Public health intelligence: report and proposals from a participatory process

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Summary

The Public Health Review highlighted a number of issues related to the Public Health Intelligence function of public health. Simultaneously the Shared Service Portfolio process is seeking opportunities to maximise effectiveness and efficiency. The Directors of Public Health (DsPH) and the Committee of the Faculty of Public Health in Scotland (CFPHS) jointly sponsored a process to enable proposals for improvement to be developed for public health intelligence in the domains of health improvement and health services. The proposals were developed over three participatory meetings and two video conferences with colleagues from remote and rural areas. Summary notes from all but the last meeting are provided in Appendices 2-5. The main text of this document describes the proposals confirmed at the final event. A list of attendees at the events is available on request.

Table 1 plots the journey through the process and summarises the identified ambitions and proposals for improvement.

The identified ambitions were:

1. The priorities for public health intelligence are set by a public health strategy.
2. We consistently improve policy and practice by ensuring that interpreted data and evidence are applied consistently (i.e. the Knowledge into Action (KIA) cycle is supported).
3. We improve co-ordination of public health intelligence activities.
4. We have sufficient workforce capacity and capability to meet the need for public health intelligence across Scotland.
5. We consistently inform decision making processes at all levels with public health intelligence.

To achieve the identified ambitions, a series of proposals were discussed and agreed by the attendees:

1. Strategy - having evidence-informed priorities as part of a public health strategy is essential to achieve a coherent and co-ordinated approach to public health intelligence. This will also free up capacity by identifying areas of lower priority. The public health community are keen to support the Scottish Government to produce this strategy given the importance it has in achieving shared public health outcomes.
2. Knowledge into Action (KiA) – linking data with effectiveness evidence, implementation support, evaluation and sharing of learning through an expanded ScotPHO website, supported by a wider range of public health organisations and teams is an option that should be pursued.
3. Co-ordination - improving co-ordination of public health intelligence efforts by gaining a better understanding public health intelligence needs (what is needed by whom and for what decisions) and resources (what is currently

collected and analysed, where and by whom) and networking (for example through the Public Health Information Network for Scotland (PHINS) and the Public Health Evidence Network (PHEN) to support shared needs. There should also be greater effort to reduce duplication between organisations.

4. Workforce – achieving KiA is dependent on the capacity and capabilities of those producing and synthesising public health intelligence, and those making decisions informed by it. Further work should map out the public health intelligence competencies for each role and group, to detail the training needs and to provide for those needs.
5. Influencing decisions – ultimately the ability to achieve KiA is dependent on public health intelligence being communicated effectively to decision-makers at the relevant time. This requires alignment of sufficiently resourced and appropriately skilled public health staff with decision makers in organisations at local, regional and national level.

The recommendations detailed under items 2-4 (KiA, co-ordination and workforce) above are not dependent on structural changes or government. However, they would require some (already very limited) local capacity to be released with a view to ultimately achieve greater efficiency across organisational boundaries. There is an offer of support to the Scottish Government for the creation of the new public health strategy. The structural arrangements for influencing decisions at all relevant levels is dependent on the decisions to be taken following the public health review.

<table>
<tr><td colspan="4">Table 1: A summary of the journey (focussing on health improvement and health service improvement activity)</td></tr>
<tr><td>Background</td><td>Public health review:
• National, regional, local action and collaboration
• Research and evidence based policy and practice
• Technology enhanced activity</td><td>Shared services Portfolio:
'Best for Scotland' identified to achieve greater efficiency and effectiveness.</td><td>Scottish Directors of Public Health/CFPHS - How can support for: the collection and interpretation of data; the production and use of evidence; implementation of public health interventions; and evaluation of public health interventions be best achieved?</td></tr>
<tr><td>Public Health Intelligence:
agreed definition / functions</td><td colspan="3">• Surveillance and monitoring of population health
• Surveillance and monitoring of the determinants of health
• Support for evidence-based policy and practice
• Assessment of the effectiveness of policies, programmes and services
(recognising the need for leadership for health intelligence activity; health service improvement activity; integrative and collaborative approaches to working; and the interpretation of evidence into action as an overall process)</td></tr>
<tr><td rowspan="2">Where are we now?
(noting that the issues identified were not consistent across Scotland)</td><td>What is well developed?</td><td colspan="2">What is less well developed?</td></tr>
<tr><td>• Data and evidence
• A varied workforce and organisations
• Outputs
• Policy environment
• Networked approaches</td><td colspan="2">• Data and evidence
• National strategies and co-ordination
• Embedding the use of data and evidence in decision-making
• Evaluation of the effectiveness of policies/programmes/services
• Workforce / workforce development needs
• Meeting the needs of Scotland (e.g. remote and rural perspectives)
• There are some gaps in activity / capacity / skills</td></tr>
<tr><td>Ambitions</td><td colspan="3">• We have (and support the development of) a public health strategy including and will ensure we have evidence-informed, objective priorities underpinning our work
• We consistently improve policy and practice through the application of the Knowledge into Action (KIA) cycle
• We improve coordination of activity (across and between organisations)
• We have sufficient capacity and capability to meet public health intelligence needs across Scotland
• We influence decision making processes / decision makers</td></tr>
<tr><td>Proposals</td><td colspan="3">• Strategy - evidence-informed priorities as part of a public health strategy is essential to achieve a coherent</td></tr>
</table>

	and co-ordinated approach to public health intelligence. This will also to free up capacity by identifying areas of lower priority. The public health community are keen to support the Scottish Government to produce this strategy given the importance it has in achieving shared public health outcomes. • **Knowledge into Action (KiA)** – linking data with effectiveness evidence, implementation support, evaluation and sharing of learning through an expanded ScotPHO website, supported by a wider range of public health organisations and teams is an option that should be pursued. • **Co-ordination** - improving co-ordination of public health intelligence efforts by gaining a better understanding public health intelligence needs (what is needed by whom and for what decisions) and resources (what is currently collected and analysed, where and by whom) and networking (for example through PHINS and PHEN) to support shared needs. There should also be greater effort to reduce duplication between organisations. • **Workforce** – achieving KiA is dependent on the capacity and capabilities of those producing and synthesising public health intelligence, and those making decisions informed by it. Further work should map out the public health intelligence competencies for each role and group, to detail the training needs and to provide for those needs. • **Influencing decisions** – ultimately the ability to achieve KiA is dependent on public health intelligence being communicated effectively to decision-makers at the relevant time. This requires alignment of sufficiently resourced and appropriately skilled public health staff with decision-makers in organisations at local, regional and national level.

Public health intelligence: report and recommendations from a participatory process

Background

Public health Review

The Scottish Government published a review of public health in Scotland in February 2016.[1] Public Health Intelligence, the domain of public health which provides support for the other three domains (health improvement, health services and health protection), was a recurrent theme throughout the review. It was defined in the review as:

> "the surveillance and monitoring of population health and the determinants of health and wellbeing; support for evidence-based practice; and assessment of the effectiveness of policies, programmes and services".

The review also made three recommendations which have particular relevance to public health intelligence (paragraphs 137, 149 and 150):

137. The current organisational arrangements for Public Health in Scotland should be reviewed and may need to be rationalised. This should explore greater use of national arrangements (including for health protection, public health intelligence and other areas deemed "once for Scotland"), more collaboration between Boards at a regional level, activity that should clearly remain at local level, and how the three levels connect.

149. Priority should be placed on ensuring that public health policy and practice is more strongly underpinned by research and evidence – and that the research and intelligence functions in public health are focussed on being policy and practice-relevant. This will require culture changes within policy, delivery and research organisations, as well as collaborative action to build the evidence base, incorporate a range of types of evidence, and to demonstrate the effectiveness and value for money of public health approaches.

150. Technological and other data developments provide opportunities that the public health function needs to grasp. It is, therefore, also recommended that the public health intelligence specialists in Scotland should rise to the information age opportunities in public health through greater use of big data and technological responses, underpinned by a public health data and technology strategy.

[1] 2015 Review of Public Health in Scotland: Strengthening the Function and re-focusing action for a healthier Scotland. Edinburgh, Scottish Government, 2016.

Shared Services Portfolio

The Shared Services Portfolio is a process led by NHS National Services Scotland on behalf of the NHS Chief Executives to explore ways of achieving 'best for Scotland' in the provision of NHS services. Public Health was identified as one area for consideration in this process, with a particular aim of **achieving maximal effectiveness and efficiency**. As this is a process led by the NHS, aspects of public health which lie in other organisations are out with the scope of this process.

A business case for public health is due to be brought before NHS Chief Executives in the early autumn.

