

New Psychoactive Substances (NPS): results of a questionnaire on the definition of NPS, proposals to establish a forensic centre for excellence, and improving data collection and information sharing



CRIME AND JUSTICE

New Psychoactive Substances (NPS): results of a questionnaire on the definition of NPS, proposals to establish a forensic centre for excellence, and improving data collection and information sharing

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Executive Summary

Introduction

This report presents the results of a questionnaire on New Psychoactive Substances (NPS) issued by the Scottish Government in September 2015. The aim of the questionnaire was to gather views on three key areas: a definition of NPS, proposals to establish a Forensic Centre for Excellence, and options for improving data collection and information sharing.

The results will be used to inform on-going discussions with the UK Government and stakeholders in Scotland in relation to implementation of the Psychoactive Substances Act, and to further develop the Scottish Government's policy programme on NPS.

Consultation responses and respondents

A total of 54 responses were received to the questionnaire: 24 from individuals and 30 from organisations. This included enforcement, health, academic and third sector stakeholders.

Defining New or Novel Psychoactive Substances (NPS)

Overall there were high levels of agreement that the legal definition of psychoactive substances set out in the Psychoactive Substances Act should be adopted by a wide range of stakeholders. There were a number of concerns raised about the specific definition proposed, for example the absence of the concept of harm. However, for the majority of respondents it appeared that concerns about the definition were outweighed by the benefits of having a consistent definition that could be used widely.

There was also agreement with proposals to categorise NPS based on their effects, in line with the Drugs Wheel Model. This would categorise NPS under nine categories: opioids, stimulants, empathogens, psychedelics, dissociatives, depressants, cannabinoids, and 'other' or 'unknown'. However, there was some disagreement about whether the proposed categories could be applied by people who were not experts in NPS. Suggestions to ensure that these categories could be applied accurately included providing additional resources, training, and guidance, as well as input from experts in order to assign substances to categories. It was also suggested that categorisation be based on actual effect rather than intended effect, and that the number of categories be reduced to minimise confusion.

Identifying and Detecting NPS

There was broad agreement amongst respondents with the proposed functions of a Forensic Centre for Excellence. These functions included leading on the identification of NPS, testing for psychoactivity, linking identification of NPS with harms and treatment and developing national reference standards. They also included linking in with other data sharing systems (e.g. the UK Forensic Early Warning System), and sharing information with relevant partners and services.

A number of respondents provided information about how they could potentially support the proposed functions. This ranged from chemical and toxicology analysis, to collating local intelligence to feed into a central hub of information.

There was some disagreement with the proposal that Police Scotland, Crown Office and Procurator Fiscal Service, Scottish Prison Service, Local Authority Trading Standards Services and Border Force should be the key priority areas for submitting NPS samples. Overall however, the majority agreed with the proposed list. There was also strong support for NHS Emergency Departments to be able to submit biological samples for testing.

While most respondents agreed that it would be useful if Emergency Departments captured data on harms associated with specific NPS samples, a number of challenges to achieving this in practice were noted. In particular this included the need to improve data capture systems, and increase capacity within services to record data on NPS. The challenge of knowing whether symptoms were NPS related or not, and gaps in knowledge about NPS and their effects were also seen as key barriers. Suggestions for overcoming these barriers included capitalising on existing systems and processes.

Improving information sharing on NPS

Improving information sharing on NPS was a key priority among respondents. A number of suggestions for the content and nature of dissemination of information on NPS were made. This included contextual information about a sample such as name and dose consumed, forensic identification of the substance, and its effects. The majority of respondents indicated that it would be most useful to receive this information on a monthly basis, although some thought it would be helpful to have access in real time. Suggestions about the format of dissemination ranged from a shared database to email bulletins. There were different views about disseminating information to members of the public.

There were high levels of agreement that a Forensic Centre for Excellence should manage and disseminate alerts on new and potentially harmful NPS. However, the timing of alerts and quality control of the information disseminated were seen to be critical to the success of an alert system. Suggestions were also made about the need to align any new process with existing alert systems used by Police Scotland and Health Protection Scotland, as well as wider UK and international arrangements.

It was also suggested that any alert system should be for all substances of misuse and not specific to NPS.

Additional questions on identifying NPS for the purposes of prosecution

Respondents reported that they would anticipate submitting both drug samples and biological samples for forensic testing, mostly in small quantities. The exception to this was health services, where potentially much larger quantities were expected. Respondents also anticipated a number of benefits to be gained if there was improved access to reference standards held by a Centre for Excellence.

Conclusion

These results indicate that there was a high level of consensus amongst respondents in relation to the definition of NPS, the functions of a Centre for Excellence, and the importance of improving data capture and information sharing. Key areas for further consideration include guidance on the use of the model to categorise NPS, overcoming challenges related to improving routine data capture on NPS, and incorporating any plans for an alert system into existing systems and processes.

1. Introduction

1.1 Background

New Psychoactive Substances (NPS), also known as “legal highs”, have risen to prominence in recent years, and stakeholders across Scotland have raised concerns about the impact of these substances on individuals, services and local communities. However, much is still unknown about the scale and associated harms of NPS use in Scotland.

In 2014, the Scottish Government established an NPS Evidence Group to consider how best to address existing gaps in knowledge relating to NPS, including improving routine data collection and information sharing¹. An Expert Review Group was also set up in order to examine the powers available in Scotland to tackle the sale and supply of NPS. The Expert Review Group published a report on 26 February 2015, which made a series of recommendations². These included a recommendation to develop a definition of NPS, as well as a recommendation to establish a national centre of excellence in forensic analysis to lead on the detection and identification of NPS in Scotland. It was also recommended that a national centre for excellence share information more widely, with for example hospitals and other relevant services, to build and maintain a knowledge base on NPS.

In addition to this work, the Home Office published the Psychoactive Substances Bill on 29 May 2015³. This has a number of potential implications for Scottish stakeholders, both in terms of how NPS is defined, as well as in relation to the forensic capacity needed to support implementation. This legislation makes the ability to identify NPS, and to determine whether a substance is psychoactive, increasingly important.

In light of these developments, the Scottish Government issued a questionnaire on New Psychoactive Substances (NPS) in September 2015. The aim of the questionnaire was to gather views on three key areas: a definition of NPS, proposals to establish a Forensic Centre for Excellence, and options for improving data collection and information sharing. This report presents the results from the questionnaire, which closed on 2 December 2015. The full questionnaire is available

¹ The NPS Evidence Group is comprised of key stakeholders from a range of sectors including health, enforcement, academia, and the third sector amongst others. This group has met three times to discuss the evidence gaps relating to NPS.

² Scottish Government (2015) New Psychoactive Substances Expert Review Group: Review of the current Legal Framework available to Govern the Sale and Supply of New Psychoactive Substances, available at: <http://www.gov.scot/Resource/0047/00472094.pdf>

³ The full text of the Psychoactive Substances Bill is available at: http://www.publications.parliament.uk/pa/bills/cbill/2015-2016/0063/cbill_2015-20160063_en_2.htm#pb2-11q2

at: <https://consult.scotland.gov.uk/drug-research-team/new-psychoactive-substances>.

The results presented in this report will be used as part of the evidence base to inform on-going discussions with the UK Government in relation to the Psychoactive Substances Act, and to further develop the Scottish Government's policy programme on NPS.

2. Consultation responses and respondents

2.1 Number of responses received

A total of 54 responses were received to the questionnaire: 24 from individuals and 30 from organisations. This included enforcement, health, academic and third sector stakeholders amongst others (Table 1). A full list of these organisations is provided in Annex A.

Table 1: Questionnaire responses by group

Respondent group	Number of respondents
Third sector	2
Representative body for professionals	2
Local government	2
Community Planning Partnership	1
Public Body, including NHS, ADP, and enforcement agencies	13
Academic or research institute	4
Other	6
Individual	24
Total	54

2.2 How the responses were received

Fifty responses were submitted via the Scottish Government's online Citizen Space platform for consultations. Four were returned by email and subsequently uploaded to Citizen Space for analysis.

2.3 Analysis and reporting

The questionnaire included 12 closed questions⁴, and 20 open 'free text' questions.

Results from the closed questions are presented as frequencies in Figures 1 to 12. Responses to each of the open questions were coded, in order to generate themes. These themes are described under each of the relevant questions. Where appropriate, verbatim quotes are included to illustrate points made. Only quotes provided by those who gave permission for their responses to be made public have been used in the report.

When reviewing these results it is important to note that respondents were participating voluntarily, and were not randomly sampled. This means that the analysis presented is representative only of the organisations and individuals who responded, rather than being representative of a wider population.

⁴ There were three yes/no/don't know questions; and nine which used a rating scale of 1 to 7, where 1 = strongly disagree and 7 = strongly agree

3. Defining New or Novel Psychoactive Substances

3.1 High level definition of NPS

The questionnaire proposed that the legal definition of psychoactive substances set out in the Psychoactive Substances Act should be adopted by a wide range of stakeholders at a national and local level in Scotland. The Act defines psychoactive substances as:

“Any substance which is capable of producing a psychoactive effect in a person who consumes it, and is not an exempted substance [i.e. alcohol, tobacco, medicines and controlled drugs, caffeine and foodstuffs such as nutmeg and chocolate]...A substance produces a psychoactive effect in a person if, by stimulating or depressing the person’s central nervous system, it affects the person’s mental functioning or emotional state...A person consumes a substance if the person causes or allows the substance, or fumes given off by the substance, to enter the person’s body in any way⁵.”

