



## *Population health and public health*

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## Definition

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Population health in general practice has been defined as:

*‘The prevention of illness, injury and disability, reduction in the burden of illness and rehabilitation of those with a chronic disease. This recognises the social, cultural and political determinants of health. This is achieved through the organised and systematic responses to improve, protect and restore the health of populations and individuals. This includes both opportunistic and planned interventions in the general practice setting’.*<sup>1</sup>

Population health is the study of health and disease in a population as specified by geographical, cultural or political guidelines.<sup>2</sup> This includes defining health problems and needs, identifying the means by which these needs may be met, and providing the health services required to meet these needs. Other related terms commonly used in general practice include:

- community medicine, which tends to apply more to the integration of population based health interventions in a clinical context
- community health, which is often used to describe the application of broad based public health interventions at a community or individual level.

Public health is the efforts organised by a society to protect, promote and restore people’s health.

Population health and public health are the combination of sciences, skills and beliefs directed to the maintenance and improvement of the health of all people through collective or social actions.

There is considerable overlap between population and public health, and differing models of this interface have been developed. A continuum can be considered between population health activities within general practices, public health activities with the community and what have been termed ‘new public health’ movements. These include the engagement of communities, organisational development and specialisation or leadership in fields such as policy development. Some health professionals use the terms population health and public health interchangeably, but there are subtle nuances between these two disciplines.<sup>3-6</sup>

Preventive medicine is the application of preventive measures into medical practice by focusing clinical skills on the health of defined populations in order to promote and maintain health and wellbeing and prevent disease, disability and premature death.

Health promotion is a range of practices including health education, community development, preventive services, policy advocacy and regulations that seek to better health at the individual and population level and goes beyond simple prevention.

In general practice, population health represents an extension and expansion of existing clinical roles toward an emphasis on prevention and a focus on groups or populations, rather than on individual patients. This may involve activities such as immunisation, risk assessment and management, patient education and screening in which general practitioners are already engaged within their practice. General practice public health also involves notification of diseases of public health importance to the relevant government agency.

## Curriculum in practice

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Typical presentations that illustrate how the population health and public health curriculum applies to general practice include:

- Max, 46 years of age, is a school teacher and active member of the local tennis club. His wife has sent him in for a check up. Max says there is nothing wrong, and that he rarely needs to attend the doctor. He does not smoke or drink, has a BMI of 23 has no relevant past or family history and has always been well. What is your management?
- Rhona, 21 years of age, is an Aboriginal woman who has been unwell for some time with vague abdominal aches and episodic diarrhoea. Stool testing had returned negative, possibly due to a delay in transporting the specimen to the pathologist, but her serology shows significant eosinophilia. In reviewing her notes, you discover her eosinophils have been progressively elevated for 3 years and an internet search of the causes of persistent elevation in the Aboriginal population lists strongyloides as a possible cause. Her serology is positive and following treatment her symptoms resolve. What are the implications of this for her and the community? Do you notify the health department?

## Rationale and general practice context

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General practice care goes beyond the individual patient to involve patient populations. General practitioners are ideally placed to implement population based health activities because about 83% of Australians attended a GP at least once during 2009–2010.<sup>7</sup>

### Integrating population health into general practice

A population health approach means implementing these activities more effectively and consistently across a whole population.

Population based health activities in general practice should include, as a priority, activities that are designed to meet the specific needs of at-risk population groups. General practice also has an important advocacy role around the structural issues that affect health status, especially for socially disadvantaged groups.

The best outcomes from general practice population health activities result from:

- better integration across disciplines within primary care
- a partnership between general practice and public health services, and consumer and community organisations.

Population based approaches to prevention and health promotion often require approaches across and beyond the health system.

