

"There is a need to address the disconnect between academic public health in the HSE and academic public health departments, and between community

organisations and both service and academic public health departments in order to co-produce questions and solutions. More joint posts and projects could build transdisciplinary research capabilities."

Further categories related to ICT, data collection and research included the need to implement a national immunisation system, greater research funding, improved resources for laboratories, and a simplification of regulations for research (Appendix 3).

Broaden scope or focus of Public Health

Four categories were identified in relation to the broadening of the scope or focus of Public Health (Figure 10):

- integration of PH into wider health system
- integration of PH into other sectors
- apply pandemic learnings elsewhere
- improve/address health inequalities.

The potential to integrate Public Health as leaders and decision makers into the wider healthcare system was identified by respondents.

"Public Health (PH) during the pandemic have been shown to be responsive, highly professional, and have provided clear leadership while always continuing to learn. It is important that PH is now supported and resourced to build on these leadership roles to develop not only the health protection services for Ireland but also to support them to provide clear leadership in the other public health domains. PH have the training and skills to be able to provide strong leadership across health intelligence, health improvement and health service improvement. In health service improvement PH have skills in areas such as population needs assessment, data analytics, evidence synthesis, services and guideline development, change management and can provide strong leadership and negotiating skills as well as being "honest brokers" when assessing other health services."

"There is such a massive scope for Public Health Departments to be involved in so many fields and collaborating with many more other organisations, such as local councils, health promotion, EPA [Environmental Protection Agency], HAS [Health and Safety Authority], disaster planning, universities, labs and other scientific bodies. There is such underutilised potential for such a small and inter-connected country."

Further categories related to the potential to broaden the scope of Public Health included further means to address health inequalities, forming closer ties with elderly care settings to play a greater role in supporting dementia care programmes, and forming closer ties with schools to support mental and sexual health programmes. Respondents also highlighted the potential for Public Health to apply learnings from the pandemic elsewhere and collaborate with other sectors, including environmental and animal health sectors (Appendix 3).

Coordination of Public Health delivery

Six categories were identified in relation to the coordination of Public Health delivery (Figure 10):

- Public Health organisations and agencies need to collaborate
- greater autonomy for regional PH doctors
- international engagement/ collaboration (not research)
- evidence-based practice
- recognition of the value of PH functions
- preparedness.

The current fragmentation of Public Health and the need for organisations and agencies to collaborate were noted by respondents.

"There is a silo-ing of organisations in Ireland and, as far as I can see, a level of unhealthy competitiveness between some organisations involved in delivering public health functions in Ireland. Public health in Ireland would therefore benefit from more of a 'team' approach where organisations work together."

Colocation of academic and service-oriented agencies as a means to facilitate collaboration was suggested.

"Co-location of academic and service oriented public health units in dedicated facilities that support porous interfaces between public health research, policy and practice"

One respondent did not believe that greater collaboration was needed. Instead, this respondent believed that *"the system of agencies is flawed at its core – unless independence is necessary – but many are simply doing the functions of the Department of Health,"* creating unnecessary work and complications.

Respondents also highlighted the important role of Public Health in preparing for future issues, including the prevention of both communicable and non-communicable diseases and preparation for future pandemics or other crises.

"We need to formalise and capture preparedness plans for known threats to public health (e.g. those identified in the National Risk Assessments including AMR, CBRN, pandemics, food safety) and work with colleagues across government and internationally to build our systemic capacity to respond to crisis including unanticipated threats. We should integrate these plans into policy work both in health and across government."

Greater autonomy for regions was also suggested with one respondent stating that *"More control & authority must be devolved to regions."* They continued *"Classic example from pandemic was recruitment. Regional recruitment by PHDs would have enabled far more efficient, timely & better staffing of PHDs. Regions must be enabled & empowered to input into national strategies, policies etc.."*

Further categories related to the coordination of Public Health delivery included the need for greater recognition of the value of Public Health, evidence-based practice, and international collaboration (Appendix 3).

Leadership, management, and governance

Six categories were identified in relation to leadership, management and governance (Figure 10):

- improved decision making
- buy-in from senior management
- improved management/ governance (skills, quality)
- defined vision for PH (goals)
- unity of purpose in societal decisions
- improved / revised governance structures.

Respondents noted the need to strengthen governance structures, to increase the effectiveness of Public Health delivery.

"For PH services to be able to deliver high quality services and leaders across all the domains there needs to be strengthening of the governance structures within public

health and the HSE including strengthening clinical governance, quality assurance and quality improvement."

Respondents also made specific recommendations related to improved management structures.

"The new National Director of [Public Health] (NDPH) needs to be on the Senior Management Team of the HSE."

"Public health needs a Public Health Directorate in the HSE or a new Public Health Agency."

Related to the fragmentation of public health mentioned above, respondents highlighted the need for a broader Public Health strategy and alignment of vision, mission, and goals across Public Health organisations and agencies.

"Public health needs strategic direction and leadership - including a national public health strategy."

"Vision, mission and goals need to be defined for Public Health and its subdivisions."

Respondents also noted a need for improved management skills, including people skills, communication using both top-down and bottom-up approaches, and performance management. Unity of purpose across government and the general public was recognised as *"critical"* throughout the pandemic, as Public Health decisions carry "*significant and concrete implications for people's lives."* One respondent noted the relative efficiency of having one or two people with sole responsibility for oversight and governance rather than a board of people.

Further categories related to leadership, management and governance included the need for improved decision making and buy-in from senior management (Appendix 3).

Communication

Five categories were identified in relation to communication (Figure 10):

- communication between organisations
- communication within organisations
- communication with the public
- types of communication

- Public Health needs to be more visible to the public.

Respondents identified the need for improved communication. Poor communication between organisations related to the fragmentation of Public Health and the need for collaboration across organisations and agencies, was again noted here.

"Communication between Public Health and organisations charged with delivery of healthcare needs to improve dramatically."

"Needs to be more communication between different organisations working in public health, avoid duplication of work and ensure those working on the ground well informed as to current national situation."

Respondents also identified the need to improve communications within organisations generally and specifically in relation to clear roles and responsibilities for staff (Appendix 3).

The need for improved communications with the public and increased visibility of Public Health to the public was also highlighted.

"Given the speed at which decisions needed to be taken and the lack of existing organisational infrastructure there was limited opportunities for engaging with community groups, the wider public on decisions which would have significant and concrete implications for people's lives."

Legislation and regulation

Three categories were identified in relation to legislation and regulation (Figure 10):

- New / updated legislation
- improved understanding of existing legislation
- implementation of existing legislation.

Respondents stated that new legislation that can be activated in emergencies, such as the COVID-19 pandemic, is needed. One respondent also identified that new legislation may be required to aid data collection and sharing. One respondent identified the need to implement existing legislation, such as the International Health Regulations. Finally, one respondent did not believe there was a need for new legislation. Rather, they believed that *"the legislation underpinning Public Health [PH] function is in fact strong and the problem has been a poor understanding of it*

by senior PH and non-PH people." Further representative respondent quotes are provided in Appendix 3.