Forty one respondents agreed with this proposal, nine disagreed and one respondent neither agreed or disagreed (Figure 1).

⁵ The full text of the Psychoactive Substances Act is available at: http://www.publications.parliament.uk/pa/bills/cbill/2015-2016/0063/cbill_2015-20160063_en_2.htm#pb2-l1g2

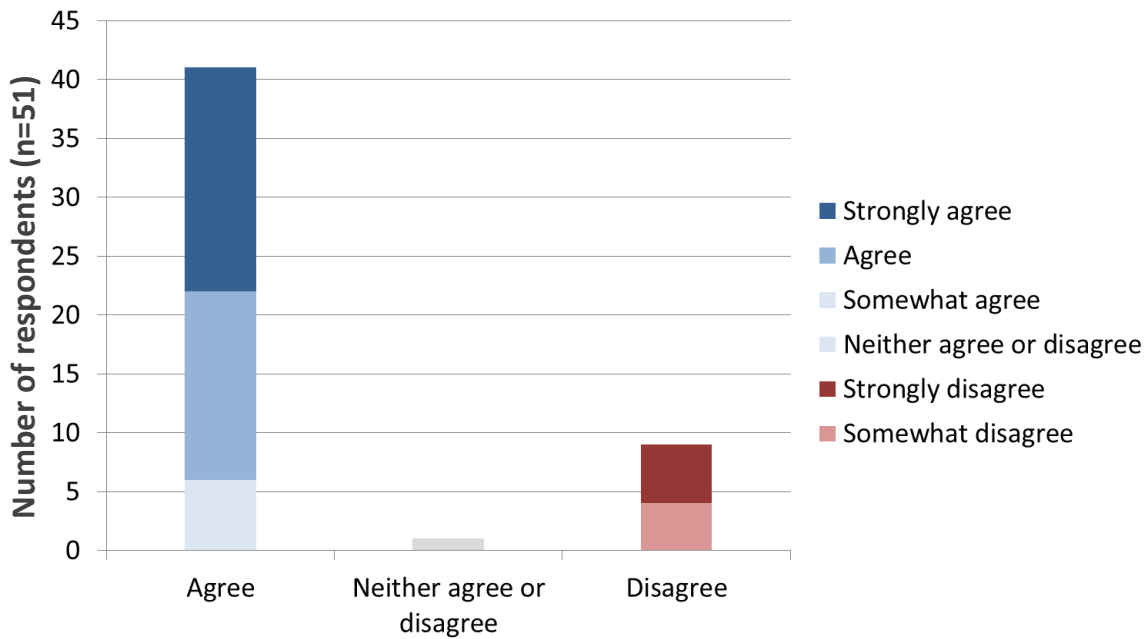


Figure 1: A wide range of stakeholders should adopt the legal definition as set out in the Psychoactive Substances Act⁶

Thirty-seven respondents provided more detail or alternative suggestions to the legal definition in the follow up free text question. The key themes from these responses are presented below.

Support for the proposed definition

Amongst those who agreed, a key theme to emerge was the need for consistency. Fifteen respondents emphasised the importance of adopting a consistent definition that could be used by a range of stakeholders because it “*allows standardisation of reporting and information collection across Scotland*” (third sector organisation), and ensures that “*every stakeholder talks about the same thing*” (academic organisation).

Concerns raised about the proposed definition

However, concerns were also raised about the specific definition proposed under the Psychoactive Substances Act. In total, five individuals strongly disagreed that the definition proposed should be adopted more widely, arguing that the limitations were too significant:

“The definition set out in the Psychoactive Substances Bill is far too wide ranging and therefore not fit for purpose” (individual).

⁶ Where the number of responses is less than 54, this is because not all respondents answered every question

Four others 'somewhat disagreed' on the basis that it was impractical to expect different stakeholders to adopt a single definition:

“Services other than law enforcement require an alternative definition that provides scope to examine harm” (individual).

Other concerns were raised about a lack of clarity about which substances would be exempt, the breadth of the definition as currently worded, absence of the concept of harm and concerns about implementation.

Alternative definitions

Four respondents stated they would prefer an alternative definition, based on existing definitions used by organisations such as the Advisory Council on the Misuse of Drugs (ACMD), the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), or the United Nations Office on Drugs and Crime (UNODC). It was suggested by one respondent that at the very least the definition used would need to be capable of mapping against these other definitions.

Overall however, there was recognition that any definition would have limitations, given the complexity of the issue and the range of substances to be captured. For the majority of respondents therefore, it seemed that concerns about the specific definition were outweighed by the benefits of having a consistent definition used by a range of stakeholders:

“It is difficult to think of a definition where there would not be some possibility of ambiguity, and so it is with this, but it is better than what we have used in the past” (individual).

3.2 Categorising NPS according to their effects

In addition to the high level definition, the questionnaire proposed that stakeholders should categorise NPS based on their intended effects, in line with the Drugs Wheel Model⁷. Using this model, NPS would be categorised as follows:

- Opioids
- Stimulants
- Empathogens
- Psychedelics
- Dissociatives
- Other
- Depressants
- Unknown
- Cannabinoids

The vast majority (44 respondents) agreed that stakeholders should categorise NPS based on their intended effects (Figure 2).

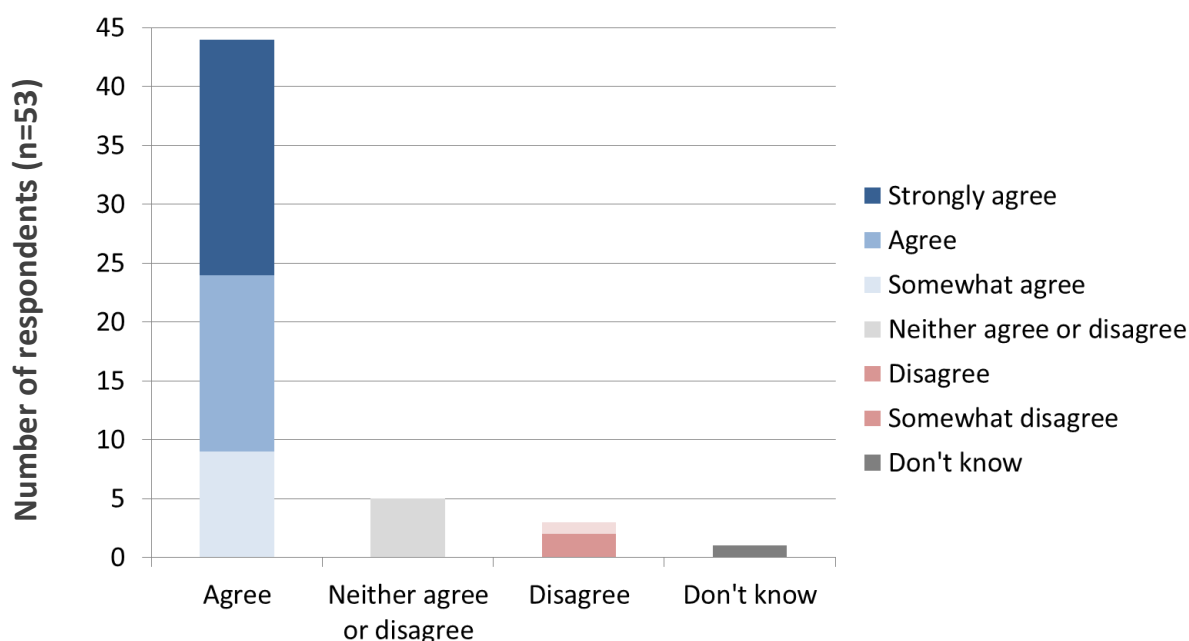


Figure 2: Stakeholders should categorise NPS based on their intended effect(s)

However, there was less agreement about whether these categories could be applied accurately by people who are not experts in NPS. Although 28 respondents

⁷ Further information about the Drugs Wheel Model is available at: <http://www.thedrugswheel.com/?page=licence>

agreed that the categories could be accurately applied, 20 disagreed (six strongly) (Figure 3).