Sponsorship and purpose

The Directors of Public Health (DsPH) and the Committee of the Faculty of Public Health in Scotland (CFPHS) both agreed to sponsor a process to:

- clarify the public health intelligence issues raised in the review
- consider options that could be pursued to respond to the PHR recommendations in this area
- clarify the preferred option(s) about the future of this function
- offer solutions to the Shared Services Portfolio process.

It was agreed that the scope of the work would be limited to public health intelligence in the domains of health improvement and health service public health.

The events were organised to answer the following question:

> How can support for the collection and interpretation of data; the production and use of evidence; implementation of public health interventions; and the evaluation of public health interventions, within the domains of health improvement and health service public health be best achieved?

Methods and process followed

A participatory process was used across the first four meetings to:

- define a shared working definition of public health intelligence
- define the scope of the events
- identify the strengths and weaknesses of current arrangements (Events 1 & 1b – summarised in Appendices 2 & 3)
- generate and test proposals for improvement
- seek broad agreement on a series of actions
    - to inform discussions around the future organisation of public health (through the Public Health Review and Shared Services Portfolio)

- for the public health intelligence community to undertake within their existing roles.

(Events 2 and 2b – summarised in Appendices 4 & 5)

Event 3

The final event took place in Glasgow on the 28th June. The aim of the event was to review the draft recommendations that the planning group had developed based on participants' feedback from the second meetings and to suggest revisions and/or add further detail to the recommendations.

The event started with a summary of the process to date. Following this, the ambitions that had emerged were presented and clarified through a question and answer session. The group were then invited to express the degree to which they supported those ambitions.

The group then split into five groups to build on the actions generated from previous events and to provide further detail on how best to realise the ambitions. The groups encouraged discussed and resolved conflicts where possible, and detailed the advantages and disadvantages of different models where compromises were not possible. At the end of the event, summaries of the suggested actions were displayed and there was a further check on the degree of support for the proposals.

Findings

The process identified five interdependent ambitions which have almost universal support. Where there was disagreement, it related to the categorisation of different ambitions and debate as to whether some should be grouped together or not rather than their actual content. The group expressed support for the proposals at the end of the process.

Each set of actions was linked to the ambitions of the Public Health Review and Shared Services Portfolio and, if implemented, would enhance the impact of that public health activity and increase public health efficiency and effectiveness. The amount of detail for each of the proposals varied dependent on the level of agreement that could be reached for each. It was noted that the action plans for some ambitions could be implemented by the existing workforce without the need for structural change or input from others; whilst other ambitions clearly require action from others. Each of the ambitions and their related proposals are described below.

1. We have evidence-informed objective priorities underpinning our work

There is greater demand for public health intelligence than capacity, in common with all domains of public health. This means that public health intelligence staff are

frequently unable to support others as quickly or fully as is required and decisions about what should not be supported are constantly having to be made. At present, there are a variety of processes in place across organisations and teams to help staff to decide where to prioritise efforts. However, these priorities are not always shared or transparent and this can lead to intelligence resources being spread too thinly and being drawn to areas where there are urgent rather than important needs. Ultimately, this may cause frustration, inefficiency and inconsistency.

There was unanimous recognition of the need for a public health strategy for Scotland amongst the attendees. The strategy needs to identify the priorities for public health overall (and therefore for public health intelligence specifically, to support public health activities across domains[2]) and, equally as important, what is not a priority (applying the principles outlined in the Chief Medical Officer's report, Realistic Medicine).

A public health strategy would be most useful if:

- it had a clear purpose (in terms of identifying priorities and how these are to be delivered) and audience
- if it was based on a series of principles[3] to inform decisions
- if there was a clear process for review and updating
- if evaluation and monitoring of the strategy were built in
- if it were developed and used collaboratively.

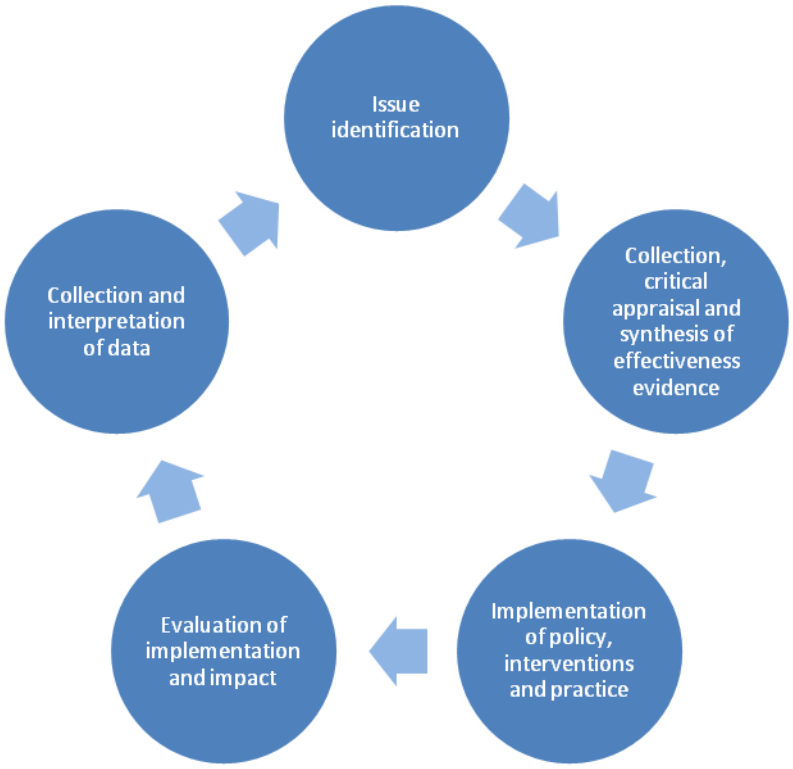
It was clear that many people attending the events had huge enthusiasm for supporting the creation of a strategy and a wealth of ideas, skills and experience to support this. There was a suggestion that the Scottish Government could set up a working group to utilise that expertise to ensure the strategy was informed by current public health intelligence and maximise the prospects of the strategy making a positive impact on public health work.

2. We consistently achieve knowledge into action

The Knowledge into Action (KiA) cycle involves the generation, management and application of knowledge to improve policy and practice (Figure 1). It spans: the collection and interpretation of data; the collection, critical appraisal and synthesis of effectiveness evidence; application of data and evidence to assist implementation; and evaluation. This provides an overall framework for the task of public health, and highlights the important role of public health intelligence in informing decisions.

[2] It was suggested that the creation of a public health intelligence strategy would be helpful following the publication of an overall public health strategy.
[3] Suggested principles were: feasibility; ensuring knowledge-into-action; values and political context; sustainability; awareness of unintended consequences; and cost-effectiveness.

Figure 1 – One representation of the Knowledge into Action cycle



The public health intelligence events, in common with the well-developed literature on this subject, identified that the application of data and effectiveness evidence to inform policy and practice is difficult. There are currently a range of health intelligence resources available for decision-makers, and public health staff are applying and interpreting public health intelligence for that purpose.

However, there remain some data gaps, data are not consistently able to be interpreted by decision-makers, and the evidence base for effective interventions and policy is patchy and is of variable quality. The data and evidence are not curated consistently in a manner that makes it easy for users to find and apply them quickly. Scarce and often limited regional and local (health board and community planning/integrated partnership levels respectively) public health intelligence resource is often tasked with low value, resource intensive and sometimes inefficient, additional/bespoke data analysis and evaluation which diverts efforts from needed knowledge brokerage. Finally, decision-makers across national and local organisations, and in areas relevant to both health improvement and health and social care services, do not consistently use the best available intelligence to inform their decisions.

The view of the attendees was that this can be done much better, and that much of this can be implemented by the current workforce working differently and more coherently. The suggestions of the group were that:

a. The ScotPHO website should be expanded to incorporate more of the KiA cycle. This would involve:
    i. Greater collaboration between the core ScotPHO team, evidence providers and those applying the evidence to populate the expanded website. A plan needs to be discussed and agreed for how this expansion in remit will be supported by the range of organisations with public health intelligence resources.
    ii. Linking the data which identify the public health issues to the evidence of effective policies and practice.
    iii. Creating spaces for sharing of learning (online discussion forum, publication of case studies and blogs, online learning resources, contact details for networking).
b. Networked solutions to providing effectiveness evidence:
    i. The Public Health Evidence Network (PHEN) should be supported and nurtured to provide the content on effectiveness evidence from the literature on health improvement. This will involve collaboration with existing work to synthesis such evidence (e.g. What Works Scotland).
    ii. Further discussion is needed on how to resource the synthesis of the evidence base in relation to health and care services.
c. Promoting horizontal learning:
    i. The Public Health Information Network for Scotland (PHINS) should be reinvigorated to promote sharing of learning between areas and to provide content for the relevant sections of the ScotPHO website above.
    ii. Further discussion is required on how to synthesise the learning from implementation science and current approaches to doing so (e.g. quality improvement hub).