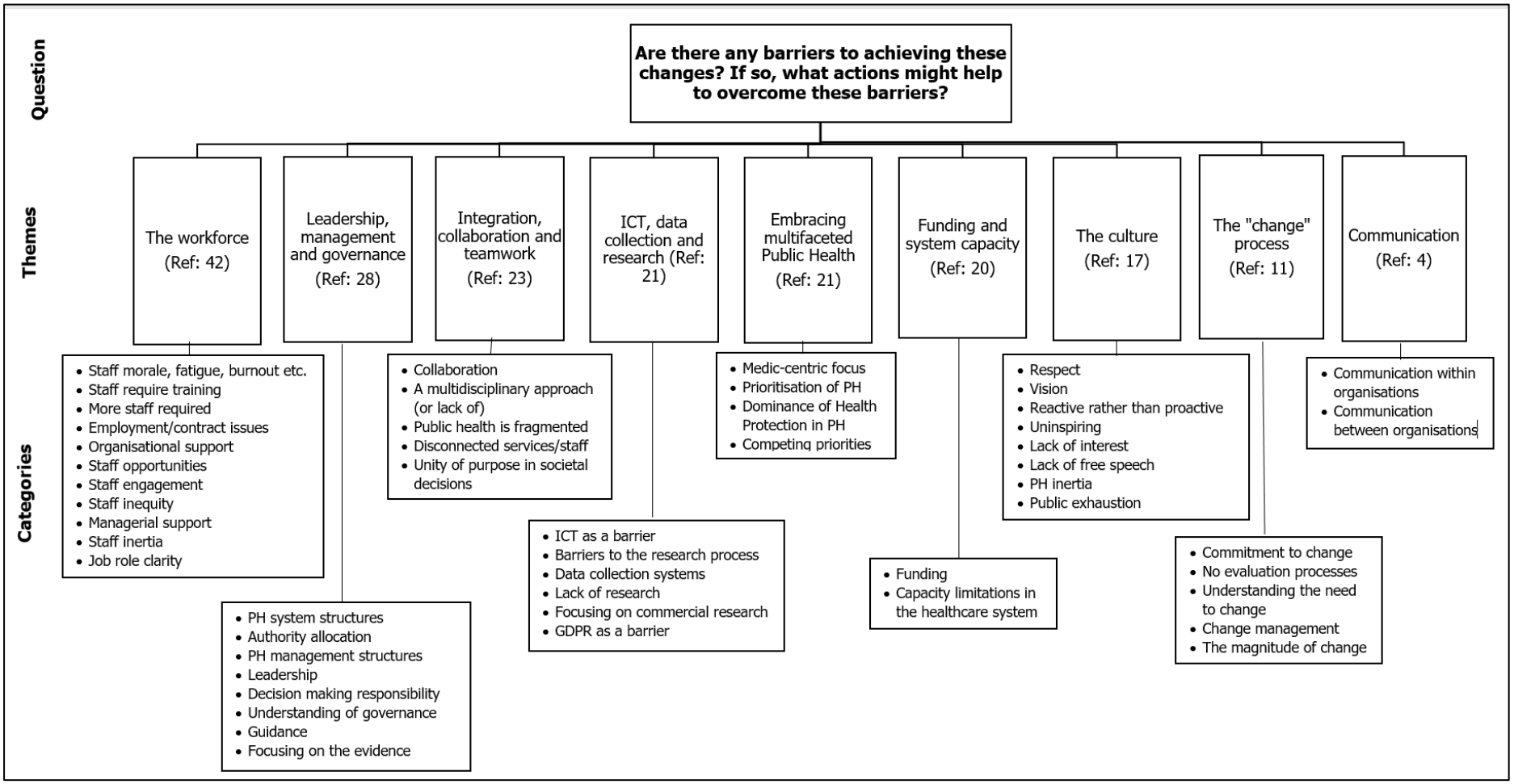
3.3.5 Barriers to change and actions to overcome them

In response to question 11, "Are there any barriers to achieving these changes? If so, what actions might help to overcome these barriers?" respondents regularly combined their responses to include both the barrier, and the action to overcome this barrier. Themes were therefore derived from encapsulating respondents overall responses, and where respondents explicitly identified an action, this was identified. Nine themes were identified (Figure 11):

- the workforce
- leadership, management and governance
- integration, collaboration and teamwork
- ICT, data collection and research
- embracing multifaceted Public Health
- funding and system capacity
- the culture
- the "change process"
- communication.

Thirty-four percent of respondents (31/90) did not answer the question (66% question response rate).

Figure 11. Themes and categories identified in response to question 11.



Key: ICT – Information and Communications Technology; PH - Public Health; Ref - number of references to this theme in the survey responses.

The workforce

Eleven categories were identified in relation to the workforce (Figure 11). Firstly, respondents identified that staff morale was low, staff were fatigued, and staff losses would occur if sufficient supports were not implemented.

"Staff burnout, don't dismiss this, it is very real. Improve supports, they are completely insufficient."

"There is a need to improve relationships within public health. Regional [Public Health Departments] have felt disrespected, dismissed & not listened to throughout the pandemic. Morale is very low." **[ACTION]**

Staff training for both leadership or management positions, and non-management positions was also identified as both a barrier in terms of preventing change and an action to be implemented in the future. Specific areas in which training was suggested were communication, leadership, and ICT.

"Health is a data heavy resource, and exclusion of built-in expertise to deal with increasing amounts of data will prove a costly mistake down the line. Overcoming this barrier will require bringing ICT salaries in-line with the private sector to entice the necessary expertise, or development of bespoke training opportunities within the HSE for current staff within ICT to upskill to fill this shortage." **[ACTION]**

"Training in communications and decision making for all leadership roles. Promoting uptake of co-leadership models through training." **[ACTION]**

Additionally, staff numbers was identified as a barrier by multiple respondents, with one respondent identifying that while Public Health staff numbers increased during the pandemic, this should continue in the future.

"It is great to see a big increase in [the Public Health] workforce during pandemic. Commitment to ongoing [Public Health] workforce planning comparable to other countries e.g. Scotland is needed." **[ACTION]**

Staff inertia, was also identified as a workforce barrier, with *"long term staff not open to change"*. Further categories related to workforce barriers and actions included employment and contract issues, managerial and organisational support, staff inequity, staff opportunities, staff engagement and job role clarity (Appendix 4).

Leadership, management and governance

Eight categories were identified in relation to leadership, management and governance (Figure 11). Firstly, respondents identified the wider Public Health governance as an overall barrier, with a need for *"clear Governance on who is leading who and who is responsible for what."*

Additionally, the requirement of transparency around reform structures was identified by respondents, to gain an understanding of where Public Health sits in the future.

"The reform structures at national level are opaque. For example, [the Health Protection Surveillance Centre] is the only organisation whose role is not named in the HSE organogram of the model for the future organisation of [Public Health] - where does it sit, does it exist."

Related to this, respondents also acknowledged the need for further Public Health reform and stated that clarity around governance structures was key within this reform.

"It is important that the reform of Public Health, with the establishment of clear governance structures including clinical governance, is clearly communicated, advocated for and supported by all levels of the health system including at national HSE level and by the Minister and [Department of Health]." **[ACTION]**

Following this, respondents identified that they did not believe authority was allocated to the right people (or that it should be allocated elsewhere), which affected efficiency in tasks, and caused an over-reliance on certain staff groupings.

"People knowing what they are talking about, authority being given to the right people and not having to check things [past]- a whole hierarchy of people."

"Too much reliance on clinical staff in management positions. Much of management is about clear governance, well documented processes and good communication. Clinical staff often feel that this is not their responsibility…Experienced non-clinical managers are just as able to fulfil this role and often understand better what is needed to avoid wastage. They are also more likely to ensure admin staff are trained to do this and to give direction when needed." **[ACTION]**

Directly related to management structures, respondents also identified the need for management training and further clarity and separation of management lines.