A useful strategic framework for strengthening and extending general practice involvement in population health at national, state, division and practice levels in Australia includes focus at the following levels<sup>8</sup>:

- organisational structures and roles – developing organisational and practice structures and systems to enable GPs to identify and undertake effective population health activities and interventions, and to facilitate collaboration with outside services and professionals
- communication – including community awareness, patient education and communication between population health and general practice agencies
- information management/information technology – developing population health data collection, dissemination and analysis, and relevant clinical tools and guidelines for information management and decision support
- workforce planning, education and training – developing materials to improve access by general practice staff to education, training and quality assurance programs; and increasing understanding and skills in relation to the population health role of general practice, patient risk assessment and effective interventions
- financial systems – implementing appropriate incentives and payment systems to support the engagement of GPs in effective population health activities both inside and outside the practice
- partnership and referral mechanisms – developing and implementing organisational supports to facilitate effective collaboration between general practice and others working in a population health context
- evaluation and research – participating in research and evaluating alternative models of general practice organisation, funding and integration.

### Related curriculum areas

Refer also to the curriculum statements:

- *Aboriginal and Torres Strait Islander health*
- *Chronic conditions.*

# Training outcomes of the five domains of general practice

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## 1. Communication skills and the patient-doctor relationship

- POPT1.1 Enable patients to take control of their health via two-way communication in the form of a patient-doctor partnership.
- POPT1.2 Assess risk factors of individual patients and the broader population.
- POPT1.3 Explain and implement preventive health interventions in general practice, including the modification of lifestyle risk factors.

## 2. Applied professional knowledge and skills

- POPT2.1 Describe the epidemiology of common conditions encountered in Australia and internationally, as well as the recommended preventive activities conducted in the Australian community including general practice.
- POPT2.2 Access current guidelines for screening and prevention.
- POPT2.3 Assess the health needs of specific populations (eg. the elderly, men, women or young people).

## 3. Population health and the context of general practice

- POPT3.1 Describe national health priorities, methods for assessing the health status of a community, and population health and public health approaches to prevention in general practice and the broader community.
- POPT3.2 Know the public health notification requirements for diseases.

## 4. Professional and ethical role

- POPT4.1 Understand professional and ethical obligations to the patient and the broader community, for example, the rights of the individual versus the rights of the community, or patient confidentiality versus the public good.
- POPT4.2 Understand methods of infectious disease control.
- POPT4.3 Liaise and work with other health professionals to optimise population healthcare outcomes and advocate on behalf of patients.

## 5. Organisational and legal dimensions

- POPT5.1 Understand the role of population based general practice activities within the context of the Australian health system, as well as work effectively within these systems to improve the health of patients and the broader community.
- POPT5.2 Understand and incorporate population health activities into general practice management systems.
- POPT5.3 Know the medicolegal duties of the GP in public health.

# Learning objectives across the GP professional life

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## Medical student

### 1. Communication skills and the patient-doctor relationship

- POPLM1.1 Take a patient history including risk factors relevant to socioeconomic determinants of health.
- POPLM1.2 Demonstrate the ability to counsel patients about their health risks, especially the risk factors of smoking, nutrition alcohol and physical activity (SNAP).
- POPLM1.3 Outline the use of focused brief advice and other strategies such as cognitive behavioural therapy and motivational interviewing in consultations about the common lifestyle factors of smoking, nutrition alcohol and physical activity.

### 2. Applied professional knowledge and skills

- POPLM2.1 Describe the epidemiology of common conditions in Australia and internationally.
- POPLM2.2 Describe Australian population based health priorities and programs targeting these conditions in Australia.
- POPLM2.3 Compare common causes of Australian mortality to the common causes of Australian morbidity that reduce quality of life.
- POPLM2.4 Describe how socioeconomic determinants of health are related to common illnesses and presentations and be conversant with the evidence supporting this relationship.
- POPLM2.5 Describe the principles of screening and apply these to screening for important diseases in clinical practice.

### 3. Population health and the context of general practice

- POPLM3.1 Describe what health and health outcomes are, how health is measured, national health and public health priorities and their burden of disease.
- POPLM3.2 Discuss the health needs of groups within the Australian population.
- POPLM3.3 Outline preventive programs within Australia including their rationale and evidence for their implementation including in general practice.
- POPLM3.4 Describe the roles of various professional groups, services and programs in prevention of disease and health promotion.
- POPLM3.5 Describe the global burden of disease and the response of the World Health Organization in relation to primary care and general practice.