3. We have good vertical and horizontal co-ordination of public health intelligence work

It was identified that the effectiveness and efficiency of public health intelligence could be improved if there was better co-ordination of work horizontally (across organisations at the same structural level) and vertically (e.g. between national and local organisations). The advantages of such co-ordination would be that duplication would be avoided and work that was undertaken could be utilised more widely.

However, the plethora of national and local organisations with some role in public health intelligence (with their varying needs, capabilities and priorities) makes co-ordination very challenging to achieve. As noted above, a national strategy which

details how national public health priorities will be delivered is an essential component in achieving better co-ordination. Furthermore, better co-ordination of resources framed around the KiA cycle (as described above) is likely to achieve improved sharing of data, evidence and learning which will also make a substantive contribution.

In addition to those actions it was suggested that:

a. A mapping exercise could be undertaken of public health intelligence needs (what is needed by whom and for what decisions) and resources (what is currently collected and analysed where and by whom) to link the curation of intelligence to decision-making.
b. The inclusion of local data collection and analyses in national data resources such as ScotPHO should be explored.

4. We have sufficient capacity and capability for public health intelligence needs nationally and locally

The attendees at the events identified three roles in relation to public health intelligence: creating the intelligence (e.g. by working on data or effectiveness evidence); interpreting and synthesising the evidence (e.g. producing an options paper based on the data and evidence); and using the evidence to make decisions (e.g. ministers, heads of service). Some people may undertake more than one of these roles, whilst others are more easily defined as a creator, interpreter or consumer of public health intelligence.

It was recognised that an important barrier to achieving Knowledge into Action (KiA) was that there is a lack of capacity to undertake some roles and that some people are insufficiently trained or experienced to fulfil the roles expected of them. Notwithstanding the actions suggested above to improve efficiency and thereby enhance capacity, a number of other actions were suggested to improve the skills of the workforce to be able to undertake the roles expected of them. The suggestions were:

a. Articulate the levels of knowledge and skills required by the range of creators, interpreters and consumers of public health intelligence, referencing the public health skills framework. This could be led by a working group of stakeholders and experts.
b. Undertake an audit of core creators, interpreters and consumers to identify skills and gaps. The audit could then be expanded to those who would benefit from public health intelligence.
c. Review of current training and competency frameworks to ensure appropriate, targeted and tiered programmes are in place.

5. We are able to influence decision-makers

The ultimate goal of Knowledge into Action was recognised as the ability to influence decision processes and decision makers across national and local organisations to ensure that the decisions taken are informed by public health intelligence. To achieve this goal it is necessary to have strong relationships with decision-makers such that public health intelligence is integrated into the variety of processes within health improvement and health and social care.

There was a lively discussion about how best to position public health intelligence in relation to local, regional and national[4] structures both to maintain and develop these relationships and also to ensure that the analysis and application of data and evidence is undertaken at the correct scale.

There is a need for people and intelligence to be provided at all levels but that the most appropriate level of analysis and input will vary depending on the decision being informed and the decision-making structure involved.

At local level there are now a variety of important structures with public health intelligence needs including Local Authorities (LA's), Community Planning Partnerships (CPPs), Health and Social Care Partnerships (HSCPs) and their Integrated Joint Boards (IJBs). Some health boards cater for small populations and can be considered to be local structure, whilst others are large and encompass numerous local authorities and substantial populations, and may be considered as regional structures. It was also noted that there is increasing demand for very local data to support locality planning.

There is need for a balance between local, regional and national input, on a case by case basis, to ensure the intelligence is fit for purpose and that it can be interpreted for the relevant audience. In general, more local provision of public health intelligence to align with local decision-making structures has a greater chance of influencing local decision-making. However, this has to be balanced against efficient use of current limited capacity, increased demands for local interpretation, the difficulties of obtaining data for very small local populations, the risks of misinterpreting random variation, and the prevention of inadvertent disclosure. Provision of public health intelligence for larger population unit sizes was seen to be more feasible and efficient but more distant and less influential on local decision-making. Consistent provision of public health intelligence to all levels is also important to avoid duplication and inefficiency (as local structures may commission their own intelligence work if they are provided for).

Acknowledgements

[4] The working definitions of: 'local' was local authority/Community Planning Partnership/Health and Social Care Partnership/small (<400,000 population) health board; 'regional' was large (>400,000 population) health board or other regional structures; and 'national' was Scotland-wide.

We would like to thank the DsPH and CFPHS for sponsoring this work; NHS Health Scotland for funding the facilitation and venue hire; Kinharvie for their expert facilitation; Claire Hendry and Pip Farman for the practical organisation of the events; and most importantly all of the participants in the events for their contributions.

Appendix 1 - Responding to the Public Health Review recommendations on public health intelligence – a proposal for discussion at DsPH meeting

Gerry McCartney – 15th March 2016

Background

Public health Intelligence is a recurrent theme throughout the Public Health Review (PHR). Public health intelligence is defined in the review as:

"the surveillance and monitoring of population health and the determinants of health and wellbeing; support for evidence-based practice; and assessment of the effectiveness of policies, programmes and services" (p.9).

The recommendations of the review include (paragraphs 137, 149 and 150):

137. The current organisational arrangements for Public Health in Scotland should be reviewed and may need to be rationalised. This should explore greater use of national arrangements (including for health protection, public health intelligence and other areas deemed "once for Scotland"), more collaboration between Boards at a regional level, activity that should clearly remain at local level, and how the three levels connect.

149. Priority should be placed on ensuring that public health policy and practice is more strongly underpinned by research and evidence – and that the research and intelligence functions in public health are focussed on being policy and practice-relevant. This will require culture changes within policy, delivery and research organisations, as well as collaborative action to build the evidence base, incorporate a range of types of evidence, and to demonstrate the effectiveness and value for money of public health approaches. (Lead responsibility: NHSHS, working with the GCPH, Academic Leads, and CSO.)

150. Technological and other data developments provide opportunities that the public health function needs to grasp. It is, therefore, also recommended that the public health intelligence specialists in Scotland should rise to the information age opportunities in public health through greater use of big data and technological responses, underpinned by a public health data and technology strategy. (Lead responsibility: NSS and ScotPHO.)

This paper proposes that some preliminary work is undertaken to:

- clarify the public health intelligence issues raised in the review

- consider options that could be pursued to respond to the PHR recommendations in this area
- clarify the preferred option(s) about the future of this function
- offer solutions to the Shared Services Review process

Scope of the work

The scope of public health intelligence detailed in this review spans all public health domains (health services, health protection, health improvement and academic public health) and includes the collection and interpretation of data, the creation and use of evidence, supporting the use of intelligence in policy and practice, and evaluation. This is essentially the entirety of the Knowledge into Action (KIA) cycle for public health.

Given that substantive work has been undertaken recently in relation to health protection, it is proposed that public health intelligence in this domain is out of scope for this proposal.

Academic public health clearly has a role in the KIA cycles described above and therefore cannot be excluded from the process. However, it is not proposed that this work will cover the specific recommendations for the better co-ordination of academic public health as this should be led from that sector.

There is a substantive strand of work contained within the PHR relating to the creation of a public health strategy for Scotland. This should include the strategy for greater use of technology and the approach to 'big data'. This will therefore be out of scope for this proposal.

It is therefore proposed to concentrate on the following task:

How can support for:
- the collection and interpretation of data
- the production and use of evidence
- implementation of public health interventions
- evaluation of public health interventions

within the domains of health improvement and health service public health, be best achieved?

Proposal

It is proposed that a small group is formed under the purview of the DsPH group to organise three meetings to come to a consensus (if possible) on the above question and to complete any necessary pre-work. The meetings will be participatory and will aim to achieve a consensus position on the future organisational arrangements.

1. Meeting 1 – Tasks: agree scope and membership, quickly map out the current provision; identify strengths and weaknesses of current provision, identify future options (including what might be best done locally, regionally and nationally).
2. Meeting 2 – Tasks: Check options with group, identify strengths and weaknesses of future options.
3. Meeting 3 – Tasks: Discuss and agree recommendations for the SSR group (in the knowledge that other decisions of the SSR may make different options for public health intelligence more or less favourable).