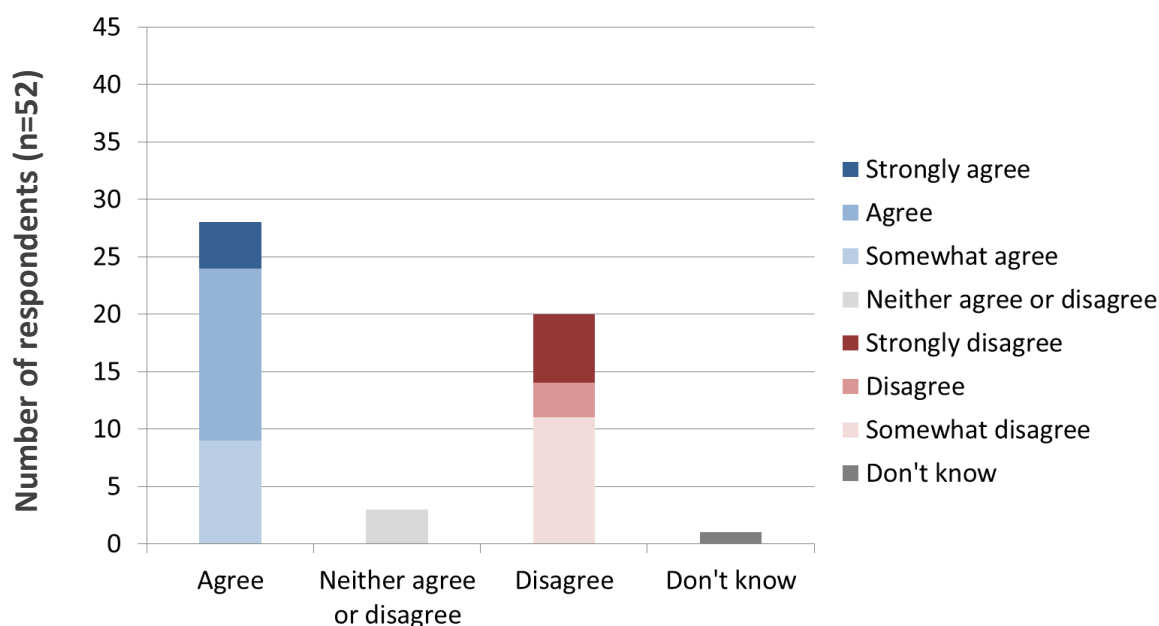


Figure 3: The categories outlined in proposal two could be applied accurately by people who are not experts in NPS

Suggestions for changes to the proposed categories were provided by 21 respondents. Thirty-six respondents also provided details about additional information that would be needed for the categories to be applied accurately. Taken together these responses highlighted a number of key themes.

Support for categorising NPS according to effect

Ten respondents explicitly supported the use of the model. It was described as well-established and understood, and seen as a useful tool to allay fears of lack of knowledge around chemical make-up of substances.

The need for guidance, awareness raising and training

However, the need for clear guidance on the use of the model, and in particular on how to categorise different substances was emphasised by 21 respondents. It was suggested that examples of the most common drugs should be given, as well as descriptions of intended effects, e.g. 'loved up, excited' with empathogens. The fact that the proposed model mixes both 'effects' and 'type of drug', and that some NPS would fit under more than one category within the model was also raised as a potential issue:

“We think that it is good to categorise by effects, however the Drugs Wheel has its limitations. Can drugs be under more than one heading? Where do synthetic cannabinoids go, for example, they seem to have several different effects?” (academic organisation)

It was suggested that this was further complicated by the lack of homogeneity within NPS products, because a named product would not necessarily behave consistently or result in similar effects. One respondent suggested that these issues could be addressed by highlighting that a substance could potentially fit in more than one category.

In addition to comments about the need for clear guidance, seven respondents suggested that some form of training or basic awareness raising would be required in order to enable people to apply the categories accurately. One respondent also mentioned that there would need to be resources made available to stakeholders if they were to be expected to categorise NPS appropriately.

The role of experts in assigning substances to categories

Seven respondents expressed the view that only experts, or those with experience of dealing with individuals under the effect of these drugs, would be able to apply the categories. This was felt to be the case particularly for substances that are seen for the first time and not already categorised. One respondent argued that substances should only be categorised after being subjected to forensic chemical analysis.

Actual versus intended effect

In addition to these comments three respondents suggested that categories may need to be based on *actual* effect, rather than intended effect:

“Given the uncertainties of what has been consumed (both by services and by users) this may need to be actual effect” (individual).

Three respondents also suggested reducing the number of categories, in order to minimise confusion.

3.3 Other issues relating to the definition of NPS

Other issues relating to the definition of NPS that were raised by respondents included the need for any definition to enable data on harms to be captured. Two respondents raised the issue of ‘NPS’ that have already been controlled (for example under the Misuse of Drugs Act 1971 or the Medicines Act 1968). It was argued that substances such as gabapentin, PMA and mephedrone might create increasing problems, but they would not be classed as an NPS under the Psychoactive Substances Act.

One respondent also queried whether following the introduction of the Psychoactive Substances Act, it would still be necessary to distinguish between NPS and other controlled drugs.

4. Identifying and detecting NPS

4.1 The functions of a Forensic Centre for Excellence

In the second section of the questionnaire, stakeholders were asked about potential functions of a Forensic Centre for Excellence. It was noted that this could be embedded as part of (or distinct from) any infrastructure put in place by the UK Government as part of arrangements to implement the Psychoactive Substances Act. Possible functions included in the questionnaire were:

- leading on the forensic detection and identification of NPS amongst agencies where testing relates to a criminal or potentially criminal case
- testing for psychoactivity by establishing the effects of substances on the central nervous system
- making links between identification of NPS and potential harms and treatment
- leading on developing national reference standards
- linking in with other data sharing systems, for example the UK Forensic Early-Warning System (FEWS) and the Welsh Emerging Drugs and Identification of Novel Substances Project (WEDINOS)⁸
- acting as a central resource for enforcement agencies, and potentially the NHS, by sharing information with relevant partners and services, for example on emerging trends.

The vast majority of respondents (45) agreed that these functions would address the most pressing gaps in knowledge about NPS (Figure 4).

⁸ Further information about the Welsh Emerging Drugs and Identification of Novel Substances is available at: <http://wedinos.org/>

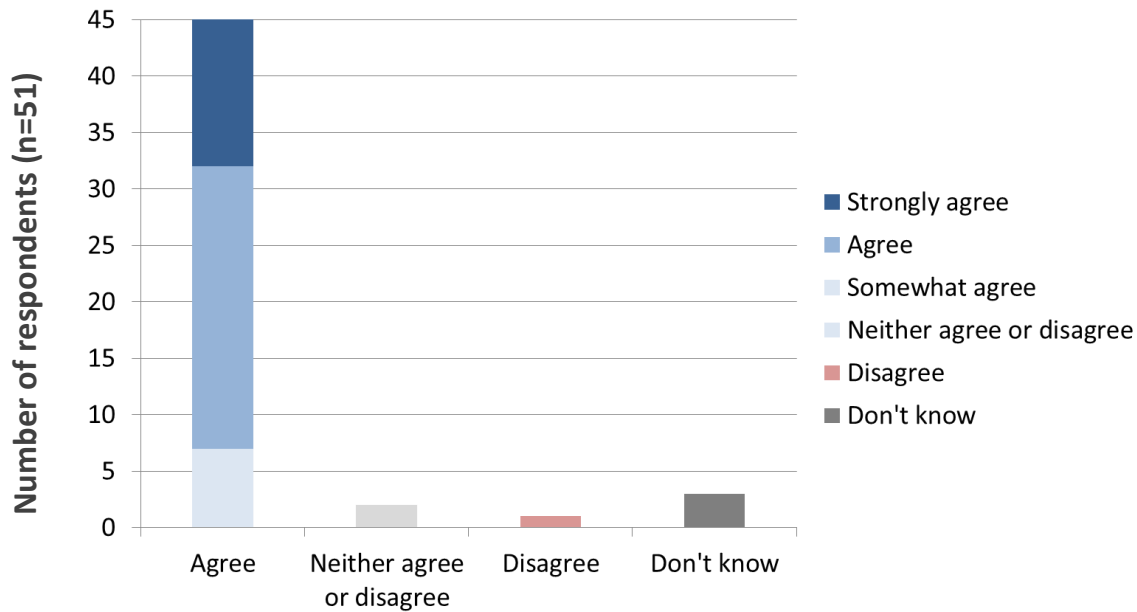


Figure 4: If a Forensic Centre for Excellence carried out the functions suggested in Section 4.1, it would address the most pressing gaps in knowledge about NPS

Thirty-two respondents provided further detail, or made suggestions about other opportunities that could be capitalised on that were not covered by the original proposals. The key themes from these responses are presented below.

Priorities: enforcement and health

The importance of a Forensic Centre for Excellence in terms of enforcing the Psychoactive Substances Act was mentioned by four respondents. In addition, the need to link forensic testing of specific NPS with information on harms, and ultimately treatment for people using NPS, was strongly emphasised by 16 respondents:

“Working collaboratively with the NHS should be integral to [forensic testing]...the drive for our better understanding of NPS should not be confined to the purposes of prosecution but [also] to support improving the general health of the public” (health organisation).

Testing for psychoactivity

Seven respondents raised concerns about the process of testing for psychoactivity, and how this testing would be carried out. There were questions about whether this would require phase I or II clinical trials, and whether testing for psychoactivity in terms of effects on the central nervous system could be carried out using the same laboratory analysis facilities needed to identify particular compounds. The point was also made that it was important to clearly distinguish between bulk drug analysis and toxicology, given the different expertise required. One respondent also noted that in order to pursue a successful criminal conviction, it might be necessary to augment

information about psychoactivity with expert testimony about the effects and harms caused by ingestion of an NPS from a clinical toxicologist.

