THEORY AND METHODS

A framework for the delivery of public health: an ecological approach

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The "Framework for the Delivery of Public Health" presented in this paper provides a new structure that brings together the multiple components of public health, relates them to key influencing factors and provides greater clarity, balance and direction for the effective delivery of public health. The paper outlines the development of the framework and describes the significance behind the key constructs. The symbolisms within the picture and interactions between the varied components are compared with the dynamics of an ecosystem; this aims to emphasise that improving health occurs within a constantly changing and interactive environment. Finally, the applications of the framework are explored, including embedding public health within an organisation or setting, assisting in strategy development for specific topics and as a training and educational aid.

A framework assists in providing shape, structure, clarity of purpose and direction for a combination of constructs. Addressing inequalities and improving the health of a population entails a complex combination of skills, methods, relationships and interactions,^{1 2} which, if not brought together with adequate focus and balance, can result in wasted efforts and poor outcomes. The "Framework for the Delivery of Public Health" presented in this paper provides a new structure that brings together the multiple components of public health, relates them to key influencing factors and thereby gives greater clarity, balance and direction for the effective delivery of public health.

This framework evolved from the need to have greater focus and vision for the competing demands of a busy public health team in a UK city Primary Care Trust (PCT), and was used to identify gaps in the delivery of care and develop an overarching public health strategy. However, this framework can be applied to a variety of settings apart from PCTs, it provides a valuable public health training tool and can be used as an aid in strategy development. This paper describes how to interpret and use this framework.

DEVELOPMENT OF THE FRAMEWORK

Initially, a number of brainstorming sessions occurred; they involved discussion of the key elements of public health, how they relate to the PCT's functions and the main influencers affecting the public health agenda. This led to a variety of sketches connecting concepts of the above discussions. To clarify our vision, it was considered important to bring together the complexity and interaction of these concepts on one sheet of paper.

An initial sketch was shared with colleagues who influenced the form and content of the framework. After 3 months of piloting, and with help from the graphics department, the surrounding picture was finally painted by JN. To ensure the validity and application of the framework, it has since been presented and tested in three workshop settings and discussed with a wider national and international peer group, after which only minor amendments have been made. Key features and applications of the framework are described below.

THE ESSENTIALS OF PUBLIC HEALTH: SKILLS, FUNCTIONS AND METHODS

The UK Faculty of Public Health has outlined 10 key "standards" to assess competency for public health training³

and to guide continued professional development. Box 1 summarises the 10 key standards.

These standards create an important baseline to develop a rounded portfolio of public health competencies. To ensure a comprehensive tool, the framework for public health has incorporated all the aspects of these 10 standards. However, in order to make the competency areas easier to remember and follow in a logical order, the key components of the competency areas have been reframed under the headings: public health skills, public health functions and public health methods. These are summarised in fig 1.

Public health skills

Skills can be defined as "proficiencies that are acquired or developed through training or experience".⁴ This framework, describes a cycle of skills that are often followed (though not necessarily in sequential order), to address a public health issue. The cycle starts with collating public health information, which is used to inform health-needs assessment and health-impact assessment. Critically reviewing the literature is the next stage, after which an appropriate strategy or plan is developed from the previous steps and transformed into action and) lastly, evaluation is done before starting the cycle again. The distinguishing feature about public health skills is that they are core skills, which every specialist should have. Although they are described in a step-by-step approach, in reality each of these skills informs the other and are often carried out in parallel. These skills are applied to particular public health functions.

Public health functions

Function is defined as "assigned duty or activity".⁴ It also has an element of inter-relationship with other aspects, and thus can be defined as "any of a group of related actions contributing to a larger action".

Therefore, public health functions can be seen to be clusterings of associated activities or duties, which contribute to the larger whole (of public health). In this framework, headings for functions have been used which tend to occur in day-to-day practice. They are placed within the building's pillars and include health promotion, health protection (which

Abbreviation: PCT, Primary Care Trust

Box 1 The 10 key standards of public health

- (1) Surveillance and assessment of the population's health and well-being.
- (2) Promoting and protecting the population's health and well-being.
- (3) Developing quality and risk management within an evaluative culture.
- (4) Collaborative working for health.
- (5) Developing health programmes and services and reducing inequalities.
- (6) Policy and strategy development and implementation.
- (7) Working with and for communities.
- (8) Strategic leadership for health.
- (9) Research and development.
- (10) Ethically managing self, people and others.

includes environmental health), screening, improving services, clinical effectiveness, research and development, and education and training. Each of these functions should incorporate aspects of all the public health skills (above) to be able to perform their activities or duties to the highest standard.