The meetings will be open, but will be task-orientated and seek to address the questions above and will therefore expect attendees to make a contribution and be willing to take delegated tasks away between meetings.

It will be important to ensure the participation of people across the KIA cycle, across domains and from local, regional and national structures. This will include (but not be limited to):

Users of evidence/implementation*:

- Scottish Government public health policy
- Local authority policymaker /COSLA
- Territorial health board director of acute services/planning
- Director(s) of Public Health
- Health promotion managers
- Voluntary sector

Data/evidence/evaluation support providers*:

- Public Health and Intelligence at NHS National Services Scotland (focussing on the non-health protection part)
- Healthcare public health interest group
- Public Health analysts within territorial health boards
- Information analysts within local authorities
- Information analysts within territorial health boards
- Public health specialists
- NHS Health Scotland
- Healthcare Improvement Scotland
- Glasgow Centre for Population Health
- MRC/CSO public health units
- Academic public health units
- North of Scotland Public Health Network (NoSPHN)

*Individuals and roles may fit into both categories.

Next steps

Pending agreement and amendment of the above proposal, the next step would be to set up a small working group to plan the meetings and do the necessary pre-work. It is suggested that this involve a DPH (to be confirmed today), Gerry McCartney (ScotPHO) and Gordon McLaren (NHS Fife and co-chair of the healthcare public health interest group).

Appendix 2 - Public Health Intelligence events – brief report of Event 1

Edinburgh, 12th May 2016

Overall purpose and objectives

The first part of the event involved setting the scene in relation to the public health review and the shared service review. In particular, the sponsorship of the Directors of Public Health and the Faculty of Public Health in Scotland was made clear.

Following this, the purpose and objectives of the events overall, and this event in particular, were discussed and agreed with the group:

> To develop a shared response to the recommendations relating to public health intelligence in the recent Public Health Review (PHR).

And the objective for day 1 was agreed as:

> To develop a shared understanding of what we mean by 'public health intelligence' in Scotland; and the areas of public health intelligence which are well developed and the areas that need further development.

Working definition

The group then discussed the scope of the events and a working definition of public health intelligence. We agreed to use the definition outlined in the public health review:

> "The surveillance of population health and the determinants of health and wellbeing: support for evidence-based practice; and assessment of the effectiveness of policies, programmes and services".

It was agreed that the scope of the events would **include** intelligence to inform **health services public health and health improvement**, but exclude intelligence for health protection matters, although it was recognised that this latter aspect was not ideal.

It was noted that the definition is wide ranging, covering the intelligence and knowledge we variously source, use or provide for public health work, for a wide range of purposes including input to health/care services. Public health intelligence and knowledge is, in part, everyone's work in Public health, though some of us specialize in aspects of it. Participants were encouraged to discuss how public health intelligence as a function currently works in Scotland

What are the current functions within public health intelligence?

The group then worked together to articulate the different functions currently undertaken in Scotland within this definition and scope. These have been summarised below:

Surveillance and monitoring of population health

- Collection and/or use of a wide range of health data sources (including, vital event registration systems, hospital and primary care records, screening, disease registers, big data, social media, qualitative data, mental health and webbing, etc.)
- Quality assurance, critical appraisal, collation, analyses and interpretation of various data sources – including profiling, time series, and analyses of equality groups and inequalities
- Dissemination of analyses and use in agenda setting

Surveillance and monitoring of the determinants of health

- Collection and collation of data across all layers of the Dahlgren and Whitehead determinants of health 'rainbow' (including: income, inequality, poverty, environment, housing, work, DWP, transport, education, service access, social fabric, 'assets', behaviours, equality characteristics, health outcomes including mental health) including a variety of forms of data.
- Quality assurance, critical appraisal, collation, analyses and interpretation of various data sources – including profiling, time series, and analyses of equality groups and inequalities
- Dissemination of analyses and use in decision-making
- Setting the data sharing and data linkage agenda
- Equality audit
- Engaging with population and other agencies to help with data collection, sharing and linkage

Support for evidence-based policy and practice

- Supporting access to the evidence base and archives through knowledge services, including literature reviews and critical appraisal
- Production of interpreted summaries of the evidence base

- Encouraging the use of a wide range of evidence, as appropriate, in policy, practice, implementation and in planning evaluation – knowledge brokerage
- Needs assessment
- Offering guidance and recommendations based on evidence
- Understanding and navigating evidence into action
- Use of Improvement techniques and providing scientific support for experimentation
- Training and coaching to build the capacity for evidence-based policy and practice
- Research and building the evidence base
- Sharing of practical implementation support and learning

Assessment of the effectiveness of policies, programmes and services

- Monitoring of high level outcomes and a range of other indicators using a variety of data sources
- Evaluations (including a wide range of outcomes, health and non-health)
- Benchmarking
- Dissemination of learning to inform future policy and practice development

What is well developed?

The group were then facilitated to consider which of these functions are currently well-developed in Scotland, as part of an appreciative enquiry.

1. Data and evidence
    - Administrative health and demographic data
    - Cancer registries
    - Long consistent time series data
    - Policies, guidelines and standards for data quality assurance
    - Surveys inc. SALSUS and SHeS
    - Local surveys
    - Comparatively robust evidence base
2. Workforce and organisations
    a. Enthusiastic, motivated workforce
    b. Good spread of analytical skills in some areas.
    c. Good understanding of social determinants of health
    d. Strong networks
    e. National support available
    f. ScotPHO, ISD, NRS, MRC
    g. Collaborations across PH, academic and third sector
    h. Strong public health academic sector
    i. Some good international links

    j. DPH leadership and local co-ordination
    k. Good consultation processes
3. Outputs
    a. Good profile products nationally and locally
    b. Geographic information systems
    c. Scottish Index for Multiple Deprivation (SIMD)
    d. Monitoring frameworks
    e. Evidence into Action briefings
    f. National evaluations
    g. Evidence summaries – e.g. SIGN
    h. Linked datasets
    i. High quality national reports
4. Policy environment
    a. National Performance Framework
    b. Good examples of evidence based policy and practice
    c. Public interest in health and inequalities
    d. Good relations with policymakers
    e. National conversation
    f. Research funding

What is less well developed?

Following this, the group then considered the aspects of public health intelligence were less well developed:

1. Data and evidence
    a. Mismatch between data needs and collection in some areas – demand for more timely and local data; missing data on sensory impairment, dementia and children
    b. Systems for accessing, sharing and linking data routinely
    c. Present data on the health and social problems alongside the evidence base for solutions
    d. Efficient and comprehensive data capture
    e. Need to develop meaningful small area geographies
2. National strategies and co-ordination
    a. Need for better co-ordination of functions and priorities as part of a strategic approach – especially across local-regional-national spectrum
    b. Need for clearer articulation of which aspects of public health intelligence are best delivered nationally and which locally
    c. Need also for articulation of distinction between a business intelligence function for services and public health intelligence function particularly as the latter relates to health services public health.

3. Embedding the use of data and evidence in decision-making
    a. More tools and structured support
    b. Engagement with council and parliamentary groups, local and national decision-making and advisory structures
    c. Scaling-up
4. More evaluation of the effectiveness of policies/programmes/services.
    a. Co-ordinated prioritisation would ensure critical mass for effective evaluation of flagship initiatives and prevent inefficient duplication of efforts.
5. Workforce
    a. Mismatch of skills and tasks for analysis in some areas
    b. Lack of capacity for producing public health intelligence in some local areas

Next steps

Towards the end of the event, the group was then encouraged to think of options for the future that might build on the current strengths and diminish the weaknesses of the current arrangements. These ideas were not systematically recorded as this will be the core task of meeting 2.

A small planning group for the subsequent events has been formed (Gordon McLaren, Gerry McCartney, Sonya Scott, Pip Farman).

A VC event for people who couldn't attend Event 1 to input into the process is planned for 31st May from 12.30-2pm. Pip Farman will be co-ordinating the participation into this – all are welcome.

The next events and the registration details are as follows:

Event 2 Consideration of possible options for the future
Thursday 2nd June in Stirling
https://publichealthreviewstir.eventbrite.co.uk

Event 3 Agreeing a response to the review
Tuesday 28th June in Glasgow
http://publichealthreviewgla.eventbrite.co.uk

Additional capacity at these events is currently being planned.

Appendix 3 – Note of VC meeting 31st May 2016

(21 participants over 7 sites)

Building on the brief report of event 1 - key themes / messages

Working definition of public health intelligence: suggestions included

- emphasising service planning
- working with colleagues and gaining expertise from the system and using it
- specifying (or giving examples) of which policies, practices, services definition referring to
- Using the FPH and PHR definition of health intelligence.