Practical issues were also raised, for example whether a single facility would be capable of delivering all of the proposed functions. In particular, whether testing for psychoactivity in terms of effects on the central nervous system could be carried out using the same laboratory analysis facilities needed to identify particular compounds.

Importance of building on existing structures

The issue of resources was also raised by three respondents:

“It would be good to have investment in substance misuse but the question should be asked about whether current structures could be built on to do this work” (health organisation).

It was suggested that it might be more cost effective to incorporate the proposed functions into existing arrangements, rather than *“reinvent the wheel”* (enforcement organisation). An additional benefit cited was that this could help to ensure a more integrated approach to NPS and other substances.

“The wider drug related harm in Scotland does not come from NPS. I would wonder whether the Centre should look at wider drug harms too” (health organisation).

Other potential functions

Other potential functions of a Forensic Centre for Excellence that were proposed included:

- providing harm reduction advice to professionals and the public (2 respondents)
- an alert function (4 respondents)
- education and support for other laboratories or teaching students at University level (2 respondents)
- a strong research capability (3 respondents)
- a source of drug reference standards to enable testing in other laboratories (2 respondents).

4.2 Capacity amongst stakeholders to support a Centre for Excellence

Stakeholders were asked whether they would be able to deliver or support functions such as the identification and detection of NPS, testing for psychoactivity, making links between identification of NPS and potential harms and treatment, or linking in with other data sharing systems. Fifteen respondents said yes, 17 said no, and 14 did not know (Figure 5).

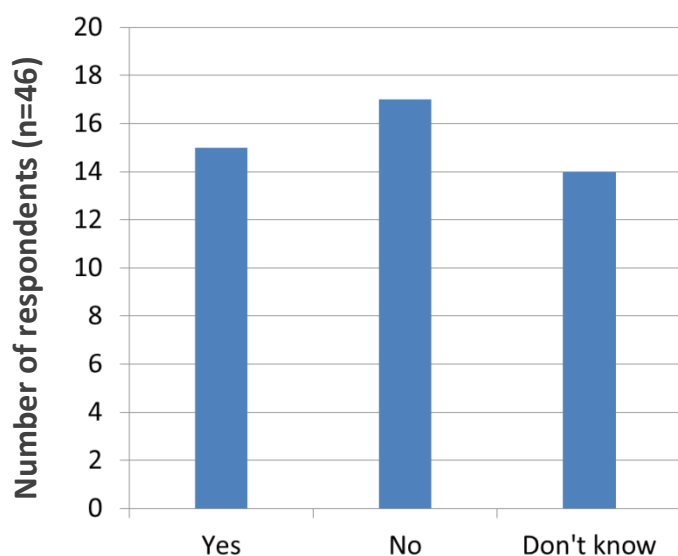


Figure 5: Would your organisation be capable of delivering any of the potential functions suggested above?

Of those who said 'yes' or 'don't know', 16 gave further information about the different types of support they could offer. This ranged from chemical analysis including isometric ID and toxicology analysis, to collating local intelligence to feed into a central hub of information. See Table 2 below.

Table 2: Organisations and type of support that could be provided for identifying and detecting NPS⁹

Organisation	Type of support
Forensic Toxicology Service, University of Glasgow	We currently carry out research into identifying NPS substances causing harm. The Head of School of Chemistry at UoG and possibly other Universities across Scotland may be interested in synthesising reference standards. There are well established research groups in Universities which we should make the most of.
Pathology Service, Forensic Medicine and Science, University of Glasgow	Forensic Pathologists could potentially advise on potential harms of NPS
National Poisons Information Service	Linking with harms
Scottish Police Authority	Chemical analysis including isomeric ID; tox analysis
Scottish Prisons Service	Working collaboratively with key stakeholders SPS could play its part
NHS and Alcohol and Drug Partnerships (4 responses)	Collating local intelligence and information to share with a Centre for Excellence (e.g. collating user feedback on the effects of the substances consumed) Issuing and marketing customised harm reduction advice based on forensic analysis
Scottish Families Affected by Alcohol and Drugs	We already provide information to ADPs and Police Scotland at a national level and would continue to contribute
Royal Pharmaceutical Society	Some of our members are substance misuse specialist pharmacists who would be capable of inputting expertise into any national standards and must be included in any expert working groups
NHS Health Scotland	NHS Health Scotland could support the forensic centre in disseminating information & learning – potentially through

⁹ Only respondents who gave permission for their responses to be made public have been included in this table

Organisation	Type of support
	existing mechanisms we could share best practice and contribute emerging evidence, and could support via ADPs and other agency relationships to facilitate knowledge sharing and planning.
Centre for Anatomy and Human Identification, School of Science and Engineering, University of Dundee	CAHID is one of the leading centres for Forensic Science research in Europe. We produced the United Nations recommended methods for the testing of cathinones, one of the main chemical templates for NPS. We hold a Home Office license allowing us to synthesise and characterise NPS materials which will create the required database of compounds. Moreover we have the technological capabilities to fully chemically characterise the resultant compounds and have a strong track record in this regard. This coupled with cutting edge technologies in neurotoxicity and medicine through Ninewells hospital can lead in the understanding of the short and long term health implications of NPS. CAHID has strong collaborative links with the SPA Forensic Science, Police Scotland, UNODC and EMCDDA, the US DEA and Law enforcement agencies across Europe, South East Asia and China and as such has a global perspective of the challenges of NPS, their international trafficking and the challenges they pose. CAHID staff have acted as expert witnesses for the courts including in the analysis and characterisation of controlled substances.
WHO Collaborative Centre for International Child and Adolescent Health Policy, University of St Andrews	Our WHO Collaborative Centre for International Child and Adolescent Health Policy would be able to assist in survey work with NPS questions in research projects, especially with young people.
CREW 2000	By acting as a central, trusted resource for housing agencies, GPs, care staff, looked after children and young people staff, youth professionals and school staff by sharing relevant information on harm reduction and sources of help...by linking in with e.g. FEWS, DEWS and TIC TAC

4.3 Key priority areas for submitting NPS samples for identification

In the questionnaire, the Scottish Government proposed a list of organisations that could potentially submit samples of NPS for testing. This included:

- Police Scotland
- Crown Office and Procurator Fiscal Service (live and post-mortem toxicology)
- Scottish Prison Service
- Local Authority Trading Standards Services
- Border Force

Respondents were asked if these should be the key priority areas for submitting NPS samples for forensic testing. The majority agreed with the proposed list (42 out of 52 respondents who answered this question). Enforcement stakeholders in particular emphasised the importance of prioritising any forensic testing to identify NPS for the purposes of prosecution, given that criminal proceedings could not be raised until there is sufficient evidence. However seven individuals disagreed that these should be priority areas (Figure 6).

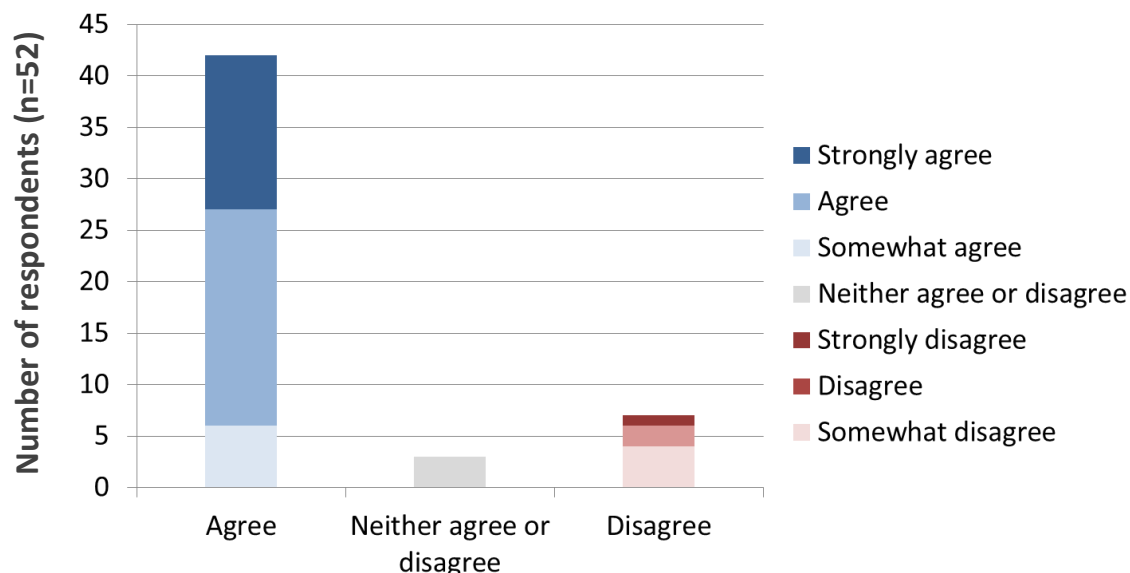


Figure 6: The organisations listed [in Section 4.2] should be key priority areas for submitting NPS samples to a Forensic Centre for Excellence

There were different reasons given by those who disagreed. Two respondents disagreed on the basis that it was not necessary for all of the proposed organisations to submit samples for testing. It was argued that existing processes for post mortem toxicology analysis were already in place, making it unnecessary for these samples

in particular to be submitted to a Centre for Excellence. It was also suggested that more support could be given to toxicology labs within hospitals to conduct toxicology testing. In contrast, four respondents who disagreed did so on the basis that greater priority should be given to testing samples from NHS organisations, including mental health services. One respondent also suggested that informal networks should be targeted as they would be more likely to produce samples than the organisations listed.