"Separate management lines. To date the Director of Public Health (DPH) managed all staff in a department and this enabled a coherent appropriate safe [Public Health] response to be delivered. Now nursing staff in [Public Health Departments] are

managed through a separate line up to a national [Director of Nursing] who is directing the nursing response & often in direct opposition to the response required by a [Department of Public Health] or a [Medical Officer of Health]... Clearer & more clinically appropriate management lines need to be agreed, with the response & service to the population at the core of any agreement." **[ACTION]**

Further categories related to leadership, management and governance included general leadership issues, unclear decision-making responsibility, lack of understanding of governance, inconsistencies in staff guidance and the need to focus on the evidence to underpin Public Health decisions (Appendix 4).

Integration, collaboration and teamwork

Five categories were identified in relation to integration, collaboration and teamwork (Figure 11):

- collaboration
- a multidisciplinary approach (or lack of)
- Public Health is fragmented
- disconnected services/staff
- unity of purpose in societal decisions.

Firstly respondents identified a need for improved collaboration and teamwork at staff level, Department level and nationally across organisations.

"Lack of cooperation between Government Departments, institutions, agencies and clear accountability. We need an institutional eco-system which is inclusive and can answer questions such as for what, for whom and to serve what good." **[ACTION]**

This included engagement and collaboration with the public, to build on the collaborative work completed during COVID-19.

"We should be ambitious and optimistic in our abilities, building on all the positives and developments of COVID-19 and mobilizing all constituencies to pull together to improve our collective public health. We should be open to engaging all sectors and constituents in solving public health problems including continuing to work closely with the public." **[ACTION]**

Additionally, respondents identified that Public Health is fragmented, and there is a need for it to be integrated within the wider healthcare system.

"The major barriers to the achievement of change in public health research capacity and support multidisciplinary public health workforce are those linked to (i) caution… and (iii) the dispersion and fragmentation of existing academic and service oriented public health units."

Lastly, respondents identified that multidisciplinary teamwork is not embraced within Public Health.

"Culturally departments of public health do not embrace multidisciplinary team work approach to new initiatives or indeed pre-pandemic ways of working e.g. only [Senior Medical Officers] or [Specialist Registrars] can do general ID notifications, the medical model of Public Health is pervasive"

Further categories related to integration, collaboration and teamwork included disconnected staff/services and unity of purpose in societal decisions. Respondents identifying that Public Health should engage with *"all sectors of society"* (Appendix 4).

ICT, data collection and research

Six categories were identified in relation to ICT, data collection and research (Figure 11):

- ICT as a barrier
- barriers to the research process
- data collection systems
- lack of research
- focusing on commercial research
- GDPR as a barrier.

Respondents frequently identified that the ICT infrastructure needs vast improvement, with data quality, data access and integrated systems impeding the delivery of a data-driven Public Health service. Strategic prioritisation of ICT, and investment in ICT, training and support were all identified as actions to overcome these issues.

"[The] information system development needs significant support both within PH and also across the system. This requires strategic prioritisation via strategy development, championing and funding, and investment in the skilled workforce to implement modern information systems for health. Systems that integrate, that talk to each other, using identifiers that support linking, backed by legislation would make a huge difference to having information to support public health." **[ACTION]**

Furthermore, respondents identified that deficits in ICT also impact the ability to conduct research, both nationally and internationally, and that a move to "open data" should be an action to overcome this.

"Lack of access to data from primary care, Inability to link data across organisations and the health system. Should be aiming for 'open data' to allow for wide sharing of anonymised data sets and comparison across the EU." **[ACTION]**

This was further emphasised by respondents outlining that a lack of, or inappropriate data collection systems, are also a barrier to any change occurring in the delivery of Public Health in Ireland.

"There are many obvious barriers to improving public health delivery in Ireland, not least the availability of appropriate data and systems for surveillance and research."

Further categories related to ICT, data collection and research included a lack of research, focusing on commercial research and GDPR as a barrier, with Ireland identified as *"not a naturally transparent society"* (Appendix 4).

Embracing multifaceted Public Health

Four categories were identified in relation to embracing multifaceted Public Health and these were identified at staff, department and national level (Figure 11):

- medic-centric focus
- prioritisation of Public Health
- dominance of Health Protection in Public Health
- competing priorities.

At the staff level, respondents identified that Public Health is medic-focused, and those with a medical background are afforded greater opportunity, greater compensation and prioritised in terms of decision making. Greater opportunities and value placed on non-medical staff, a multidisciplinary team approach, and a move

away from a medical degree as a base requirement were all identified as actions to overcome this.

"…Ireland also continues to maintain a traditional approach to public health throughout many of the relevant organisations, serviced largely by medical leadership. There would almost appear to be an element of gate-keeping here such that there are very few career opportunities (towards leadership) which are open to professionals who do not have a medical or nursing background…Given the multidisciplinary nature of public health, the shortage of medics working in public health (which is often blamed on medics not achieving similar salaries and status to their medical consultant counterparts), it would seem prudent to base entry to leadership positions on talent, postgraduate qualifications, and wealth of experience, as opposed to an undergraduate qualification." **[ACTION]**

At the department level, respondents also identified that within Public Health, health protection is prioritised with a lack of focus on the three other pillars (health improvement, health service improvement and health intelligence). Recruitment of Public Health experts across the remaining pillars may help to overcome this.

"The vast majority of the focus is on Health Protection and not on the other three pillars of public health. To overcome this, there is an urgent requirement to either formalise the links to where this exists elsewhere in the organisation and urgently bring in our consultants for these pillars so that focus can be brought to the area." **[ACTION]**

Furthermore, at the national level, respondents identified that Public Health is not valued or embraced within the wider healthcare system, and until this issue is resolved, Public Health will struggle.

"Public health can offer a lot to improve health and health care delivery, but this is seen as a threat by the senior levels of HSE, and the senior levels of [the Department of Health]. Until this changes public health will struggle, as will plans for service reform."

"HSE culture and leadership- need to change and embrace public health at [the] highest level in the organisation." **[ACTION]**

Issues around competing priorities was also identified within the theme 'embracing multifaceted Public Health' (Appendix 4).

Funding and system capacity

Two categories were identified in relation to funding and system capabilities (Figure 11):

- funding
- capacity limitations in the healthcare system.

Firstly, respondents regularly identified *"Funding"* as a barrier, with many respondents not elaborating further. For those who did elaborate, funding toward policy development, staff training and change management were stated as actions, while one respondent suggested that *"The barriers are that both the healthcare and political systems are totally focused on the here and now, not about investing in health promotion to prevent costs and demands on the system in the future."*

Similarly, while respondents often did not elaborate when referring to system capacity as barrier, one respondent identified a need for increased capacity in the Office of the Chief Information Officer (OCIO).

"[OCIO] capacity and ability to work with public health - increase capacity and ensure service offering is driven by needs of the business".

The culture

Eight categories were identified in relation to the culture (Figure 11). Firstly, a lack of respect for each other was regularly identified by respondents as a barrier, both within Public Health and nationally with other organisations (Government, HSE), with an improvement in relationships required to overcome this.

"We're an unhappy group of people who don't like or respect each other."

Following this, respondents also identified that there was a lack of vision within Public Health, particularly when moving beyond the Health Protection pillar.

"Lack of vision and innovation for road mapping Departments of Public Health into roles other than health protection centred".

"I've no vision for how it could/should look. Need to sell the vision." **[ACTION]**

Respondents also identified that Public Health is primarily reactive in its response, as opposed to proactive, while acknowledging that additional factors such as staff numbers may contribute to this response.

"Lack of staff resulting in public health being only reactive in responses particularly with Senior Area Medical Officer posts".