Definition of Public Health functions: additions suggested

- Partnership and collaborative working:
    - Need to emphasise working with partners, we combine data and evidence with public health principles and our leadership role in leading processes and change go beyond interpretation of evidence to translating it into action. It is our unique offer.
    - 'training and coaching' - we have a much more integrated and collaborative approach to working to support evidence-informed practice than function suggests
- IJBs and integrated datasets and their use – different ways of producing, using, accessing data and evidence are used across boards.
- Modelling at high and low levels in terms of demand and capacity.

What is well developed?

- Examples of what is working well are not consistent across Scotland - need to better reflect and evidence eg quantify and qualify list generated from event 1 and share learning from this.
- Workforce and organisation:
    - Some Boards have integrated public health and service planning intelligence functions so PH intelligence team provides information for the whole organisation / IJB's and therefore the advice is more robust and impactful
    - Varied workforce with range of backgrounds – multi-disciplinary, some highly developed and specialist skills in some boards
    - Networked approaches - NoSPHN / public health intelligence subgroup: developed specific pieces of work (cancer / population

projections); promotes learning between areas / CPD; promotes an intelligent region approach / population of 1.3 million developments; promoting different ways of working locally, regionally, nationally; linking up interests and skills.

What is less well developed?

- Workforce / workforce development:
    - Defining roles (everyone in public health has a role)
    - We don't use the wide range of background experiences which people come into public health with / share expertise
    - Opportunities for (signposting to) support and training on public health intelligence / online learning
- Remote and rural
    - SIMD is a real challenge in rural areas and need to identify a better way of doing rural deprivation measures.
    - Island bill will require things to be 'island proofed'
    - National surveys don't provide the sample sizes required and we don't have the money to boost
    - Representation from smaller Boards into communities of practice difficult.
- Gaps / developments needed
    - Spatial epidemiology and analysis
    - Proactive horizon scanning / emerging public health risks eg Legal highs, new drugs
    - Using intelligence resources and evaluation at the start of programming eg psychological therapies access funding
    - What should we contribute to new drugs, immunomodulation – should we be more involved or leave to SMC/HIS?
- Coordination
    - Better co-ordination of what different resources are being doing (e.g. LIST resource) and understanding gaps.
    - Combining data, evidence & feedback.

Next steps / thinking ahead

- Opportunity to be clear what we mean by public health intelligence, including workforce from specialists in health intelligence to generalists
- Increase the capacity and resilience
- Clarifying what is best – locally (IJB's / localities/Boards - recognising areas differ), regionally and nationally to best meet challenges
- Pre-empt organisational change (eg intelligent regions, community empowerment act)

- Influence the PH intelligence component of the PH strategy (what should it look like?)
- IJBs are the new commissioners and the data needs to be built on these geographies and the evidence needs to be tailored for them.

Appendix 4 - Report of public health intelligence event 2a

Stirling University, 2nd June 2016

PART 1 PURPOSE AND CONTEXT

1.1 What do people want to get out of today? Some examples:

- Sense of commonalities and practicalities that people can do despite the context of budgets etc.
- Identify how the university can get involved in the greater use of evidence and the generation of new evidence in the light of the innovation underway

1.2 Purpose

Overall

- To develop a shared response to the recommendations relating to public health intelligence in the recent public health review

Event 2

- To explore and appraise possible steps that could be taken to further improve public health intelligence in Scotland

1.3 Context

- Public Health Review recently published; Shared Services Portfolio process underway. Live context gives an opportunity to feed in our thinking to these processes.
- Focussing on health intelligence in relation to health services public health and health improvement – excluding health protection and academic public health
- Recap on Event 1a in Edinburgh
    - achieved a shared understanding of public health intelligence
    - defined the activities and functions undertaken in each of the parts of the public health intelligence definition
    - reflected on the strengths of the functions, although not the consistency across the country
    - reflected on the areas which we thought required further development (and consolidated with the outputs from the PHR):
        - data availability and quality
        - prioritisation of public health intelligence efforts
        - co-ordination of public health intelligence
        - knowledge translation
        - assessing impact
        - workforce capacity

- Event 1b – videoconference with remote and rural colleagues – key findings of this have been added to the materials for today.
- Purpose of today is to explore possibilities and seek understanding (not agreement). Will be fed back to DsPH, FPH in Scotland and Shared Services Portfolio.

1.4 Discussion Points

- Query and disagreement about why health protection is excluded and is this possible and appropriate? Could we at least cover the holistic issues around public health intelligence which would include health protection?

- General agreement that we can look at the high level issues in relation to health protection but any suggestions in this domain will need to be checked out more fully with that workforce.

PART 2: CONSIDERATION OF GEOGRAPHICAL ROLES AND RESPONSIBILITIES

2.1 Local-regional-national – Where are functions best planned and delivered?

Best done in partnership between geographical teams

- Prioritisation of data collected and analyses and linkage undertaken
- Priorities for national surveys
- Data standards and definitions
- Prioritisation of needs assessment resources

Best done nationally

- Quantitative data collection
- Quality assurance of national datasets
- Data analysis
- Data linkage
- Health Economics
- Reviews of evidence base for interventions/policies/practice models across health services and health improvement
- Critical appraisal of evidence in key areas filtered for locality use.
- Evidence reviews on what works and in what context
- Evaluation of national policy
- Planning/co-ordinating local evaluation to enable aggregation of samples for greater power and support shared learning.
- Evaluability assessments
- Co-ordination of innovation
- Work on competencies
- Facilitating a network for local skills development
- Co-ordination of shared learning

Best done regionally

- Evaluability assessments
- Bringing together communities of practice
- Participation in shared learning and exchange

Best done locally

- Understanding local priorities
- Data collation
- Qualitative data collection
- Interpreting analyses
- Interpretation of data and evidence
- Understanding context
- Exploration of issues raised by new intelligence
- Championing evidence-informed approach
- Communicating the value of evidence to other sectors and stakeholders
- Building capacity of multi-agency workforce
- Participation in shared learning and exchange
- Facilitating community based conversations

Best done at all levels

- Understanding of: data quality, decision-making structures, and windows of opportunity for change.
- Data quality assurance
- Data outputs
- Dissemination of intelligence
- Interpretation of data analysis
- Knowledge translation
- Evaluation

2.2. Other Recurrent Themes

- It is important to define what we mean by local and regional – e.g. board, IHSC/Community Planning Partnership, sub-partnership locality?
- Difficulty of allocating functions to geographical levels
- Need for vertical and horizontal co-ordination/connection
    - National public health intelligence producers need to be responsive to local needs
    - It is important that data collected and analysed is co-produced with and relevant to local decision makers and it is important that outcomes are analysed at local levels where possible. This includes national survey data.
    - We need a mechanism to co-ordinate and communicate between levels – vertical and horizontal networks offer a possible solution.
- Demands exceed capacity.
- There is a need to standardise priority data item definitions across Scotland
- Agreed national public health dataset
- Need for local skills in data analysis to interpret data

2.3 **Reflections on this stage**:

- Lots of expertise, lots of apparent diversity in views – perhaps some resolvable.
- No shortage of ideas.
- Problems with definitions of national-regional-local – the definitions are different from different perspectives.
- Local means very different things – local authorities, localities, IJBs, etc.
- Difficult to allocate things to levels – challenge is how to get an integrated system of health intelligence support. Need to value the contributions made by those collecting data.
- Some drift to structural solutions rather than functional – think that is okay.
- We can be constrained by the existing organisational forms. There is value of thinking with a clean slate.
- Need for mechanisms to co-ordinate and communicate between levels.
- Need for networks – horizontal and vertical.
- Need more prioritisation – we may not have resource to have functions at all levels.
- Need to embrace prevention to avoid missing the opportunities – e.g. around public mental health.
- Getting nationally-agreed standards for data collection provides for all geographical aggregations; if we have diversity in data collection then we can't do this.
- How ready are we to use the intelligence we have – focus on the workforce and the ability to use data and evidence.
- Qualitative evidence missing from the discussion.