Respondents were also asked whether in addition to the organisations listed above, NHS Emergency Departments should also be able to submit biological samples for testing. There were high levels of agreement, with 44 respondents agreeing and three disagreeing (Figure 7).

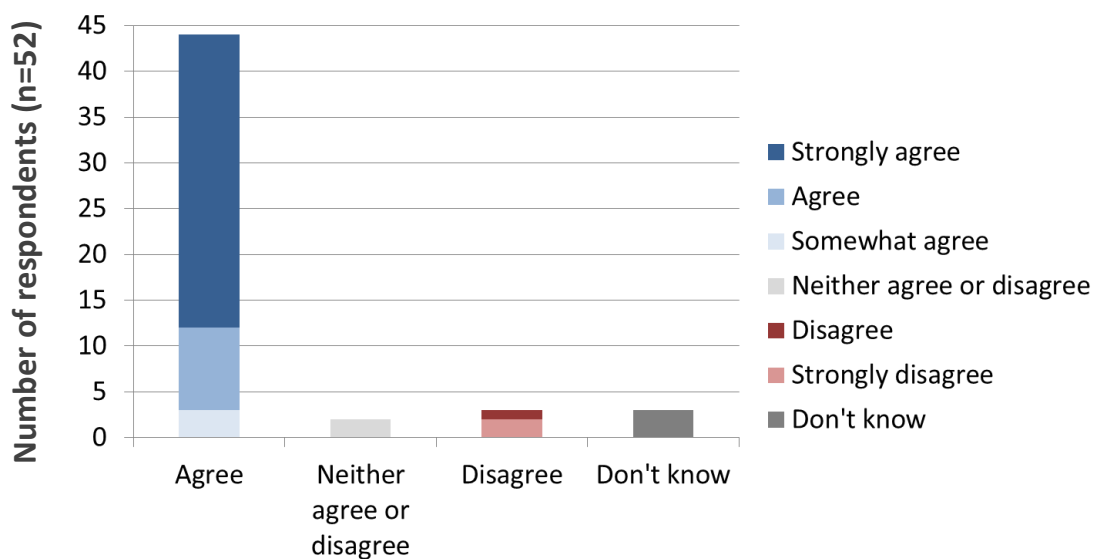


Figure 7: In addition to the organisations listed in Box 1, NHS Emergency Departments should also be able to submit biological samples for testing

Twenty-eight respondents provided further details of other organisations that would represent priority areas for submitting NPS samples for testing. These are discussed below.

Health and drug treatment services

Responses to the open question about organisations that would represent priority areas reinforced the strong support for health and treatment services being able to submit samples for identification¹⁰. This point was raised by 17 respondents. It was argued that this could potentially increase the pool of substances tested and knowledge of these. In turn, respondents felt that this could accelerate learning, and be used to issue alerts and harm reduction advice, as well as increasing

¹⁰ Including substance misuse services, Injecting Equipment Provision (IEP) services, third sector organisations, Community Addiction Teams, Intensive Care Units and Acute Psychiatric Units, Community Mental Health Services, forensic medical settings, and pharmacy

understanding of clinical effects of specific substances. This would be particularly beneficial if a substance was linked to a critical incident. However, two respondents also noted the potential illegality of agencies seizing or holding substances in order to submit them for analysis, and queried whether this would preclude agencies such as third sector substance misuse services from doing this.

Members of the public

Five individuals suggested that there should also be a public access mechanism for submitting samples:

“We understand the risk management implications for the public and Government, however we see value in offering a public access mechanism for collecting NPS e.g. like WEDINOS” (third sector organisation).

In addition, it was suggested that the National Crime Agency and local authorities could potentially be added to the list of organisations that could submit samples.

4.4 Collecting data on harms associated with NPS

In relation to the issue of collecting data on harms associated with NPS, the questionnaire asked if it would be useful if NHS Emergency Departments captured and held data on harms associated with specific NPS. Forty-nine respondents agreed, and no respondents disagreed (although one neither agreed or disagreed, and two did not know) (Figure 8).

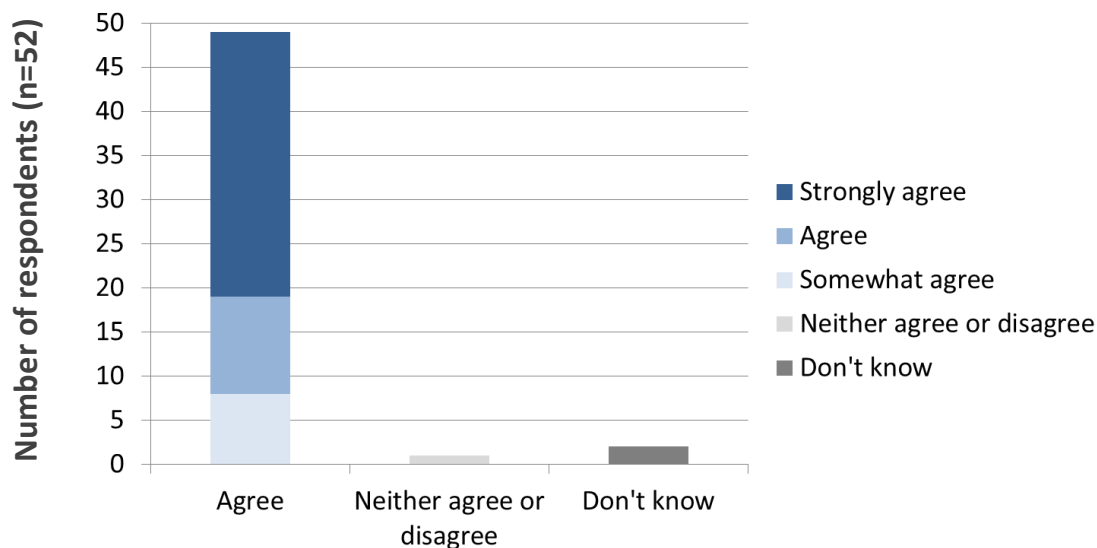


Figure 8: Where possible, it would be useful if NHS Emergency Departments captured and held data on harms associated with specific NPS samples

Thirty-five respondents provided more detail about how this could work. Key themes are presented below.

Improving data capture systems

Nine respondents raised the issue of NHS Scotland patient recording systems, which do not currently capture NPS related attendances at Emergency Departments:

“This would require changes to national coding systems. [It is] currently very difficult to obtain any reliable data on drug or alcohol use never mind NPS from systems” (health organisation).

However, eight respondents flagged up potential challenges to improving data capture on the harms associated with specific NPS samples. These challenges can be summarised as follows:

- The need for refinements to data capture systems
- The need to coordinate data collection within and across services and health boards
- Getting buy in from already stretched Emergency Department services
- The need for increased resources/capacity within Emergency Departments for staff to capture this information
- Recognition that currently obtaining information about proscribed drugs and alcohol from Emergency Department presentations is also difficult, regardless of the specific issues relating to NPS
- Gaps in knowledge about some NPS and their effects on different individuals
- The challenge of knowing whether symptoms are NPS related or not.

Building on existing processes

Practical suggestions were made about how these data could be captured by building on existing processes, for example as part of the Identification of Novel Psychoactive Substances (IONA) project¹¹ or replicating processes for biochemistry investigations, which require clinicians to record symptoms when requesting analysis of samples. Three respondents suggested that any data on harms could be shared with the National Poisons Information Service TOXBASE database¹², or the Medicines Information database.

The importance of appropriate information governance arrangements

It was stressed that appropriate information governance structures would need to be in place if these data were to be collected and shared. It was also suggested that there would need to be a national directive to ensure that protocols and procedures were consistent across different services.

¹¹ More information on the IONA study is available at: <http://www.ncl.ac.uk/hpru/assets/documents/IONA%20protocol%20England%20and%20Wales%20v1.3%205thJan2015.pdf>

¹² More information about TOXBASE is available at: <http://www.npis.org/toxbase.html>

4.5 Sharing data on harms collected in NHS Emergency Departments

Following on from this, the questionnaire also asked whether (once anonymised) data on harms relating to specific NPS should be shared with other stakeholders. As shown in Figure 9 below, there were high levels of agreement, with 50 respondents agreeing. One respondent neither agreed or disagreed, one did not know, but none disagreed.