Public health methods

Method is defined as “a means or manner of procedure, especially a regular and systematic way of accomplishing something” or “the procedures and techniques characteristic of a particular discipline or field of knowledge”.⁴

Therefore, public health methods are procedures and techniques that are incorporated into public health skills as an approach to assist in accomplishing public health functions (leadership, and the overarching public health vision of improving health and reducing inequalities). These are methods in common with other disciplines, which have been shown to enhance the overall effectiveness of public health delivery, and include working collaboratively, advocating for public health issues, providing leadership and working with communities.

PUTTING PUBLIC HEALTH INTO THE PICTURE

The core components of public health (skills, functions and methods) are placed in the centre of the framework, an ancient Greek temple, symbolising the wisdom and endurance of public health within a constantly changing health economy. Each component is part of a larger entity, for which the overarching vision (the top triangle of the roof) provides the sense of direction (fig 2A).

However, the components of public health are not in isolation from the rest of the world, and therefore the foundation steps reflect the setting on which public health may be based. The setting could be within a governmental organisation (ie, Department of Health, PCT, local authority, regional government) or within a partnership or voluntary organisation. The core functions or objectives of the setting are written on the foundation steps, and the public health components are a matrix interwoven within the fabric of the organisation. Ideally, there is a common vision reflected within the business plan or strategy for the organisation.

Public health does not exist in isolation. The features surrounding the Greek temple are all factors that influence public health. In the sky, the clouds represented national drivers, symbolically, being somewhat “nebulous”, but with the creative ability for “blue sky” thinking. The ground represents local drivers, which keep in touch with local issues, and ensure that national drivers are appropriately translated to the local situation.

To the sides, enablers represented by a tree, are a source of wisdom, learning, capacity building, germinating new ideas and facilitating creative development, with leaves blown over the building, “fertilising” public health. Quality is represented by a rainbow; the flower, with national quality checks in the clouds above the rainbow, and the flower head symbolises regional quality assurance, whereas the roots and leaves contain community and user-lead quality elements (that also feed into local drivers at the ground level).

Figure 2A can be used to identify national and local drivers, enablers and quality aspects according to public health being placed within different settings, and also in relationship to particular public health issues or topics. Figure 2B illustrates the public health framework with national and local drivers,

Figure 1 Public health skills, functions, and methods. C., clinical; d., development; educ., education; H., health; HNA-HIA, health-needs assessment and health-impact assessment

Figure 2 (A) Putting public health into the picture—the basic framework. (B) A framework for the delivery of public health in a primary care trust setting. CHAI, Commission for Healthcare Audit and Inspection (Healthcare Commission); FPH, Faculty of Public Health; GMC, General Medical Council; HDA, Health Development Agency; HIA, Health Impact Assessment; HNA, Health Needs Assessment; HPA, Health Protection Agency; LSP, Local Strategic Partnership; NICE, National Institute for Clinical Excellence; NPSA, National Patient Safety Agency; NSF, National Service Framework; NSC, National Screening Committee; PALS, Patient Advice and Liaison Service; PCT, Primary Care Trust; PHC, Primary Health Care; PH, Public Health; SHA, Strategic Health Authority.

enablers and quality aspects, filled out as applied to a PCT setting. The temple steps describe core PCT tasks, and the overarching vision is to reduce inequalities and improve health. National and local drivers, enablers and quality aspects all relate to key influencers for public health in a PCT setting (the flower represents components of clinical governance).⁵

WHY AN ECOLOGICAL APPROACH?