PART 3: AREAS FOR DEVELOPMENT – SUGGESTED WAYS FORWARD

3.1 Prioritised Suggestions

Data availability and quality

- Non-NHS-led centre for public health and wellbeing intelligence (generally not supported, but unclear if that is the non-NHS bit or the creation of a centre bit or both)
- National core dataset underpinned with nationally approved and agreed definitions and standards (generally supported but quite a few queries)

Prioritisation of public health intelligence efforts

- We should develop clear, objective, consistent, evidence-based criteria for setting public health priorities at local/regional/national level – iterative and co-ordinated between geographical levels and across Scotland. [almost universally supported]
- Public health intelligence efforts should reflect these population health needs and be made less vulnerable to short-term political influence. [almost universally supported]

Co-ordination of public health intelligence

- Develop a proposal to achieve: 1. Sharing of good practice and things that haven't worked; 2. Create a network /community of practice. [almost consensual support]
- Co-ordinated support across knowledge into action cycle with national and local contributions; starting in areas where we have substantive work to support decision-makers (inc. key contacts – to be defined). [almost complete consensus]

Knowledge translation

- Early engagement between national policy makers, local decision makers, and PH intelligence producers, using the existing evidence base for interventions and implementation including contextual knowledge. [almost consensual support, some questions asking 'how']
- Further work to define the knowledge translation function drawing upon intelligence gathered from event (e.g. knowledge translation flip chart sheets). [some support, lots of uncertainty]

Assessing impact

- Platform for sharing information and evaluation advice/support embedded in practice (which is interactive and covers all domains of public health). [almost universal support]
- Develop skills in evaluation through cross-sectoral working using wide range of data and evidence from different partners. [almost universal support]
- Co-ordinated implementation to support better evaluation design for stronger learning. [strong support]

Workforce capacity

- Identify the public health workforce (core and less specialist 'rings') and gaps; identify the key skills and competency levels in relation to the roles. [general support]
- Making it easy for staff – co-location, sharing, integration – skills, people, relationships, locations, data. [supported, but lots of queries]

3.2 Other Recurrent Themes

- Agreed data definitions and standards
- Resource challenges
- Need for collaboration between local, regional and national partners in deciding priorities for public health intelligence including survey sample sizes and content, profile outputs, evidence appraisal, and evaluation.
- Network working
- Ways to share learning – journal/forum/community of practice
- Need to support evidence into practice – e.g. knowledge brokers.

- Thinking beyond health services
- Skills gaps

PART 4: SYNTHESIS AND PROPOSAL

1. National core dataset underpinned with nationally approved and agreed definitions and standards.
2. We should develop clear, objective, consistent, evidence-based criteria for setting public health priorities at local/regional/national level – iterative and co-ordinated between geographical levels and across Scotland.
3. Public health intelligence efforts should reflect these population health needs and be made less vulnerable to short-term political influence.
    a. We need to develop a public health strategy which helps prioritisation of PH intelligence resources.
    b. Objective, evidence-based criteria for priority setting are needed – based on condition, context, intervention, burden of disease, preventable and amenable conditions, inequalities.
4. Develop a proposal to achieve: sharing of good practice and things that haven't worked; and create a network /community of practice.
5. Co-ordinated support across knowledge into action cycle with national and local contributions; starting in areas where we have substantive work to support decision-makers. To include health and social care public health and health improvement; national and local layers of decision-making; list of key contacts at each level.
    a. Contribution from local and national support across KIA cycle
    b. National organisations asking local what would be useful
    c. Data quality hierarchy and clarity on the purpose and use of different forms of data (inc. qualitative, experiential, contextual, etc.)
    d. National production of profiles to local demand
    e. Large national survey samples with local bolt-ons
    f. Create open access best practice/things that didn't work journal/forum/community of practice
    g. Network – public health evidence with local and national involvement
    h. Introduction of national statistics protocol to local settings
6. Early engagement between national policy makers, local decision makers, and PH intelligence producers, using the existing evidence base for interventions and implementation including contextual knowledge.
7. Identify the public health workforce (core and less specialist 'rings') and gaps; identify the key skills and competency levels in relation to the roles (including knowledge translation).
8. Make it easy for staff – co-location, sharing, integration – skills, people, relationships, locations, data.

APPENDIX: FULL DISCUSSION SUMMARY

Local-regional-national – where are things best done?

People grouped around the four public health intelligence functional areas and divided within these to discuss the sub functions identified during the first sessions with respect to the above question.

An opportunity was then given to comment and build on this.

A. Surveillance and monitoring of population health

1. ***Collection and/or use of a wide range of data sources***
    a. Need to value, retain and reward expertise
    b. Lots of inefficient duplication with local surveys
    c. National data collection should be closely linked to interpretation and translation using the best evidence and information from local innovations
    d. National role in identifying data gaps and filling these
    e. Standards – definitions need to be locally relevant, co-produced, comparability is important
    f. Need for wider (health and social care and voluntary sector) involvement in any developments (away from medical model)
    g. Standardised approach to collecting local priority data
    h. What about qualitative data – local? National standards? Other data sources are they included in national centre?
    i. National approach enables economies of scale, all need to be involved in definitions of standards
    j. Develop and share resources nationally
    k. Need to scope current/established datasets across Scottish public bodies – ask how can these by improved; where can we link datasets in order to answer ph questions
    l. Needs to be nationally co-ordinated and resourced – but needs local relevance and outputs (including focus on specific core groups)
    m. National centre of excellence for data collection and advice
    n. Development, application and dissemination of nationally approved data standards and definitions
    o. Ability to granularise national data effectively

2. ***Quality assurance, critical appraisal, collation, analyses, interpretation, dissemination and use in agenda setting***
    a. Standardised local data collection needed
    b. Identification of a definition of local
    c. Local boards linking into national surveys, what they would like included, big enough sample size
    d. Distorted priorities of value of collecting data will impact on data quality so education of data generators is vital
    e. Consistency over time of national survey questions would help
    f. Real time data often isn't clean and the value of good coding is undermined
    g. Is it a threat or is it an opportunity?

h. Need exemplars to demonstrate relatability, validity and usefulness
i. Collecting health data from the public – a public health portal?
    - National – QA of key national datasets
    - Shared local-national responsibility for QA
    - All national data starts local – should end up of use for local and national data analyses
    - Building blocks – workforce, definitions/standards, coding, it systems, validation
    - Focus shifting to real time data for operational day to day management of services
    - Threat to Scotland's established ph datasets – don't take our eyes off the PH ball
    - But need more responsive but controlled evolution of the national datasets
    - Unclear needs based prioritisation of ph analysis for population health – within, between, across agencies
    - Increased demands, stretched resources
    - Distorted priorities – what the sg will pay for, loud voices
    - How do we increase connectivity without overloading – e..g death by email?

B. Surveillance and monitoring of the determinants of health

3. Collection and collation of data across all layers of Dahlgren and Whitehead determinants, quality assurance, appraisal and interpretation

a. Benchmarking – national frameworks/guidance/standards; available at local levels; feedback at local level to users/operational teams; some regional feedback and use to support regional services e.g. trauma, cancers. Local = boards partnerships, primary care practices, communities, smallest available 'unit for action'.
b. Benchmarking needs to include a mix of qualitative and quantitative data to share best practice [reported verbatim]
c. Dissemination – needs to happen across local, regional, national. Two-way dissemination – from local practitioners through to national government. Improve use of practitioner experiential learning especially for social interventions – good model may be significant clinical incident learning – ADTC safety collaborative/ National Patient Safety.
d. Consider complexity – quality of life – widening of indicators required.
e. National quantitative; local qualitative
    - Be clearer about the purpose of qualitative data collection – for how/why questions only
    - Prioritisation – key demands greater than capacity. Need to co-ordinate horizontally and vertically.
    - Governance needs to be explicit without duplication
    - Reach a consensus on what data needs to be collated and analysed centrally (e.g. links to national ph policy) and what should be left to local areas
    - Hard to reach groups can't be addressed from a national centre

- Examples of gaps – recording when a child's parent is in prison; gender-based-violence
- Not making assumptions
- Consider positives/assets as well e.g. some deprived areas may have excellent social support
- Community planning partnerships and sharing good sources of data – availability of data sharing
- Agreed national data set – available and accessible
- Needs to consider governance – data linkage safe haven

4. ***Dissemination of analyses, use in decision-making and setting the data sharing and data linkage agenda***
    - Knowledge translation vitally important. Need to understand data quality, decision making structures – e.g. windows of opportunities for change
    - Analyses needs to be regularly updated
    - It needs to be given to those who need the information to make decisions. Cascade of data and intelligence does not always work.
    - Monitor working hours
    - As much data and analysis should be publically available as possible. allows synthesis with other sources and users.
    - Local support teams to support analytics and data insights
    - Sharing resources e.g. coding
    - Decision-makers need confidence in data and analysis done – may want to play with sensitivity analysis – hands on therefore local.
    - Should be available at point of care
    - Need better sharing of local analyses between areas and nationally but doesn't need to be full report/final product

5. ***Equity audit and engaging with population and other agencies to health with data collection, sharing and linkage***
    a. Already happening at CPPs (or should be!)
    b. Partners (police, fire, voluntary) may have data which may not be in a format public health are used to; or their regional/local etc. are differently defined
    c. Issues re. information governance (different in different organisations, lack of secure emails).
    d. Engaging populations > listen to practitioners already working with people. Importance of qualitative information. Need a common sense approach – qualitative and quantitative.
    - Ensure national datasets are made available at useful population levels – e.g. IJBs – and that linkages are available between datasets
    - National analysts should support local interpretation e.g. dashboards of indicators at HSCP level
    - Supported by nationally approved and agreed standards
    - Local data collection, national validations and analysis
    - It is not just local workers who should be consulted. Local people/communities councils/ADPs should have a voice too

- National analysts should be more pro-active e.g. known about IJBs for 6 years yet data not available at that level for comparison or to improve practice [lots of support for this, but another comments that they are almost identical to local authority areas].