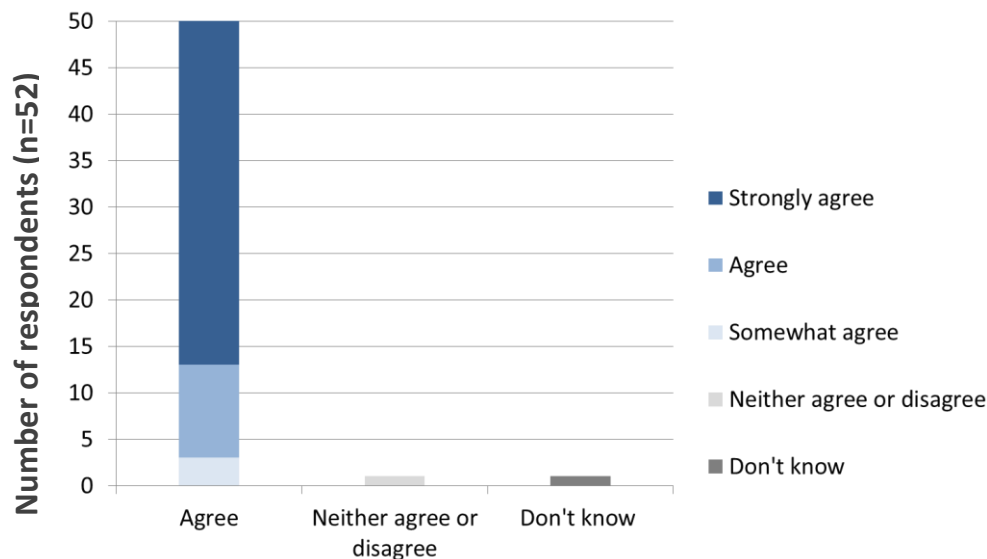


Figure 9: Once anonymised, these data on harms relating to specific NPS should be shared with other stakeholders

Thirty-seven respondents provided more detail about the specific stakeholders that would benefit from sharing data on harms relating to specific NPS. A wide range of suggestions were made, including health, enforcement, third sector, local authority stakeholders and members of the public amongst others. A full list is provided at Annex B.

5. Improving information sharing

Respondents were asked if they were aware of data or information being collected or shared on NPS that was not already represented in a mindmap attached as an annex to the questionnaire. A number of additional data sources were mentioned, ranging from local NHS services to international networks. An updated mindmap incorporating this information is provided at Annex C.

The next section of the questionnaire asked a series of questions on improving information sharing on NPS. In relation to forensic analysis of samples of suspected NPS, the following information was identified as being most useful to stakeholders.

5.1 Content of information

Contextual information relating to a sample

- Name of substance (including street name)
- Packaging/branding information
- Photographic details of substance and packaging
- Date of sample
- Geographical location of sample
- Demography of user
- Usage/dose consumed (if known)

Forensic identification of a sample

- Forensic identification of substance (linking brands with psychoactive ingredients)
- Purity of substance tested/potency and 'dangerous' levels
- Half-life
- Contaminants identified
- Chemical analysis and characterisation

Effects of a sample

- Specific effects related to the substances, need to be certain on isomeric form
- Effects on central nervous system/clinical effects
- Presenting symptoms/harms (physical and mental) – *“this could be presented on the front page of TOXBASE for users to see”* (individual)
- Contra-indications with other prescribed drugs

- Long term harms
- Information regarding dosage
- How substances are taken (e.g. use of cutting agents)
- Harms and dangers from any use and particularly when mixed with other medicines or other substances
- What to expect from behaviour of those under the influence
- Drug type by effect and associated harms

Information needed following identification of a sample

- Guidance on treatment pathways
- Harm reduction information
- Regional and national trends: availability of specific substances, and information on what substances are being used in what areas at what time, current local drug seizures
- Frequency of submission of particular substances (for implied prevalence), amongst younger age groups especially
- Legislation a substance is controlled under/legal status
- Linking up with other data sources – are there other reports of its use? (e.g. drug seizures/live toxicology)
- Availability of reference standards for a specific substance
- Are there any reference spectra available?
- Links to support services
- Alerts

5.2 Frequency of information sharing

There were a range of views about how frequently stakeholders would want to receive or access this information, and some stakeholders provided more than one response. The majority however indicated that it would be most useful to receive or access this information on a monthly basis (19 responses), followed by 'in response to critical incidents' (14 responses), quarterly (11 responses), and annually (four responses). Five respondents also thought it would be helpful to have constant or 'live' access.

5.3 Format of information sharing

It was suggested that links could be made with Toxbase, the service provided by the National Poisons Information Service:

“Link-up with TOXBASE so that clinicians had ready access to the latest advice on identification and treatment of patients” (health organisation).

The need to link in with schools was also mentioned by one respondent:

“A national electronic curriculum resource disseminated via Education Scotland and co-developed with young people...could equip teachers with more knowledge and confidence in developing early intervention and prevention work to better meet the challenges posed by NPS” (third sector organisation).

Other suggestions for disseminating information generated by forensic analysis included:

- A shared database or electronic portal (with restricted log in) or public facing website, frequently updated
- Phone line for direct enquiries
- Email (e.g. newsletter) and available to download
- Simple alerts/bulletins using picture and summaries as being done currently by Police Scotland – dissemination could be done jointly with current Police Drug alert bulletins
- Publications of reports
- Press publications
- Seminars
- Development of a smartphone app
- Considering good practice and lessons learned from FEWS and WEDINOS together with ADP and Police Scotland drug alerts and information sharing protocols already in place.

It was also suggested that different stakeholders may need different formats or levels of access to information, depending on their needs.

5.4 Alerts and warnings

The questionnaire asked stakeholders whether it should be the role of a Forensic Centre for Excellence to manage and disseminate alerts on new and potentially harmful NPS. Forty-nine respondents agreed, one neither agreed or disagreed and two did not know (Figure 10).

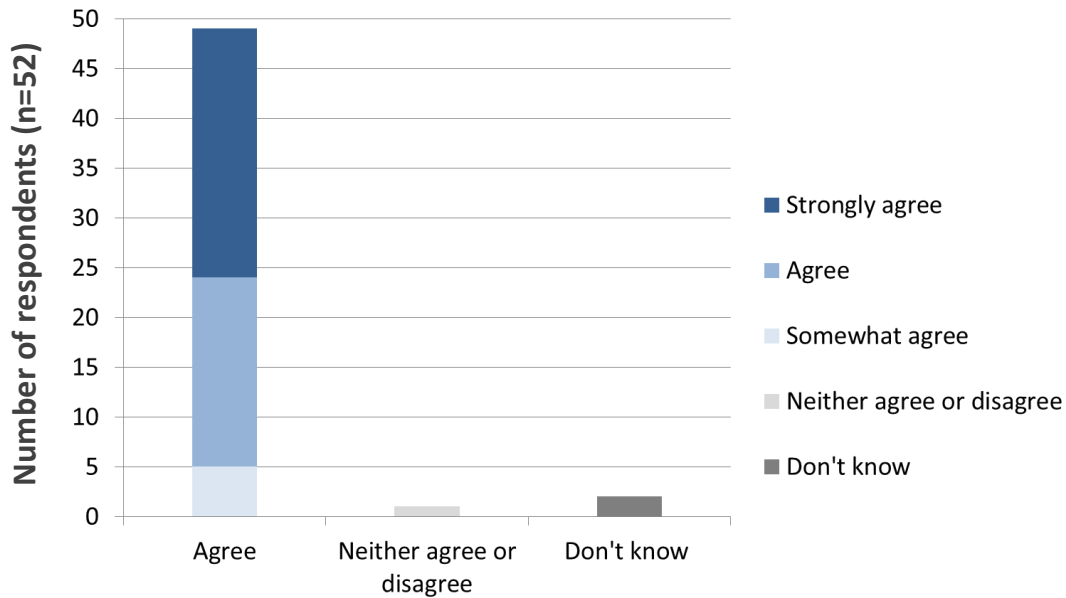


Figure 10: It should be the role of a Forensic Centre for Excellence to manage and disseminate alerts on new and potentially harmful NPS

There were 24 responses that provided further detail about the management and dissemination of alerts on new and potentially harmful NPS. The key themes are summarised below.

Coordination role

Responses highlighted the need for a two way process of information exchange, involving local partners feeding information in to a Forensic Centre, as well as coordinated outputs (four respondents). It was also argued that by coordinating information and improving communication, a Forensic Centre for Excellence could reduce ‘disinformation’:

“It is disturbing for families and unhelpful for authorities for wild speculation and assumption to occur following a drug related death” (health organisation).

Timing of alerts

The issue of timing of alerts was also raised by two respondents, in relation to the potential delay between information being received and subsequently issued. Another respondent identified that there was potential to share detailed toxicology and autopsy information with National Records of Scotland to allow better interpretation of mortality data. However, it was noted that this would require sign-off from the Crown Office and Procurator Fiscal Service, and that there would have to be caveats around the significance of a substance in the cause of a death.