### 4. Professional and ethical role

- POPLM4.1 Describe principles of confidentiality and notification of communicable diseases to public health authorities.
- POPLM4.2 Describe the ethical issues involved in balancing the individual and public good.
- POPLM4.3 Describe methods for infectious disease control including immunisation, basic hygiene measures (eg. hand washing), quarantine, and control of disease vectors.

## 5. Organisational and legal dimensions

- POPLM5.1 Describe the Australian healthcare system including responsibilities of commonwealth, state and nongovernment organisations and the private sector.
- POPLM5.2 Describe the clinical and population health/public health functions within this system.
- POPLM5.3 Outline how electronic systems can be used to implement and monitor national health priorities within clinical settings.

# Learning objectives across the GP professional life

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## Prevocational doctor

Assumed level of knowledge – medical student

### 1. Communication skills and the patient-doctor relationship

- POPLP1.1 Demonstrate how to explain to patients how common illnesses and presentations are related to lifestyle factors especially for smoking, nutrition, alcohol and physical activity.
- POPLP1.2 Counsel patients on their need for preventive measures such as Pap tests and immunisations.
- POPLP1.3 Describe the principles of communicating health risks to patients.
- POPLP1.4 Demonstrate discussion of risks with patients.

### 2. Applied professional knowledge and skills

- POPLP2.1 Demonstrate the ability to counsel women about cervical smears and chlamydia screening, perform a Pap test and explain any results (see *Women's health* curriculum statement).
- POPLP2.2 Describe common infectious diseases in Australia, including their diagnosis, treatment and management (including immunisation and other forms of prevention).

### 3. Population health and the context of general practice

- POPLP3.1 Describe the roles of different parts of the health system in conducting screening and surveillance for diseases in the hospital and community context.
- POPLP3.2 Explain the role of GPs in working with hospital based services to reduce the burden of diseases within a community.

### 4. Professional and ethical role

- POPLP4.1 Demonstrate a nonjudgmental approach to patients and their lifestyle choices.
- POPLP4.2 Counsel patients about the need for testing for infectious diseases, including the need for disease notification if a test is positive.

### 5. Organisational and legal dimensions

- POPLP5.1 Discuss principles of patient information and recall systems, screening and measures and program to improve patient safety in clinical care including electronic systems.

# Learning objectives across the GP professional life

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## Vocational registrar

Assumed level of knowledge — prevocational doctor

### 1. Communication skills and the patient-doctor relationship

- POPLV1.1 Give focused brief advice and consider the appropriateness of other strategies such as cognitive behavioural therapy and motivational interviewing in consultations about the common lifestyle factors of smoking, nutrition, alcohol and physical activity.
- POPLV1.2 Explain to patients that lifestyle factors may cause many common illnesses and modification of these risk factors needs to be part of a management plan.
- POPLV1.3 Counsel patients about recommended screening tests including tests that are not universally recommended, but which patients may request (eg. prostatic specific antigen or chest X-ray).
- POPLV1.4 Describe methods for liaising with other health professionals within the healthcare system to optimise healthcare and advocate on behalf of the patient.
- POPLV1.5 Describe strategies for implementing a public health approach in the general practice setting.

### 2. Applied professional knowledge and skills

- POPLV2.1 Describe preventive guidelines in Australian general practice and the rationale and evidence for their development.
- POPLV2.2 Undertake a needs assessment in a community to identify health priorities. This could include capacity to interpret printed information and papers, interpreting health data and skills in liaising with key stakeholders in the community.
- POPLV2.3 Apply principles of epidemiology and biostatistics sufficient to critically interpret papers.
- POPLV2.4 Describe the epidemiology of illness in special populations including rural areas of Australia.
- POPLV2.5 Describe the impact of rural and remote practice on equity and access to health services.