C. Support for evidence-based policy, practice and planning.

6. ***Supporting access to the evidence base and archives through knowledge services***
    a. Evidence base (access and support) – national and local (co-ordinated and prioritised), support including specialists such as librarians. Local context (adapted); very specific skill sets e.g. health economics; national and disseminated and shared locally.
    b. Archives – national and local
    c. Interpreted summaries
    d. Parimaily national with capacity to adapt to local context
    e. Greater dissemination of local work at national level
        - Concern that national summaries of evidence could be a limiting factor in some cases.
        - Need national reviews with critical appraisal of evidence base for interventions/policies/practice models across health services and health improvement.
        - Access to evidence should be national support for search summary – local and national
        - Timelines – may be need for quick support for immediate local need, then scale up if a national issue. Live, dynamic, real time.
        - Types of evidence – implementation and contextual; experiential; support needed locally to capture this
        - Leverage on technology for agreed bespoke analysis – e.g. predictive analytics
        - Explicit and stated assumptions

7. ***Encouraging the use of a wide range of evidence, as appropriate, in policy, practice, implementation , planning, evaluation and knowledge brokerage. Also needs assessment***
    a. National role in planning local evaluation to ensure shared learning and opportunity to group up areas for more powerful learning.
    b. Where national and local policy differs, need to prioritise use of needs assessment resources
    c. Local policy can be different from national or regional
    d. Also filter by specific care groups – nationally and locally
        - Evidence/needs assessment to influence practice and policy; use lived experience and qualitative data
        - Local – key is relationships, shared understanding, link to decision-making bodies; work on health services and care
        - National and international perspectives – must respond to local needs; collection of joint knowledge/evidence to support local work; cross cutting issues; critical appraisal

- Proposal – nationally – critically appraise evidence in key areas and filter for locality use – use this to support localities to use via workforce development and facilitations
- Proposal – local – responsibility to champion evidence-based approach and partnership planning; understand local priorities to provide appropriate PH advice, leadership, response

8. ***Offering guidance and recommendations based on evidence and understanding and navigating evidence into action*** **-** Incorporated with 7

9. ***Use of improvement techniques, scientific support for experimentation and training and coaching to build capacity for evidence based policy and practice.***
    a. National – co-ordinate innovation; stepwise implementation; what is the nature of evidence? Models of action, support package for people to understand what works and how it works in contexts
    b. Regional – evaluability assessments – university; develop of capacity to understand what works and how possible constraints may operate.
    c. Local – create local conversations around methodology – what is the nature of evidence?
    d. Skills and capacity locally need to be supported, co-ordinated and further integrated.
        - National standard for model – approach and measure – to compare locally
        - Capabilities needed in wider range of implementation and knowledge translation approaches, beyond current scope of 'quality improvement'
        - National work on competencies
        - National network to support local skills development
        - Evaluability assessment needs to be national too
        - Evaluability assessment already happening – but is current approach sustainable?
        - Should test of changes for non-public health services be the role of public health?
        - National networks to support local skills development
        - Healthcare improvement scotland have a key role to play
        - A lot of skills already there but used i.e. public health does not communicate as well as it could. So skills need to be develops appropriately and not duplicated.
        - Evidence can be from the community – need to listen and communicate with partners

10. ***Research and building the evidence base***
    a. National – competencies – non-specialist workforce; data/data linkage; providing a national competency framework; co-ordination of shared learning and exchange – possibly linked to data exchange.
    b. Regional – participation in shared learning and exchange; redefine what regions should or could be; bringing together communities of practice.

c. Local – community based conversations – informed by national/regional intelligence and evidence based policy and practice; making it real – interpretation of data and evidence; mechanisms to build capacity of multi-agency workforce; participation in shared learning and exchange; communicating our evidence value to other sectors and stakeholders.
    - Not every enquiry is research!
    - National work on criteria/guidance on what good practice is
    - Developed information literature skills – support available locally
    - More equalities data in routine systems
    - National support for local innovation
    - Co-production of research – cross-sectoral
    - Important to have vehicle for people interested in the same areas to contact/find each other
    - Question needs to be asked around what evidence is considered valuable by public health. It may be not in the way it used to be and therefore a change of mindset and flexibility is required
    - Need to widen scope of evidence beyond traditional research and data develop new skills in generating and capturing and applying evidence from practice, experience
    - Local areas need further support (capacity main problem) to use existing knowledge repositories
    - Important for national research papers/findings to be actively disseminated

D. Assessment of the effectiveness of policies, programmes and services

11. Monitoring of high level outcomes and a range of other indicators using a variety of data sources and Evaluations.

a. Local variation in implementation can be used to evaluate impact
b. Scope for academic – service partnerships
c. NHS Quality strategy has 6 parameters and partnerships have different indicators – need information on all.
    a. Analysis, interpretation and narrative – local shared implementation community, national benchmark
    b. Monitoring > performance > improvement
    c. Technology-co-ordinated nationally but with local developing input/partners
    d. Collection local
    e. Definitions national
    f. Analysis national with dialogue between levels
    g. Interpretation at all levels
    h. Knowledge translation at all levels
    i. Investigation locally
    j. Technology – tools developed nationally to support local data needs
    k. Note – if local areas become de-skilled in analysis then the lose understanding of the data issues and quality assurance may be lost
    l. Evaluations – national policy should be done nationally
    m. Other evaluations done at all levels

12. ***Benchmarking and dissemination of learning to inform future policy and practice development.***
    a. Learning from unintended adverse social/health consequences of decisions/policies e.g. widening inequality – local learning needing wider dissemination.
    b. National support for collating local/regional reports, relevant grey literature, and translating into evidence/intelligence to improve policy and practice – e.g. generic template business case.
    c. Standards and guidance – national
    d. Use and feedback – all levels
    e. Dissemination – all levels, and up and down.
    f. Collation/archiving/translating – national
    g. Specialist expertise e.g. health economics – national
    h. Impact of dissemination on improvement – all levels
    i. Need improved understanding of what improvement science can/does not offer – yes, what it implemented; no, did it work?
    j. Linking benchmarking and quality improvement at each level
    k. Leverage on technology for benchmarking at all levels – e.g. discovety
    l. Don't forget statisticians/data scientists

Issues Parking

- Health protection – overarching issues
- Health screening for migrants and health improvement (esp. refugees)
- Stop colour coding people in public health practice and research
- Use NRS census framework (2011)

Areas for development – suggested ways forward

People then generated suggestions in the 6 groupings that emerged from the first meeting:

1. **Data availability and quality**

Suggestions and comments in addition to prioritised areas:

- Better accessibility of datasets – portal and better search tools
- Expertise
- More joined-up e-Health systems
- Greater standards
- Challenges:
    - Resources
    - Blame culture
    - Risk aversion
    - Legacy systems
    - Rapidly changing technology
    - Agreed definitions

2. **Prioritisation of public health intelligence efforts**

Suggestions and comments in addition to prioritised areas:

- Need consensus re. what public health can achieve (i.e. a strategy) and include a description of the data needs
- Public health priorities should underpin prioritisation of public health intelligence resources
- Objective, evidence-based criteria for priority setting are needed – based on condition, context, intervention, burden of disease, preventable and amenable conditions, inequalities.
- Lead on priorities from within public health in consultation and collaboration with partners – build the consensus 'bottom-up' – need vertical and horizontal communication.
- Explore public health governance structures to strengthen independence – look at other organisations and areas for examples
- Clear description and communication s of public health functions across domains
- Prioritisation criteria for public health and public health intelligence
- PH strategy
- Strong, independent PH voice
- Prioritisation is not a one-off event at one level – iterative, collaborative, co-ordinated
- Challenges:
    - need a clear description of public health intelligence resources – capacity and capability
    - shifting political environment and priorities
    - maintaining a long-term view
    - tension between maintaining strong ph identity and engaging the range of people and organisations who are doing relevant work
    - distortion of activity by performance measures that doesn't reflect population health needs.