Sharing information with members of the public

There were different views about whether information on alerts should also be issued to members of the public. Two respondents suggested that information could be disseminated via public information websites. However, four respondents urged caution about releasing information to members of the public:

“We have noticed that mass media coverage of a particular substance, even if it’s connected to a death, can drive curiosity and use of the substance, thereby increasing the potential for harm. It would be extremely important to ensure that alerts were managed sensitively and appropriately” (third sector organisation).

Quality control of information disseminated

Practical issues about quality control were also raised by three respondents. It was noted that ADPs often encounter information about NPS from various sources. However, it was argued that it could be challenging to assess whether or not this information should be disseminated due to:

- A lack of confidence in the veracity of the data
- Lack of confidence about whether the data is relevant to a local area
- Concern about the workload and risk of fatigue from too many reports
- Concern about ‘so what’ questions – i.e. what do we expect services to do with this new information? How might it change their practice?
- Concern about not accurately reflecting local situations, and ‘normalising’ NPS use if messages are exaggerated.

Building on existing systems and processes

Seven respondents also highlighted the need to build on existing systems or processes. This included dissemination of alerts in collaboration with NHS, National Poisons Information Service, Police Scotland, organisations such as Health Protection Scotland, and in line with wider UK and international arrangements.

In addition to these themes, two respondents also raised concerns about a focus on NPS distracting from other issues of concern, and suggested that any alert system should be for all substances of misuse and not restricted to NPS only:

“Ultimately alcohol and illegal drugs are the greatest concern in Scotland and we must be careful not to generate an unnecessary moral panic about NPS that diverts attention away from alcohol and other drugs” (health organisation).

6. Additional questions on identifying NPS for the purposes of prosecution

As well as the questions which were asked of all stakeholders, a series of additional questions were asked of stakeholders within Police Scotland, Crown Office and Procurator Fiscal Service, the Scottish Prison Service, Local Authority Trading Standards Services, NHS Emergency Department staff and Border Force.

6.1 Organisations that anticipate submitting samples for identification

These stakeholders were asked whether they would anticipate submitting samples for forensic testing. Out of 26 responses, seven said yes (enforcement and health stakeholders). Eleven said no (individuals, health and academic stakeholders), and eight did not know (individual and enforcement stakeholders) (Figure 11).

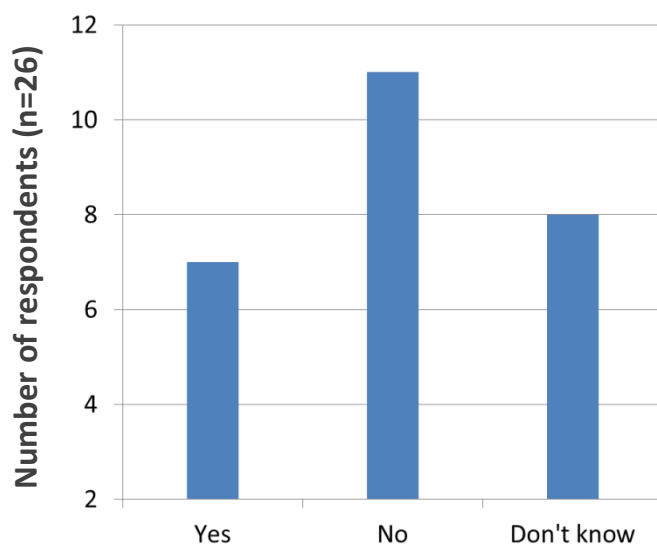


Figure 11: Would you anticipate submitting samples to a Centre for Excellence?

6.2 Type and quantities of samples

Respondents anticipated submitting both drug samples and biological samples (including blood or plasma), mostly in small quantities, for forensic testing and identification. The exception to this was the National Poisons Information Service, where larger quantities were expected, potentially running in to “*hundreds of samples per year*”. Border Force and the Scottish Prison Service were not able to estimate quantities, responding “*unknown*” or “*various*”. Table 3 provides further details of the individual responses.

Table 3: Types of samples that may be submitted for forensic testing by Scottish stakeholders¹³ (includes responses from those who anticipated submitting samples and those who responded ‘don’t know’)

Organisation/Individual	Type of sample	Anticipated frequency	Anticipated quantity
Border Force	Samples detected at the border, this can be in varying sizes	On average we seize quantities of NPS once every month	Various quantities
Forensic Toxicology Service, University of Glasgow	Sometimes we get bulk drugs to analyse from the scene of a death which SPA have no intention of analysing. It would be useful if these were routinely tested by SPA and information communicated to us while we are investigating the death	No response	No response
National Poisons Information Service	Blood or plasma samples together – where possible – with linked NPS packets	Weekly or every two weeks	Hundreds of samples per year – well over 1000 patients present to NHS Lothian emergency departments every year
Society of Chief Officers of Trading Standards in Scotland	Samples from seizures and/or test purchases	Unknown	Unknown
Scottish Prisons Service	Drug seizures	Unknown	Unknown, further work with intelligence units will be required to provide estimated sample submissions based on current and previous intelligence gathering

¹³ Only respondents who gave permission for their responses to be made public have been included in this table

Organisation/Individual	Type of sample	Anticipated frequency	Anticipated quantity
Dumfries and Galloway ADP	Samples handed in through drug treatment agencies	As required, unlikely to be more than once per month	Very small, street quantities
NHS Forth Valley	Both drug samples and biological specimens	Fortnightly to monthly	Small volumes
Perth and Kinross Council	Small quantities of individual 'retail' packages	Unknown as it will depend on the NPS market after the introduction of the Bill.	Probably a minimum of 1.5g to a maximum of 10g

6.3 Access to reference standards

Stakeholders within Police Scotland, Crown Office and Procurator Fiscal Service, the Scottish Prison Service, Local Authority Trading Standards Services, NHS Emergency Department staff and Border Force were also asked about access to reference standards. Twelve respondents said they would benefit from accessing reference standards. Nine did not know, and three said no (Figure 12).

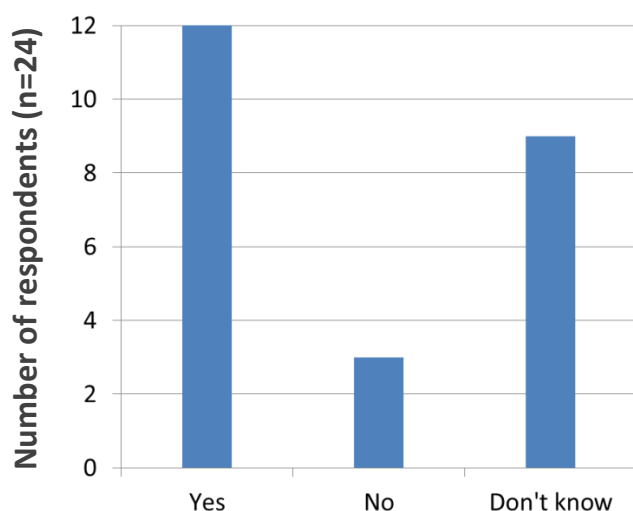


Figure 12: Would you benefit from accessing reference standards held by a Centre for Excellence?

Of the 12 respondents who said they would benefit from accessing reference standards, 11 provided more detail. The key benefits that were provided are summarised below:

- To enable initial testing of toxicology samples to identify if these are potentially positive (this would be useful even if the reference standards were not certified)
- To complement work to define the nature and characteristics of NPS, including their potential for psychoactivity or addiction
- To assist in the interpretation of post mortem data in drug related deaths
- To benefit forensic pathology and toxicology work
- To build an evidence base for future enforcement action.

7. Conclusions

This report has summarised the results of the 54 responses to the NPS Questionnaire issued by the Scottish Government in September 2015. The questions related to the definition of NPS, proposal to establish a Forensic Centre for Excellence, and views about how to improve data collection and information sharing on NPS between stakeholders. The key points relating to each of these sets of questions are summarised below.

7.1 Defining New or Novel Psychoactive Substances

Overall there were high levels of agreement amongst stakeholders that the legal definition of psychoactive substances set out in the Psychoactive Substances Act should be adopted by a wide range of stakeholders. There were also high levels of agreement with proposals to categorise NPS based on their effects, in line with the Drugs Wheel Model. However, there was some disagreement about whether the proposed categories could be applied by people who were not experts in NPS. This suggests that clear guidance on the use of the model, and in particular guidance on how to categorise different substances, would be required if the proposal was to be implemented. Respondents also suggested that some form of training or basic awareness raising, as well as input from experts, would be required in order to assign substances to categories. Categorisation based on actual effect rather than intended effect, and reducing the number of categories were also suggested as potential options to minimise confusion.

7.2 Identifying and detecting NPS

Functions of a Forensic Centre for Excellence

There was broad agreement amongst respondents with the proposed functions of a Forensic Centre for Excellence. It was recognised that a Forensic Centre for Excellence would have a strong role to play in enforcement. There was also strong support for the need to link forensic testing of specific NPS with information on harms. The rationale provided for this was that it could potentially increase the pool of substances tested and knowledge of these. Stakeholders noted that this could accelerate learning, and be used to issue alerts and harm reduction advice, particularly if a substance was linked to a critical incident.