Public exhaustion was also identified by one respondent, with the reduced uptake of the influenza vaccine attributed to public *"vaccine exhaustion"*, where public restrictions have negatively impacted public attitude toward vaccination beyond COVID-19. Further categories identified in relation to the culture included an uninspiring healthcare system, a lack of interest, a lack of free speech and inertia within Public Health (Appendix 4).

The "change" process

Five categories were identified in relation to the "change" process (Figure 11):

- commitment to change
- no evaluation processes
- understanding the need to change
- change management
- the magnitude of change.

Firstly, respondents identified a need to commit to long-term changes, for real transformation in the delivery of Public Health to occur. This was specifically identified in regards to Public Health reform with a respondent identifying it will take time and for priority to be given to Public Health at a national level (as previously discussed) for adequate change to occur.

"Reforms that have started are very welcome, but it is only the beginning and there is a long road to go to ensure we can provide adequate Public Health Service in Ireland - not just health protection but across all domains of public health. HSE/department of health/government need to ensure public health reform remains a priority in the long/medium term, even if other priorities require more attention in the short term."

Respondents also identified the need for ongoing evaluation and assessment in relation to service delivery, to identify the impact of change and or to identify where change is needed.

"Embedding a culture of accountability through annual review of results delivery against the goals set, and using this process to identify barriers and blockages to

delivery so that the barriers can be minimised/ addressed." **[ACTION]**

The need for change management initiatives to be embedded within Public Health was also identified.

"Fear of change itself [as a barrier] - needs to be addressed through change management initiatives" **[ACTION]**

The magnitude of the change required was also identified as a category in relation to the "change" process (Appendix 4).

Communication

Two categories were identified in relation to communication (Figure 11):

- communication within organisations
- communication between organisations.

Firstly, the respondents identified that better communication is required within the Department of Public Health, particularly at administrative level.

"Communication and guidance within the [Department of Public Health] needs to improve, particularly in the admin team." **[ACTION]**

Furthermore, regarding communication from other organisations, clear communication regarding Public Health reform, and continued communication in about new Public Health responsibilities were both identified as required actions.

"It is important that the reform of Public Health, with the establishment of clear governance structures including clinical governance, is clearly communicated, advocated for and supported by all levels of the health system including at national HSE level and by the Minister and [Department of Health]."

"Key sponsorship and continued formal communication from the highest levels of the [Department of Health] and HSE ([Secretary General, Chief Executive Officer, Chief Operating Officer, Chief Corporate Officer) on the new [Public Health] responsibilities and structures in the HSE."

4 Discussion

The current report aimed to summarise and present public consultation survey data, gathered by the Department of Health to inform the work of the Public Health Reform EAG. Respondents (n=90), most of whom work within the HSE or Department of Health (87%), provided feedback on the delivery of a number of EPHFs prior to and in light of the pandemic. In addition respondents identified what they believed were the key lessons learned, changes required, and barriers to these changes, in relation to the delivery of these EPHFs. Common themes across the respondent feedback related to the need for improvements in: workforce issues; ICT, data collection and research; leadership, management and governance; and communications. These findings identify key learnings from the COVID-19 pandemic that may have implications for enhanced health protection and preparedness for future public health crises.

In regards to respondents' experience of the delivery of EPHFs in Ireland, respondents identified a clear need for improvement in the delivery of EPHFs, stating that for the majority of EPHFs, delivery was typically at best "average" pre-pandemic, and generally "stayed the same" or "improved" during the pandemic. While developed as a "fundamental and indispensable set of collective actions" with which Public Health goals can be achieved, the application and delivery of EPHFs is contingent on a number of factors including political commitment to Public Health, institutional agreements to lead and coordinate EPHFs, and workforce requirements for EPHF delivery.[8] In a study examining changes in the use of acute hospital care in Ireland during the first wave of COVID-19,[9] it was identified that while the COVID-19 pandemic impacted the Irish health system greatly (for example, there was increased demand for alcohol and mental health services, increased backlog of elective procedures etc.), the shock experienced by the system provided valuable insights with regards to the flexibility and innovation of service delivery. The authors suggested that this should now be harnessed to instigate sustainable health system change, with EPHF-contingent factors such as political leadership, human and financial resources and ICT infrastructure identified as key to this endeavour.[9]

Additionally, while respondents identified the delivery of EPHF 9 – *Ensuring adequate quantity and quality of public health workforce*, as "poor" or "very poor" prior to the pandemic, this was identified as being delivered "somewhat better" in light of the pandemic. It is well documented that the health system in Ireland is understaffed,[3] with OECD figures outlining that Ireland has a lower numbers of doctors (3.3 per 1,000 population in 2019) and nurses (12.9 per 1,000 population in 2019) compared with other countries.[10] However, during the pandemic there was an increase in general public health staff recruitment, with 1,700 more nurses and 900 more

doctors working in the HSE at the end of 2020, compared to 2019.[11] While survey respondents acknowledged this increase in staff numbers, respondents indicated that further recruitment is still required, with particular focus on workforce skills (that is, the appropriate skills mix needs to be considered).

In relation to workforce issues and the workforce, research has regularly identified the negative impact which the COVID-19 pandemic has had on healthcare professionals and those working within the larger Public Health domain. National and international[12] evidence has identified high rates of psychological distress, depression, stress and anxiety among healthcare workers, potentially caused by personal issues such as infection risk to self and others.[12-16] Combined with staffing issues (recruitment and retention), it may therefore be unsurprising that respondents identified that key lessons needed to be learned in regards to workforce issues, particularly in relation to improvements in workforce numbers, skill mix and training in order to improve Public Health delivery, as well as supports to minimise staff burnout. This aligns with findings from Shanafelt et al.[14] who reported that requests from healthcare professionals to their organisations during COVID-19 focused on the concepts of *hear me, protect me, prepare me, support me, and care for me*.[14] The authors also provide practical actions on how best to respond to these requests, ranging from creating an array of feedback channels to providing rapid training and access to experts, to providing support for tangible needs (for example, food and childcare).

Leadership, management and governance was also identified as a reoccurring theme across respondents' comments. In 2019, the Health Services People Strategy 2019 – 2024 was published,[17] with "Leadership and Culture" identified as Priority 1, central to the delivery of better healthcare and services valued by the public and staff. However, respondents within the current report identified a need for clarity around who had authority in regards to decision making, with respondents also identifying a need for inclusive decision making. In regards to governance, respondents identified a need for clear governance, particularly during the COVID-19 pandemic. An overview article by Dobbs[18] identified that during the COVID-19 pandemic underlying uncertainties (such as virus progression, treatment and associated morbidity levels) played a major role in the effective governance of Public Health. As decision making was based on the precautionary principle and trying to minimise risk, these uncertainties clouded the ability to address the pandemic. However, in light of the COVID-19 pandemic Public Health reform may present an opportunity in which to clarify Public Health governance and move from an *"opaque"* governance structure to one which is *"clearly communicated, advocated for and supported by all levels of the health system",* as identified by respondents.