3. Co-ordination of public health intelligence

Suggestions and comments in addition to prioritised areas:

- Contribution from local and national support across KIA cycle
- National register or phone book
- National organisations asking local what would be useful
- Better/different It infrastructure
- More multiagency strategy groups agenda setting through data/evidence
- Data quality hierarchy
- Integration of public health and local authorities
- National production of profiles to local demand
- Large national survey samples with local bolt-ons
- Create open access best practice/things that didn't work journal/forum/community of practice
- Network – public health evidence with local and national representatives
- Introduction of national statistics protocol to local settings
- Co-ordination or network for evaluation and effectiveness evidence

- Challenges:
    - Scale
    - Updates
    - Costs
    - Resources
    - Time
    - Cutting support co-ordination by function isn't always helpful – needs to be integrated

4. Knowledge translation

Suggestions and comments in addition to prioritised areas:

- Developing a cumulative knowledge base to build credibility and to enable spread and sustainability
- Recommendations for action in relation to evidence produced
- Pre-sifting evidence in relation to key topics and areas of priority
- Co-production/co-design in translating and generating knowledge
- Toolkit design to support evidence into practice
- Understanding the evidence base for knowledge translation
- Feedback loop between local users and producers of knowledge to inform
- More in residence knowledge brokers in policy teams
- Think about knowledge brokers in the widest sense, e.g. local practitioners, communities, third sector, the public (not a top-down, narrow view)
- Shared learning to support gathering of local knowledge/evidence/practice and sharing widely
- Developing robust evaluation competencies and formal reporting/sharing
- Challenges
    - Time pressure to get evidence to localities in time for 5-10 year LOIPs being written (local outcome implementation plans)
    - To make clear recommendations
    - Clarity about who local decision-makers are – what level are they at, and what decisions do they make
    - Who/what are knowledge brokers and what skills do they need?
    - Clear understanding of purpose – how does intelligence support the purpose
    - Improved networks for sharing
    - Ensuring both interventions and implementation knowledge are supported – that what and how > effectiveness and efficiency
    - Time challenges and conflicts
    - Information overload
    - Shared language

5. Assessing impact

Suggestions and comments in addition to prioritised areas:

- Clarity of outcomes, including short-term outcomes
- Developing links to get non-health data for assessing impact

- Stronger evaluative culture in CPPs and IJBs
- Mechanisms to share what works
- Workforce skills – rigour, quality and standards
- Co-ordination to allow learning 9differnt areas/stepped wedge design)
- Impact from population perspective rather than out perspective
- Where is evaluation support for service delivery (e.g. ALFie) – HIS? Other?
- Cross-Scotland evaluation advice panel
- Challenges:
    - Time
    - Agenda-driven
    - What doesn't work is not always visible
    - Planning needs to consider how we will assess impact
    - Skills gap
    - Need to address confounding
    - Need better comparative stats on social care side
    - Need to share information across health and social care and other services
    - Need comparison groups
    - If we are contracting e.g. with third sector we need to be clear what we want back

6. Workforce capacity

Suggestions and comments in addition to prioritised areas:

- Group people together to share expertise and exchange skills
- Share skillsets across organisations
- Invest in core analytical skills and move these outputs into intelligence and insights
- Broadening role of practitioners to include data collection and analysis
- Curricultum review to broaden individual and organisational capacity
- Focus at middle management level
- Deploying the right people to tasks
- Workforce – wider and other partners – understand data and intelligence
- Influence mandatory training
- Challenges:
    - Data that is not fully representative of the real workforce
    - Too much expected of individual people
    - Organisations are protective of people/skills
    - Skillsets being kept individually and lost when they move on
    - Time commitments and priorities

Appendix 5 - Public Health Review and Public Health Intelligence Note of Event 2b (VC, 13th June 2016)

1. **Setting the context**
   Sonya Scott provided an overview of the background to the process (including the Public Health Review and Shared Services Portfolio), what had been discussed and agreed at previous meetings and the two main tasks for today's meeting.
   - There was a short discussion about the very short timescale for DsPH responses to the request for information from the Shared Services Portfolio group.

2. **Local, regional and / or national?**

   The group had a brief discussion on the levels (local, regional, national) at which the various public health intelligence functions would be best undertaken at.[5] The points raised in the discussion included:
   - Difficult to be clear what 'local' means – there are a variety of levels within that domain.
   - A national process for standardising data analysis might be helpful. However, if things were done solely at national level it would be unlikely to be produced quickly enough for local use.
   - Need to get better at checking what is available from national resources and sharing local work.
   - The national provision of data requires sufficient local sample sizes (in relation to surveys) if they are to be useful.
   - Data analysis is not done at a regional level at the moment.
   - A lot of resource is required at local level to ensure that the evidence and data are applied in decision-making – including interpretation.
   - National or regional work needs to be interpreted and implemented locally.
   - Evidence – can imagine that being done nationally, but needs linked to local needs. Unlikely that any national system can respond to all local needs. Is there a need for a library to store local work - ? in a ScotPHO-style website.
   - Rapid decision-making requires 'good enough' reviews – the turn-around time for a national agency is unlikely to be quick enough. NES evidence summaries may be helpful.
   - Local need is for synthesis of evidence, rather than lists of references
   - Can the evidence base work be done once for Scotland? Yes, but still need local capacity. Could be done by a local service once for Scotland if co-ordinated.

[5] The functions identified from the previous meetings were: 1. Collection and use of a wide range of data sources; 2. Quality assurance, critical appraisal, collation, analyses, interpretation, dissemination and use in agenda setting; 3. Collection and collation of data across all layers of Dahlgren and Whitehead determinants, quality assurance, appraisal and interpretation; 4. Dissemination of analyses, use in decision-making and setting the data sharing and data linkage agenda; 5. Equity audit and engaging with population and other agencies to health with data collection, sharing and linkage; 6. Supporting access to the evidence base and archives through knowledge services; 7. Encouraging the use of a wide range of evidence, as appropriate, in policy, practice, implementation, planning, evaluation and knowledge brokerage. Also needs assessment; 8. Offering guidance and recommendations based on evidence and understanding and navigating evidence into action; 9. Use of improvement techniques, scientific support for experimentation and training and coaching to build capacity for evidence based policy and practice; 10. Research and building the evidence base
Monitoring of high level outcomes and a range of other indicators using a variety of data sources and Evaluations; 11. Benchmarking and dissemination of learning to inform future policy and practice development.

- Need data at IJB level to support decision-making. There will be some diversity of data needs in local areas. Often have to rework the data locally, and to investigate odd findings in the nationally provided data. Huge demand for things to be 're-cut' locally.
- The interpretation and validity of the application of the evidence requires local intelligence.
- Overall co-ordination between national-regional-local functions is the crucial factor if we are to maximise our impact and avoid duplication.
- There is a need for national and regional co-ordination of public health intelligence work.
- There are differences between rural and island areas – we can't expect that we will all be able to provide the same support.
- At board level we are asked to do reviews for non-public health interventions, health services (e.g. on obstetric services) and health improvement - therefore the generic skills are important.
- Regional support has been important for health service work (e.g. NoSPHN and NoS Planning group). Recognises the interdependencies of services.

3. Suggestions for improvement in the areas identified at previous meetings

The group had a brief discussion on what would help improve public health intelligence in the areas previously identified as areas for improvement at previous meetings. The points raised in the discussion included:

- Need a public health strategy. In particular, priorities for PH and to steer decisions about how to organise PH intelligence (and PH generally).
- Need to island-proof whatever changes are proposed. Need to make sure whatever is developed is sufficiently responsive to local needs. Scotland has diverse populations.
- Use NoSPHN or ScotPHN to share work horizontally. Need to achieve a scenario where all boards contribute to this and receive benefits from others doing this.
- Technology should be used more extensively for communication/sharing (horizontally and vertically) and data analyses/visualisation.
- Health economics skills required locally.
- All the areas of public health intelligence are quite interdependent.
- Public health intelligence needs to support delivery of the clinical strategy.
- Concluding point that having a robust PH strategy is likely to be more successful in improving the effectiveness and efficiency of PH function than restructuring of sparse PH resources.

4. Next steps and timeline

28th June – all day event in Glasgow – agreeing areas of consensus and articulating reasons for areas of difference – support with travel costs is available – contact Pip.