Ecology is defined as “the science and relationships between organisms and their environments”, whereas an ecosystem is “an ecological community together with its environment, functioning as a unit”.⁴

Principles of ecology have mainly been applied to biological systems; in terms of public health, much of the literature relates to the ecology of infectious diseases.⁶ Ecological principles have been applied successfully to a variety of settings—for example, components within economic systems have been likened to ecosystems to enhance competitiveness within the market place.⁷ More recently, ecological models have been adapted to wider public health issues, including violence prevention,^{8,9} physical activity¹⁰ and environmental health.¹¹

The Public Health Framework brings an ecological approach to relating the interaction of the multiple elements, as all the different aspects including the public health components, the drivers, enablers and quality aspects, influence each other as part of a connected system. Key elements of an ecosystem include the following.

- Each component is part of a cyclical system.
- Each part influences the other.¹²
- A balance of different components is needed to maintain a healthy ecosystem.
- Clear pathways between components allows a cycle of energy to flow.
- The overall system needs to be sustainable.¹¹

For example, in this framework, if national drivers are over-represented as influencers for the public health agenda, the local application may be inappropriate for the situation on the ground. Similarly, if local drivers are the main influencer, it could create an insular approach, lacking an overall perspective.

Ideally, local and national drivers should interact and inform each other in a cyclical manner.

APPLICATIONS OF THE FRAMEWORK

The framework has been successfully used in a number of workshops, meetings and individual sessions, and within local, regional and national settings. A variety of situations that the framework has been applied to in practical settings are described below.

Strategy development

The framework was used to identify an overarching public health vision. The roof was used as a pyramid with the main causes of morbidity and mortality placed at the bottom, health risk factors at the next level, followed by factors that promote health and finally the overarching vision at the top of the pyramid.

To assist in strategy development, the framework was used to provide the basis for a structured gap analysis comparing national with local drivers. In order to prioritise importance, national and local drivers were divided into overarching drivers and subdrivers. Examples of overarching public health drivers include the public health white papers, Choosing health: making healthier choices easier,¹³ and Tackling health inequalities.¹⁴

The public health functions (the pillars) were used as subheadings for national drivers. Local strategies and pathways were identified and cross-tabulated with national drivers to identify gaps (at local or national level). Public health priorities were developed based on the gap analysis, in combination with local important health issues.

Integrating public health into the mainstream

Figure 2A has been used as a basic framework on which core functions/objectives of an organisation/partnership were labelled on the steps of the temple. The usefulness and relevance of each public health skill, function and method was then considered in turn as a checklist. No hierarchy is recommended for the public health skills, functions or methods as this depends upon context, setting or issue. For example, advocacy and leadership may be more important at national

What is already known

- There are many written books and papers describing the components of public health.
- The UK Faculty of Public Health has developed a comprehensive list of standards for public health practice.
- A few models exist to help understanding of certain aspects of public health.

What this paper adds

The “Framework for the delivery of public health” is a new tool that provides a:

- Clear understanding of the multiple components of public health and factors influencing the public health agenda.
- Structured framework for developing an overarching public health strategy.
- Tool for comprehensive strategy development for public health issues.
- Framework for integrating public health into the mainstream functioning of an organisation.
- Useful public health training tool and revision aid.

level, whereas collaboration and community engagement may be more important at local levels.

This process can be used to strengthen an organisation's response to its core functions—for example, for a PCT—of “Reducing inequalities” and “Commissioning to meet health needs”; and it provides a structured approach for integrating public health into the mainstream working of an organisation.

Applying the framework to public health issues

In a similar way to the above process, fig 1 and 2A have been used to enhance the public health response to a particular public health issue—for example, smoking, sexual health and violence prevention. The building was “placed back” into the picture, to identify drivers (and gaps in drivers), enablers and quality checks (opportunities and barriers were used as a variant for enablers and quality checks). A shared vision was written in the triangular roof of the building, objectives placed within the steps, followed by identification of which public health skills, functions and methods should be emphasised to assist in developing a public health approach or strategy for a specific topic or issue. In this way, black and white copies of the framework (fig 2A) have been used to brainstorm practical strategies in group-work settings.

Policy implications

- This framework provides a clear basis for understanding the dynamic process between local, regional and national drivers in the development of policy.
- The framework can be used as an aid in the development and implementation of public health policy.
- There is potential to use this framework as a model for policy analysis.

Finally, the “Framework for the delivery of public health” has been used individually or in workshops, either as a training tool or examination revision aid to enhance understanding of public health and its practical applications.

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