ICT, data, and research capabilities were reoccurring, interlinked themes across respondent comments. ICT systems were reported as being *"archaic"* and a *"major barrier to working efficiently"* throughout the pandemic. In particular, the need to improve current data collection systems (for example, CIDR) and integrate them across health services and the public and private health systems was highlighted. This supports an Economic and Social Research Institute (ESRI) report which found that severe deficiencies in the Irish health data infrastructure were exposed during COVID-19, presenting substantial challenges for decision makers.[19] Similar to the ERSI report, some respondents suggested using a unique/individual health indicator to link data across systems and services. The rollout of eHealth initiatives such as individual health identifiers and electronic health records are ongoing projects in the implementation of Sláintecare, although progress has been negatively impacted by the need to prioritise eHealth solutions focussed on the pandemic and recovery from the cyber-attack in May 2021.[20, 21] Findings from the National Public Engagement on Health Information published by HIQA in 2021 show that the public would welcome the move towards a more digital healthcare system,[22] while internationally, the COVID-19 pandemic has generated renewed interest in data integration across the health system.[23] Sustaining and expediting progress in updating ICT and data surveillance capabilities is essential, with respondents highlighting its importance in facilitating public health research, and informing public policy and healthcare delivery.

Lastly, communication was identified as a reoccurring theme across respondent's comments. While the majority of respondents' commentaries were (in general) negative or advisory, there was mixed commentary (positive and negative) on communication within Public Health during the COVID-19 pandemic. While respondents identified that information was sometimes not forthcoming, they also highlighted that new lines of communication were established, which they hope to foster in future work. This need for improved communication among healthcare workers in Ireland has previously been identified.[24, 25] For example, in 2019, Ireland scored poorly (0/100, compared to a mean score of 15/100 across 195 countries) in the *communications with healthcare workers during public health emergencies* domain of the Global Health Security Index compiled by the Nuclear Threat Initiative and Johns Hopkins School of Public Health.[25] A checklist for global health communication practices during COVID-19 was compiled by Ratzan et al.[26] It identified setting shared goals, establishing coordinated responses, devising a communication strategy, implementing the community plan and being ready to adapt as the primary steps. These steps are largely focused around the collaboration of organisations within the Public Health domain, which was identified by respondents as a required communication change moving forward. While effective

communication with the public was prioritised as Action 3 in Ireland's National Action Plan in response to COVID-19 (Coronavirus),[24] further communication development may be required both within and between organisations in the Public Health domain.

4.1 Limitations

While 90 respondents were included within the final analysis, the majority of these were located within the Dublin region, and working within a HSE Public Health Department. Due to the voluntary nature of the survey, results within the current report are reflective of those who chose to participate, and therefore may differ from the opinions of those who did not. It is therefore unclear how representative the current results are, in regards to the broader community of individuals working in Public Health, in Ireland. Additionally, while the survey administered was interested in gaining insight in the delivery of EPHFs both before and during the COVID-19 pandemic (present day included), a large number of respondents have worked for less than two years in their current role in Public Health. This may have impacted on their ability to accurately answer questions 7 and 8 (the delivery of EPHFs before and in light of the COVID-19 pandemic). Furthermore, question non-response was apparent, with a decrease in the question response rate observed in the latter half of the survey. This was identified in the open-ended questions (or part open-ended questions), questions 9, 10 and 11, where question response rates of 73%, 52% and 66% were identified, respectively. While survey design methods such as forced answering could have been adopted to decrease question non-response, such practices have been identified to increase survey dropout and to decrease answer quality, thereby contributing to survey attrition.[27]

5 Conclusion

Overall, within the last number of years, the COVID-19 pandemic has placed healthcare systems worldwide under unprecedented pressure, with the Irish Public Health system no different. Individuals working within Public Health in Ireland were in a unique position to provide valuable information around the delivery of EPHFs both before and in light of the COVID-19 pandemic. The current report identified that respondents perceived the delivery of the majority of EPHFs pre-pandemic as being "average" at best, and generally "stayed the same" or improved somewhat during the pandemic. Additionally, themes around the workforce; leadership, management and governance; ICT, data collection and research; and communication were reoccurring across respondent comments and therefore may be key areas for consideration when guiding the work of the Public Health Reform EAG.

References

1. Acheson E. On the state of the public health [the fourth Duncan lecture]. Public Health. 1988;102(5):431-7.
2. Koplan JP, Bond TC, Merson MH, Reddy KS, Rodriguez MH, Sewankambo NK, et al. Towards a common definition of global health. The Lancet. 2009;373(9679):1993-5.
3. Tithe an Oireachtais Houses of the Oireachtas. Committee on the Future of Healthcare May 2017 [Available from: https://data.oireachtas.ie/ie/oireachtas/committee/dail/32/committee_on_the_future_of_healthcare/reports/2017/2017-05-30_slaintecare-report_en.pdf].
4. The World Health Organization, Regional Office for Europe. STRENGTHENING THE HEALTH SYSTEM RESPONSE TO COVID-19, Recommendations for the WHO European Region (1 April 2020) 2020 [Available from: https://apps.who.int/iris/bitstream/handle/10665/333072/WHO-EURO-2020-806-40541-54465-eng.pdf?sequence=1&isAllowed=y].
5. Government of Ireland. Ministers for Health establish the Public Health Reform Expert Advisory Group 2022 [Available from: https://www.gov.ie/en/press-release/8beb5-ministers-for-health-establish-the-public-health-reform-expert-advisory-group/#].
6. World Health Organisation (WHO). Essential public health functions 2022 [Available from: https://www.who.int/teams/integrated-health-services/health-service-resilience/essential-public-health-functions].
7. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative research in psychology. 2006;3(2):77-101.
8. World Health Organization (WHO). 21st century health challenges: can the essential public health functions make a difference? 2021 [Available from: https://apps.who.int/iris/bitstream/handle/10665/351510/9789240038929-eng.pdf?sequence=1].
9. Marron L, Burke S, Kavanagh P. The public health and health system implications of changes in the utilisation of acute hospital care in Ireland during the first wave of COVID-19: Lessons for recovery planning. HRB Open Research. 2021;4:67.
10. OECD, Systems EOoH, Policies. Ireland: Country Health Profile 20212021.
11. Government of Ireland. Health in Ireland - Key trends 2021 2021 [Available from: https://www.gov.ie/en/publication/350b7-health-in-ireland-key-trends-2021/].
12. Lai J, Ma S, Wang Y, Cai Z, Hu J, Wei N, et al. Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019. JAMA Network Open. 2020;3(3):e203976-e.
13. Gavin B, Hayden J, Adamis D, McNicholas F. Caring for the psychological well-being of healthcare professionals in the Covid-19 pandemic crisis. Ir Med J. 2020;113(4):51.
14. Shanafelt T, Ripp J, Trockel M. Understanding and Addressing Sources of Anxiety Among Health Care Professionals During the COVID-19 Pandemic. JAMA. 2020;323(21):2133-4.