Capacity amongst stakeholders to support a Centre for Excellence

A number of respondents provided information about how they could potentially support the proposed functions of a Forensic Centre for Excellence. This ranged from chemical analysis including isometric ID and toxicology analysis, to collating local intelligence to feed into a central hub of information.

Key priority areas for submitting NPS samples for identification

While there was some disagreement about the key priority areas for submitting NPS samples, overall the majority agreed with the proposed list. There was also strong support for NHS Emergency Departments to be able to submit biological samples for testing. This was a key issue raised by a large number of respondents. A small number of respondents suggested that additional areas that could submit samples were members of the public, the National Crime Agency and potentially Local Authorities.

Collecting and sharing data on harms associated with NPS

None of the respondents disagreed that it would be useful if Emergency Departments captured and held data on harms associated with specific NPS samples. However, it was suggested that changes to existing data capture systems would be needed to achieve this. Respondents identified a range of challenges that would have to be overcome in order to deliver improvements in data capture systems, including the need to increase capacity within services to record data on NPS. The challenge of knowing whether symptoms were NPS related or not, and gaps in knowledge about NPS and their effects were also seen as key barriers.

Suggestions for overcoming these barriers included capitalising on existing systems, such as the National Poisons Information Service Toxbase database, or processes established as part of existing research projects (e.g. the IONA project). It was also emphasised that robust information governance processes would need to be put in place to facilitate improved information sharing.

Respondents identified a large number of stakeholders who would potentially benefit from sharing data on harms, including those in health, enforcement, the third sector, local authority and members of the public amongst others.

7.3 Improving information sharing on NPS

The third section of the questionnaire considered issues relating to improving information sharing on NPS. This emerged as a key priority among respondents. A number of suggestions for the content and nature of dissemination of information on NPS were made, although it was recognised that different stakeholders might need different formats or levels of access to information, depending on their needs.

There were high levels of agreement that a Forensic Centre for Excellence should manage and disseminate alerts on new and potentially harmful NPS. However, respondents emphasised that the timing of alerts and quality control of the information disseminated would be critical to the success of an alert system. Suggestions were also made about the need to align any new process with alert systems that were already in place.

There were different views about whether information should be disseminated to members of the public or not. It was also suggested that any alert system should be for all substances of misuse and not specific to NPS.

7.4 Additional questions on identifying NPS for the purposes of prosecution

The subset of respondents who were asked additional questions about identifying NPS for the purposes of prosecution reported that they would anticipate submitting both drug samples and biological samples (including blood or plasma) for forensic testing, mostly in small quantities. The exception to this was health services, where potentially much larger quantities were expected.

Respondents also anticipated a number of benefits to be gained if there was improved access to reference standards held by a Centre for Excellence.

Annex A: List of organisations that responded to the NPS Questionnaire

Health stakeholders

- 14 Alcohol and Drug Partnerships/NHS/Drug Treatment Services
- NHS Health Scotland
- Royal Pharmaceutical Society

Enforcement stakeholders

- Border Force
- Crown Office and Procurator Fiscal Service
- National Crime Agency
- Police Scotland
- Scottish Police Authority Forensic Services
- Scottish Prison Service
- Society of Chief Officers of Trading Standards in Scotland
- Trading Standards Scotland

Academic stakeholders

- Forensic Toxicology Service, University of Glasgow
- Pathology Service, University of Glasgow
- WHO Collaborative Centre for International Child and Adolescent Health Policy, University of St Andrews
- Centre for Anatomy and Human Identification, University of Dundee

Third sector stakeholders

- Crew 2000
- Scottish Families Affected by Alcohol and Drugs

In addition to the 30 responses from these organisations, there were also 24 individual responses (**not** representing an organisation).

Annex B: Stakeholders that would benefit from improved data sharing on harms

Enforcement stakeholders

- STOP units
- Police Scotland
- Scottish Prison Service
- Trading Standards
- Those involved in criminal prosecution under the Act

UK wide stakeholders

- Advisory Council on the Misuse of Drugs
- NEPTUNE I and II UK guidance on NPS harms and treatment pathways
- UK Forensic Early-Warning System (FEWS)

Health stakeholders

- Harm reduction/treatment services, including mental health and addiction services
- ADPs
- Drug Trend Monitoring Groups
- Any organisation supporting substance users, families, communities or vulnerable populations (e.g. people in custody settings, looked after children and young people)
- Forensic toxicologists and forensic clinicians, Forensic Pathologists and Toxicologists
- NHS Pan Lothian Strategy on NPS
- NHS Boards, tier 3 & 4 specialist drug treatment services
- Scottish Ambulance Service

Local authority/education/social work stakeholders

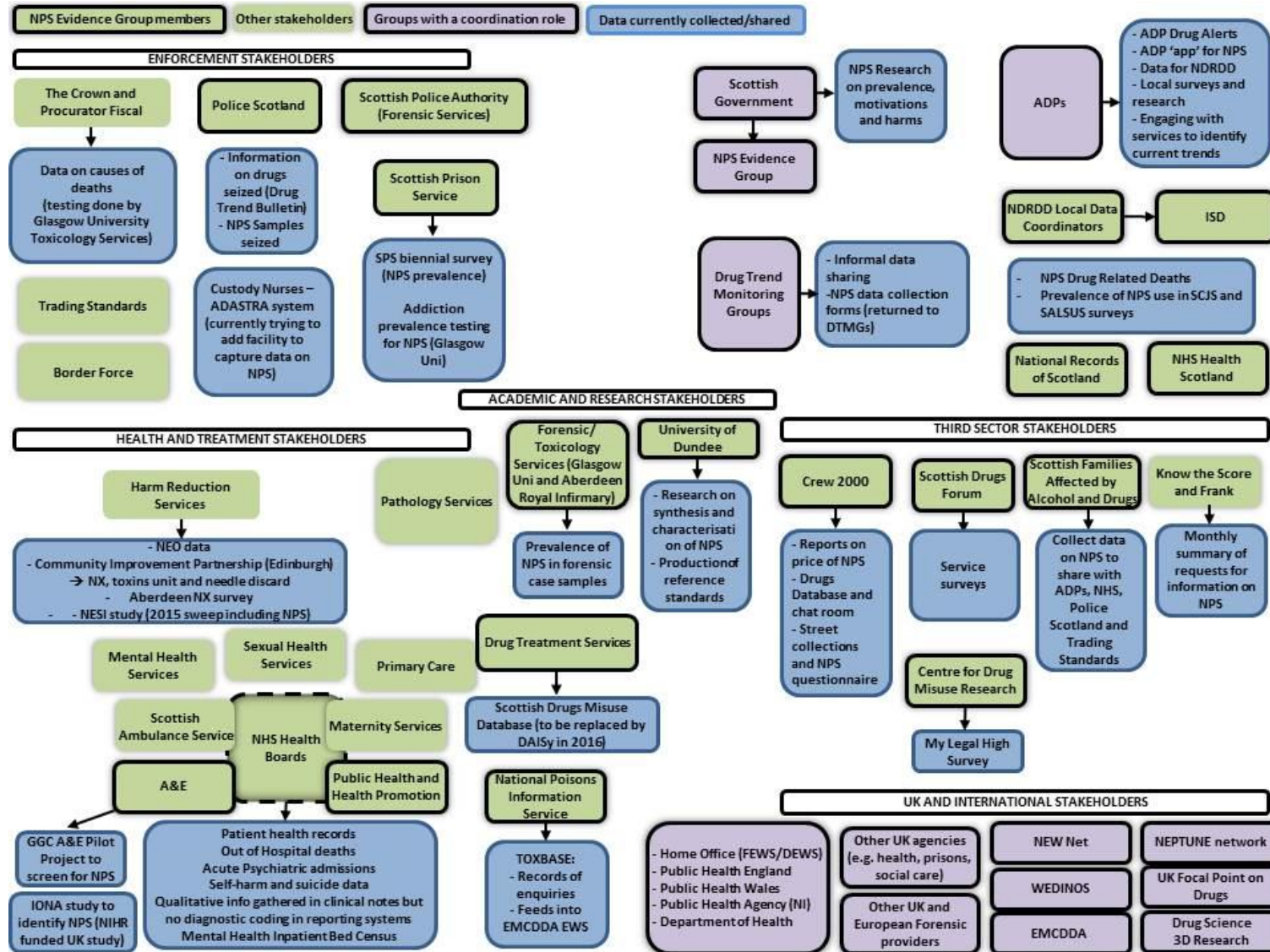
- Educational/prevention/support organisations, e.g. Know The Score, Talk to Frank
- Schools

- Local Authorities
- Social work services (frontline staff undertaking direct interventions)

Other stakeholders

- Members of the public
- Media
- National agencies such as SDF and CREW to ensure public awareness
- Academia, including epidemiologists

Annex C: Updated stakeholder map and key sources of data on NPS



How to access background or source data

The data collected for this social research publication are available on the Scottish Government's Consultation Hub: <https://consult.scotland.gov.uk/drug-research-team/new-psychoactive-substances>



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