### 3. Population health and the context of general practice

- POPLV3.1 Describe the roles of different parts of the health system in conducting screening and surveillance for diseases in the general practice context.
- POPLV3.2 Develop recall systems and other measures in the general practice setting to implement preventive guidelines including electronic systems.
- POPLV3.3 Audit performance of self and practice in relation to population health activities, especially immunisation, screening and management of lifestyle risk factors.
- POPLV3.4 Conduct an assessment of the health needs within the general practice and the local community.
- POPLV3.5 Discuss the advantages and disadvantages of preventive practices and individualise

this advice to the patient's needs.

- POPLV3.6 Work with a multidisciplinary team to implement preventive strategies in a practice or community.
- POPLV3.7 Identify occupational health factors that may influence disease.
- POPLV3.8 Demonstrate infection control measures within the general practice setting consistent with the RACGP *Infection control standards for office based practices*.

#### 4. Professional and ethical role

- POPLV4.1 Differentiate between clinical and public health roles to the broader community (disease notification, involvement in surveillance networks) in general practice.
- POPLV4.2 Describe specific public health issues relevant to rural practice and other close communities, such as confidentiality and the fact small populations may be identified in research undertaken by the GP.
- POPLV4.3 Manage patients found to have an infectious diseases, including notification requirements.

#### 5. Organisational and legal dimensions

- POPLV5.1 Be conversant with aspects of public health legislation relevant to general practice.
- POPLV5.2 Implement population approaches in your general practice work.
- POPLV5.3 Discuss the advantages and disadvantages of implementing population health approaches into general practice activities.
- POPLV5.4 Develop strategies to overcome barriers to the implementation of population health approaches in general practice, as outlined in the RACGP publication *Putting prevention into practice* (the green book).
- POPLV5.5 Evaluate recall systems to ensure at risk patients receive necessary follow up.
- POPLV5.6 Describe the role of the GP as part of a larger healthcare system.
- POPLV5.7 Explain the role of health informatics in improving the general practice contribution to population health.
- POPLV5.8 Develop skills in evaluation (clinical audit) to assess the process indicators, and the impact and outcomes of population health strategies implemented in practice.

# Learning objectives across the GP professional life

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## Continuing professional development

Assumed level of knowledge – vocational GP

### 1. Communication skills and the patient-doctor relationship

POPLC1.1 Describe and explain to patients current and emerging public health problems (eg. SARS, pandemic influenza) and the appropriate response.

### 2. Applied professional knowledge and skills

POPLC2.1 Describe successful strategies to encourage disadvantaged groups to present to general practice for preventive care.

POPLC2.2 Develop evaluation and research method skills.

### 3. Population health and the context of general practice

POPLC3.1 Maintain a practice register and extract information from it.

POPLC3.2 Implement prevention and health promotion among particular population groups including people from culturally and linguistically diverse backgrounds, refugees and Aboriginal and Torres Strait Islander people.

POPLC3.3 Describe strategies for mental health promotion in general practice among particular population groups.

POPLC3.4 Describe and implement strategies in general practice for injury and violence prevention.

### 4. Professional and ethical role

POPLC4.1 Demonstrate ability to access latest relevant population health data, including the use of information technology.

POPLC4.2 Demonstrate that general practice standards and professional development of population health are regularly reviewed.

POPLC4.3 Describe the ethics of resource allocation in healthcare, for example, different geographical areas and the role of the medical profession in advocacy for individual patients and population groups.

POPLC4.4 Demonstrate the ability to work as a part of a team, both within the practice and with health professionals outside the practice to promote health and reduce health inequalities.

POPLC4.5 Consider, where appropriate, further studies in public health such as a Masters of Public Health, faculty of public health medicine training, or other opportunities for public health training applicable to GPs.

### 5. Organisational and legal dimensions

POPLC5.1 Demonstrate implementation of legislative changes affecting population based health.

POPLC5.2 Regularly review practice systems in place, including electronic process for recall systems to ensure patients at risk receive necessary follow up.

POPLC5.3 Outline practice infection control processes consistent with the RACGP *Infection control standards for office based practices*.

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