15. Ali S, Maguire S, Marks E, Doyle M, Sheehy C. Psychological impact of the COVID-19 pandemic on healthcare workers at acute hospital settings in the South-East of Ireland: an observational cohort multicentre study. BMJ open. 2020;10(12):e042930.
16. Roberts T, Daniels J, Hulme W, Hirst R, Horner D, Lyttle MD, et al. Psychological distress and trauma in doctors providing frontline care during the COVID-19 pandemic in the United Kingdom and Ireland: a prospective longitudinal survey cohort study. BMJ open. 2021;11(7):e049680.
17. Division HSEHR. People Strategy 2019–2024. Dublin: Health Service Executive – Human Resources Division, 2019.
18. Dobbs M. National Governance of Public Health Responses in a Pandemic?: Eur J Risk Regul. 2020 Apr 21:1-9. doi: 10.1017/err.2020.39.
19. Walsh B, Mac Domhnaill C, Mohan G. Developments in healthcare information systems in Ireland and internationally. Dublin: The Economic and Social Research Institute (ESRI), 2021 June 23, 2021. Report No.
20. Government of Ireland. Sláintecare Implementation Strategy & Action Plan 2021-2023 2020 [Available from: https://www.gov.ie/en/publication/6996b-slaintecare-implementation-strategy-and-action-plan-2021-2023/].
21. Ireland Go. Slaintecare Progress Report 2021 [Available from: https://www.gov.ie/en/publication/9652b-slaintecare-progress-report-2021/.
22. HIQA. Findings of the National Public Engagement on Health Information: Health Information and Quality Authority 2021 [Available from: https://www.hiqa.ie/sites/default/files/2021-09/Findings-from-the-National-Public-Engagement-on-Health-Information.pdf.
23. Balsari S, Kiang MV, Buckee CO. Data in Crisis - Rethinking Disaster Preparedness in the United States. The New England journal of medicine. 2021;385(16):1526-30.
24. Government of Ireland. Ireland's National Action Plan in response to COVID-19 (Coronavirus) 2020 [Available from: https://assets.gov.ie/71520/4f149f2f5baf45d98312ec51f1b9ccf8.pdf].
25. Initiative NT, Health JHSoP. Global health security index: building collective action and accountability 2019.
26. Ratzan SC, Sommarivac S, Rauh L. Enhancing global health communication during a crisis: lessons from the COVID-19 pandemic. 2020.
27. Décieux PJ, Mergener A, Neufang MK, Sischka P. Implementation of the forced answering option within online surveys: do higher item response rates come at the expense of participation and answer quality? Psihologija. 2015;48(4):311-26.

Appendix 1. Public consultation survey

Survey to inform the work of the Public Health Reform Expert Advisory Group
Survey for individuals working in public health

Introduction
You are invited, as an individual working in public health in Ireland, to complete this short survey to inform the work of the Public Health Reform Expert Advisory Group (PHREAG).

The PHREAG is keen to hear from those working in public health in Ireland to:

- **gather lessons from your experience of the public health response to the COVID-19 pandemic** in Ireland and;
- **hear your ideas on how we can best improve the delivery of the essential public health functions in the years ahead.**

Information on how the data from this survey will be processed and used

Privacy Notice
See the Department of Health's Privacy Policy.
Any personal information which you volunteer to this consultation will be treated with the highest standards of security and confidentiality, strictly in accordance with the General Data Protection Regulation 2016/67 and the Data Protection Act 2018.

How data will be used
The Department of Health is collecting this data to inform the work of the Public Health Reform Expert Advisory Group. The Health Information and Quality Authority (HIQA) will analyse the responses and produce a report for the Public Health Reform Expert Advisory Group outlining the main themes and findings of the consultation.

By completing this survey, you are consenting to your data being processed by the Department of Health and HIQA. Your data will only be used in the context of the work of the Public Health Reform Expert Advisory Group and for no other purpose.

Freedom of Information
All surveys and comments submitted to the Department for this purpose are subject to release under the Freedom of Information (FOI) Act 2014 and the European Communities (Access to Information on the Environment) Regulations 2007- 2014. Personal, confidential or commercially sensitive information should not be included and it will be presumed that all information contained in your survey response is releasable under the Freedom of Information Act 2014.

What is the role of the Public Health Reform Expert Advisory Group?
The Public Health Reform Expert Advisory Group (PHREAG) is an independent expert

group which has been established by the Minister for Health and the Minister of State for Public Health, Wellbeing and the National Drugs Strategy. Its mandate is to identify learnings from the public health response to the COVID-19 pandemic in Ireland with a view towards strengthening health protection generally and future pandemic preparedness specifically. The PHREAG will also identify lessons from international best practice regarding reform and strengthening of other core public health functions, traditionally described under four key pillars which encompass health protection, health improvement, health service improvement and health intelligence.
The World Health Organization has proposed the use of an essential public health function (EPHF) framework to support an integrated approach to sustainable public health systems strengthening. The PHREAG is using the twelve EPHFs to inform their deliberations and these map to the traditional four pillars of public health. The twelve functions are as follows:

1. Monitoring and evaluating population health status, health service utilisation and surveillance of risk factors and threats to health
2. Public health emergency management
3. Assuring effective public health governance, regulation, and legislation
4. Supporting efficient and effective health systems and multisectoral planning, financing, and management for population health
5. Protecting populations against health threats, including environment and occupational hazards, food safety, chemical and radiation hazards
6. Promoting prevention and early detection of diseases including non-communicable and communicable diseases
7. Promoting health and wellbeing and actions to address the wider determinants of health and inequity
8. Ensuring community engagement, participation and social mobilization for health and wellbeing
9. Ensuring adequate quantity and quality of public health workforce
10. Assuring quality of and access to health services
11. Advancing public health research
12. Ensuring equitable access to and rational use of essential medicines and other health technologies

Please see this webpage for additional information on the Public Health Reform Expert Advisory Group

Section 1: Some information about you

- **Do you work in public health in some capacity in Ireland?**
    - Yes/No

- **Where are you predominantly based in your current role?**
    - Drop down list of provinces, one option only
        - Connacht
        - Leinster -Dublin
        - Leinster - outside Dublin

- Munster
- Ulster

- **What organisation do you work for? Tick all that apply**
  - o Academic Institution
  - o Acute Hospital
  - o Institute of Public Health
  - o Community Health Organisation
  - o Department of Health
  - o Economic and Social Research Institute
  - o Faculty of Public Health Medicine of Ireland
  - o Food Safety Authority of Ireland
  - o Health and Safety Authority
  - o Health Information and Quality Authority
  - o Health Products Regulatory Authority
  - o Health Research Board
  - o HSE Health and Wellbeing Directorate
  - o HSE Health Intelligence Unit
  - o HSE Health Protection Surveillance Centre
  - o HSE Public Health Department
  - o Irish College of General Practitioners
  - o Irish Medical Council
  - o Irish Medical Organisation
  - o National Cancer Control Programme
  - o National Cancer Registry Ireland
  - o National Immunisation Advisory Committee
  - o National Screening Service
  - o National Social Inclusion Office
  - o National Virus Reference Laboratory
  - o Public Health Laboratory
  - o Safefood (Food Safety Promotion Board)
  - o HSE Other, please specify _____
  - o Other, please specify _____

- **What is your principal role?**
  - o Academic
  - o Administrative
  - o Allied healthcare
  - o Management
  - o Medical
  - o Nursing
  - o Other (please specify below)
  - o Other clinical
  - o Scientific
  - o Surveillance
  - o Technical

- **How long have you been in your current role? Tick box below**
    - Less than 2 years
    - 2-5 years
    - 5 years+

Section 2: Assessment of EPHFs in your role

- **Which of the following essential public health functions (EPHF) do you undertake in your current role? Tick all that apply**
    - Monitoring and evaluating population health status, health service utilisation and surveillance of risk factors and threats to health
    - Public health emergency management
    - Assuring effective public health governance, regulation, and legislation
    - Supporting efficient and effective health systems and multisectoral planning, financing, and management for population health
    - Protecting populations against health threats, including environment and occupational hazards, food safety, chemical and radiation hazards
    - Promoting prevention and early detection of diseases including non-communicable and communicable diseases
    - Promoting health and wellbeing and actions to address the wider determinants of health and inequity
    - Ensuring community engagement, participation and social mobilization for health and wellbeing
    - Ensuring adequate quantity and quality of public health workforce
    - Assuring quality of and access to health services
    - Advancing public health research
    - Ensuring equitable access to and rational use of essential medicines and other health technologies

Section 3: Strategic Challenges for the delivery of public health functions into the future

- **Only considering the individual EPHFs that you deliver as part of your current role, what were your views on the delivery of these EPHFs before the pandemic? Note: only those EPHFs ticked above are visible**

  1- Very Poor; 2- Poor; 3- Average; 4- Above Average; 5- Excellent

    - Monitoring and evaluating populations health status, health service utilisation and surveillance of risk factors and threats to health — Choose 1-5
    - Public health emergency management — Choose 1-5
    - Assuring effective public health governance, regulation, and legislation — Choose 1-5

- o Supporting efficient and effective health systems and multisectoral planning, financing, and management for population health — Choose 1-5
- o Protecting populations against health threats, including environment and occupational hazards, food safety, chemical and radiation hazards — Choose 1-5
- o Promoting prevention and early detection of diseases including non-communicable and communicable diseases — Choose 1-5
- o Promoting health and wellbeing and actions to address the wider determinants of health and inequity — Choose 1-5
- o Ensuring community engagement, participation and social mobilization for health and wellbeing — Choose 1-5
- o Ensuring adequate quantity and quality of public health workforce — Choose 1-5
- o Assuring quality of and access to health services — Choose 1-5
- o Advancing public health research — Choose 1-5
- o Ensuring equitable access to and rational use of essential medicines and other health technologies — Choose 1-5

- **Only considering the individual EPHFs that you deliver as part of your current role, have your views on the delivery of these EPHFs changed in light of the COVID-19 pandemic experience? Consider whether delivery is... Note: only those EPHFs ticked above are visible**
  1 – Much worse; 2- Somewhat worse; 3- Stayed the same; 4- Somewhat better; 5- Much better

- o Monitoring and evaluating populations health status, health service utilisation and surveillance of risk factors and threats to health — Choose 1-5
- o Public health emergency management — Choose 1-5
- o Assuring effective public health governance, regulation, and legislation — Choose 1-5
- o Supporting efficient and effective health systems and multisectoral planning, financing, and management for population health — Choose 1-5
- o Protecting populations against health threats, including environment and occupational hazards, food safety, chemical and radiation hazards — Choose 1-5
- o Promoting prevention and early detection of diseases including non-communicable and communicable diseases — Choose 1-5
- o Promoting health and wellbeing and actions to address the wider determinants of health and inequity — Choose 1-5
- o Ensuring community engagement, participation and social mobilization for health and wellbeing — Choose 1-5

- Ensuring adequate quantity and quality of public health workforce — Choose 1-5
- Assuring quality of and access to health services — Choose 1-5
- Advancing public health research — Choose 1-5
- Ensuring equitable access to and rational use of essential medicines and other health technologies — Choose 1-5

- **What are the <u>key lessons</u> from the pandemic? (Please identify which EPHF(s) you are specifically referring to in your answer)**
  - Free text (1400 characters)

- **What should change to improve the delivery of the essential public health functions in which you work in the future?**

  Tick all that apply

  a. Improved communication within your organisation
  b. Improved communication between organisations
  c. Improved ICT (Information and communications technology)
  d. Improved data and surveillance capabilities
  e. Improved organisational structures
  f. Improved governance structures
  g. Strengthened legislative framework
  h. Increased funding of public health functions
  i. Increased integration of public health functions nationally and regionally
  j. Increased integration of public health work into wider healthcare system functions
  k. Improved clarity in your role in performing essential public health functions
  l. Other_ (please specify) _____

  Please expand on your responses to this below:
  - Free text (1400 characters)

- **Are there any barriers to achieving these changes? If so, what actions might help to overcome these barriers?** Free text (1400 characters)

Appendix 2. Additional categories identified in response to question 9.

Theme	Category	Representative respondent quote
Communication	Types of communication	*"Technology and communication – more digital communication rather than face to face that inconvenience a person especially if the person is unwell or sick."*
Leadership, management and governance	Evidence-based decisions	*"Public Health professionals in Ireland have always had a good sense of "WHAT" needs to be done. The overwhelming weakness (in my view) is a failure to apply evidence based, best practice, in "HOW" things get done. There is a huge body of literature in management science that should be guiding our operations and use of resources to response to public health threats. This evidence based has been completely and absolutely ignored both before and during the pandemic. We've adopted an unspoken mantra of "work harder and spend more money" (which will get the job done, to a point)."*
	Public health structures	*"The pandemic highlighted the need for national structures and processes to support multidisciplinary public health teams working with Public Health Medicine consultant physicians at national and regional level and in specialist centres such as the HPSC."*
	Quality assurance and improvement	*"Prior to and during the pandemic public health has been to the forefront of advocating and supporting the use of needs assessment for services delivery including rationing. Public Health has also led on quality assurance and quality improvement across many health services during this time of challenge for example contact tracing, vaccination services, cancer services, screening services. Public health should further develop this role in the future based on their unique skills and expertise and also that they can play the role of "honest broker" when designing, delivering and assuring other health services."*
ICT, data collection and research	Research prioritisation	*"Value of mobilising health researchers towards particular issues."*

Workforce issues	Agility and resilience	*"The resilience, agility and unique contribution of the entire public health workforce. I was redeployed to the Department of Public Health, during the pandemic. I experienced the agility and resilience of public health staff during my time there."*
	Inequity	*"There was so much staff movement and redeployment that new staff /and new in role staff had no one available to support them and answer questions. Managers and experienced staff were working from home and attending meetings all day. All admin staff were ordered to attend the workplace with maximum of just one manager available who was not necessarily able to support. It felt risky on two levels:* *a) prior to vaccination there was a sense that only the health of senior staff mattered and junior/ new staff were left to take the risk and keep the machine running* *b) as a new admin staff member unfamiliar with working in clinical settings, let alone multiple clinical settings I was immediately sent out to multiple residential care settings and community settings across services within 24 hours of starting. I often felt like quitting and onsite front line staff were shocked that someone so junior was sent to them. This did not help to build trust in the system."*
	Recognition	*"Recognition of the importance of the Public Health function and the important role of the Public Health physician."*

Appendix 3. Additional categories identified in response to question 10.

Theme	Category	Representative quote
Workforce issues	Staff morale, personal difficulties, fatigue, etc.	*"There are significant interpersonal difficulties within and between departments - more effort goes towards the protecting of ego than to the protection of our population."*
	Staff inequity	*"There is a lot of attention on those working in the medical field who work in public health and the need to improve their conditions, but little focus on non-medic colleagues, who are also chronically under-resourced (in terms of HR, ICT, data availability etc.)."*
	Engagement with staff	*"...we can say what we want as staff, most of the time it falls on deaf ears, if you want to change things for the better, ask the people doing the work, on the ground."*
	Improve teamwork	*"Increased teamwork only if increased funding allows more manpower..."*
	Improve working conditions	*"In addition, management/admin does not receive overtime as do medical professionals and have worked many non-compensated hours."*
	Greater staff support	*"More link with Environmental managers - need one to one meetings."*
ICT, data collection, and research	Develop national immunisation system	*"Need to get a system where all childhood vaccinations done in a general practice setting are entered directly onto a national IT system - as was put in place for COVID. At the moment GPs enter childhood vaccinations onto their practice IT system, print record and send it to HSE for entry onto HSE IT system - a total waste of time and also increases the risk of mistakes"*
	Labs need more resources	*"The laboratories have not received the additional resources that the depts. of public health have received as a result of COVID and as a consequence much of the non-COVID surveillance work has stalled (e.g. AMR). Surveillance function in the labs were under resourced before COVID as it was."*
	Research funding	*"Key areas in the public health system...that need strengthening over the next 3-5 years include... review and repurposing of the existing health research funding landscape in Ireland to ensure dedicated and protected funding streams to support the broad spectrum of public health, health system and health services research."*
Broaden the scope and/or focus of PH	Integrations of PH into other sectors	*"Need also for integration across sectors, including the environmental and animal health sectors and working with professionals in those disciplines for areas which are cross cutting. For example on zoonoses."*

	Apply pandemic learnings elsewhere	*"If the same model could be applied to significant public health issues such as Mental health, Sexual diseases. The population is growing and varied with people from all corners of the world, many of them very vulnerable. Many of them do not know how to access our services. If they see us on the ground it removes that barrier for them."*
	Improve/address health inequalities	*"It is clear that inequalities have a high impact in terms of risk factors for both NCDs and Covid-19 (and most likely other infectious diseases also). The impacts of the pandemic seemed to differ along lines of age, gender, race, underlying health and socioeconomic status; more research may be necessary to understand these impacts better, but the impacts of disadvantage, in particular, may be amenable to policy intervention."*
Legislation and regulation	New/updated legislation	*"Additional work to ensure appropriate legal and ethical frameworks that support access, sharing and linkage of population health and health service data, including unique health identifiers, e-health capacity, well-functioning disease registries, health informatics, big data capacity etc."*
	Implementation of existing legislation	*"Public Health Emergency Mgt - fully implement international public health legislation fully - e.g. International Health Regulations."*
Leadership, management, and governance	Decision making needs to be improved	*"Decision making needs to be drastically improved, with reasons for decision making clearly communicated along with the decision itself, alternatives considered and rejected."*
	Buy-in from senior management needed	*"Senior Management buy in at the highest level of the Department is required to ensure the emergency management function is embedded with the Department with appropriate resources provided to perform this function."*
	Improved management/ governance (skills, quality)	*"There are very poor management structures within the dept where I am located - usual problem of medical doctors being managers when they have no interest/skills in managing people."*
Communication	Communication within organisations	*"Improved communication within your organisation - DPH comms required, often PH guidance or updated measures is garnered from media outlets"*
	Communication (unstated)	*"Communication is very poor at the moment, needs to be better."*
	PH needs to be more visible to the public	*"Mobile Clinics: The public are now getting their information from a myriad of sources and unfortunately these are not always reliable or supported by any medical foundation. The physical presence of public health as an entity is effective in communicating directly with the public. The public response and experience to testing and vaccination in Ireland was overwhelmingly positive. Unfortunately the typical experience of someone accessing medical services in Ireland is one of delays and disappointment."*

Coordination of public health delivery	International engagement/ collaboration (not research)	*"Also fully participate in international fora (e.g. HERA, ECDC, EMA, HSC, WHO) to engage with expertise, resourcing and other opportunities."*
	Evidence based practice	*"In addition to the primary impacts and differing disease risk, there were also ancillary and varied impacts on various aspects of health and wellbeing - on health behaviours such as smoking, diet, activity levels, social connectedness and mental health - which we need to keep an eye on as society re-opens. The Healthy Ireland Survey and other, similar research instruments will be invaluable in this regard. It is important to keep a close eye on these; they are also likely to be variously impacted by the cost of living, current inflation rates and other recent factors."*
	Recognition of the value of PH functions	*"Public Health can be invisible and is not well resourced within HSE. Other pressures mean that PH may not be as strong as it could be as an external organisation that could require HSE to deliver in accordance with standards. This is the direction of travel for many countries."*

Appendix 4. Additional categories identified in response to question 11.

Theme	Category	Representative respondent quote
The workforce	Employment, contract issues	*"Two tier system of CPHMs & SPHMs both equally qualified (RCPI CSCST PHM). SPHMs cannot be expected to continue to function as CPHMs (as they have done for decades) if the HSE is not going to employ, recognise or respect them as CPHMs. A 2-tier system cannot be allowed to be established."*
	Organisational support	*"The training of Public Health physicians is wide-based and supports them to become leaders and provide expertise and experience in many areas such as health improvement, health service improvement, patient safety and quality improvement. This significant training, skills and expertise should be harnessed by the health system so as to improve the Irish health services for the people who use them and the people providing them."* **ACTION**
	Staff opportunities	*"Management staff should have opportunities to take up senior leadership roles, some of which are only available to SPHMs."* **ACTION**
	Staff engagement	*"Lack of staff engagement."*
	Staff inequity	*"Focus on developing SPRs and SMOs role with DPHs to the deliberate and persistent exclusion of nurses in some Departments of Public Health."*
	Managerial support	*"Nurse's role within the organisation is effectively 'managed' by SPHMs to complement own agendas despite a nursing organisation structure being implemented".*
	Job role clarity	*"When new director starts, discussions around roles and responsibilities of the admin team have to finally be looked at."* **ACTION**
Leadership, management and governance	Leadership	*"An end to the board and working group's culture. Leaders need to take responsibility for specific areas, consult properly and then make decisions. The leaders I know may be perfectly capable but are given far too many areas to look over to actually focus properly on a change, implementing and overseeing that change."* **ACTION**
	Decision making responsibility	*"Organisational - who is responsible to setting the public health agenda"*
	Understanding of governance	*"The old adage," what you don't know, you don't know" applies. There is a lack of*

		understanding of governance in PH. If I was to request the minutes and actions from meetings of the Directors of Public Health / CPHOG, I would not receive them as they do not routinely exist."
	Guidance	*"Communication and guidance within the DPH needs to improve, particularly in the admin team".* **ACTION**
	Focusing on the evidence	*"Focusing on the evidence base to inform public health and keeping industry interests out of the population health policy process."* **ACTION**
Integration, collaboration and teamwork	Disconnected services/staff	*"There is a cultural disconnect between public health physicians and GPs which is a disaster. As a GP [in the] community I don't know personally or professionally any of the local public health team of doctors and nurses. They have never been near me. They have never contacted me, even during the pandemic, and when I contacted them to ask advice about managing an outbreak in our community they were vague, not sure who was in charge, I got conflicting advice and eventually gave up."*
	Unity of purpose in societal decisions	*"Public health needs to work with all sectors of society and we need to be more globally connected."* **ACTION**
ICT, data collection and research	Poor data collection systems	*"There are many obvious barriers to improving public health delivery in Ireland, not least the availability of appropriate data and systems for surveillance and research."*
	Lack of research	*"It is also difficult to measure the impact of health promotion initiatives due to the lack of baseline data and the lack of investment in longitudinal and outcome based evaluation."*
	Focusing on commercial research	*"The major barriers to the achievement of change in public health research capacity and support multidisciplinary public health workforce are…..(ii) a national research funding culture and strategy that is heavily focused on enterprise and the commercialisation of research outputs and…..oriented public health units."*
	GDPR as a barrier	*"GDPR. Ireland is not a naturally transparent society."*
Embracing multifaceted Public Health	Competing priorities	*"Competing priorities – will we need to wait for a child health and immunisation system or can a NIIS proceed, is a system for public health outbreaks going in before NIIS or at the same time."*
The culture	Uninspiring	*"The current Public Health landscape in Ireland is uninspiring, but it can be world class, and I like to hope for a brighter future."*

	Lack of interest	*"Lack of interest from decision makers in making meaningful change."*
	Lack of free speech	*"Most expert's voices were suppressed during pandemic. Lack of driver in opinions & lack of free speech during pandemic."*
	PH inertia	*"Resistance to change or provision or new services or to new populations."*
The "change" process	The magnitude of change	*"The magnitude of change, especially on foot of the professional and societal experience of dealing with a pandemic."*