

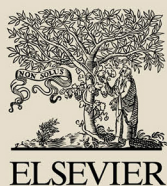


Community Health and Wellness

Principles of Primary Health Care

7e

Jill Clendon and Ailsa Munns



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Tower 1, 475 Victoria Avenue, Chatswood, NSW 2067

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ISBN: 978-0-7295-4394-1

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National Library of Australia Cataloguing-in-Publication Data



A catalogue record for this
book is available from the
National Library of Australia

Senior Content Strategist: Melinda McEvoy
Content Project Manager: Kritika Kaushik
Copy edited by Leanne Peters
Proofread by Tim Learner
Cover and internal design by Natalie Bowra
Index by SPi Global
Typeset by GW Tech
Printed in Singapore by KHL Printing Co Pte Ltd

Last digit is the print number: 9 8 7 6 5 4 3 2 1

Dedication

This book is dedicated to all community health practitioners, for the visionary contribution they are making in these challenging times to the global health and wellbeing of people, families and communities.

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Preface

This book is intended to guide the way nurses and other health practitioners work with people as they seek to maintain health and wellbeing in the context of living their normal lives, connected to their families, communities and social worlds. Life is lived in a wide range of communities, some defined by sociocultural factors such as ethnicity or Indigenous status, some defined by geography of 'place', others by affiliation or interest and some by relational networks such as social media. Because most people live within multiple communities, it is important to understand how their lives are affected by the combination of circumstances that promote or compromise their health and wellbeing. Knowing a person's age, stage, family and cultural affiliations, employment, education, health history and recreational and health preferences has an enormous effect on the way we, as health practitioners, interact with them. Likewise, our guidance and support are heavily influenced by the environments of their lives: the physical, social and virtual environments that contribute to the multilayered aspects of people's lives. Knowing how, why and where people live, work, play, worship, shop, study, socialise and seek healthcare, and understanding their needs in these different contexts, underpins our ability to develop strong partnerships with people and communities to work together as full participants, in vibrant, sustainable and equitable circumstances to achieve and enable community health and wellness.

This edition of the text represents contemporary thinking in community health and wellness from local, trans-Tasman and global communities. As access to comprehensive online sources of information grow and develop, our focus remains on the fundamental principles of *primary health care* that underpin community health and wellness. Using these principles as a foundation, the reader can then use the internet to investigate other, specific areas of interest while maintaining a core understanding of what comprises community health and wellness. We have signposted many areas that readers may want to explore further and we encourage you to also access any supplementary material available online.

Despite a lack of definitional consensus between *primary health care* and primary care in contemporary policy in both Australia and New Zealand, primary health care continues to be an integral approach to promoting health and wellness throughout the world and remains a focus in this edition. We encourage readers to use this text to fully understand the principles of primary health care and how a primary health care approach can be applied to any practice context regardless of setting. The principles of primary health care are outlined in Chapter 1 and elaborated on throughout the book.

A primary health care approach revolves around considering the social determinants of health (SDH) as we work in partnership with individuals, families and communities. The text examines the inter-relatedness of the SDH throughout the various chapters, to examine where such things as biological factors, employment, education, family issues and other social factors influence health and the way we approach our role in health promotion and illness prevention. As partners our role is to act as enablers and facilitators of community health, encouraging community participation in all aspects of community life. Incorporating the principles of primary health care into our practice enables us to facilitate these approaches.

Another foundational element that guides our consideration of community health is the notion that health is a socio-ecological construct. As social creatures, we are all influenced by others and by our environments, sometimes with significant health outcomes. The relationship between health and place and

the growing impact of climate change are therefore crucial to the opportunities people have to create and maintain health. Interactions between people and their environments are reciprocal; that is, when people interact with their environments, the environments themselves are often changed. Further, achieving health and wellness must be sustainable and equitable. Analysing these relationships is therefore integral to the process of assessing community strengths and needs as a basis for health promotion planning. The first two sections of the text focus on these principles and the practice of primary health care. In this edition we continue to grow the repository of primary health care practice skills practitioners need to work effectively with individuals, families and communities. This includes community assessment, project planning, health informatics, health promotion and education, working in groups, motivational interviewing, difficult conversations and approaches to quality improvement activities. New for this edition is increased content on communicable disease, contact tracing and community infection prevention.

Our knowledge base for helping communities become and stay healthy is based on understanding the structural and social determinants of health that operate in both global and local contexts. We also know that what occurs in early life can set the stage for whether or not a person will become a healthy adult and experience good health during the pathways to ageing. Along a person's life pathway, it is helpful to know the points of critical development and age-appropriate interventions, particularly in light of intergenerational influences on health and wellbeing. We outline some of these influences and risks in Section 3 of the book, which addresses healthy families, healthy children, adolescents, adults and older people. We provide a set of goals in each chapter for achieving health and wellbeing and how these influence professional practice.

Maintaining an attitude of inclusiveness is the main focus of Section 4. Within the chapters of this section, we suggest approaches that promote cultural safety and inclusiveness in working with Indigenous people and others disadvantaged or discriminated against. To enable capacity development within communities, we need to use knowledge wisely, which means that we need evidence and innovation for all of our activities. Clearly, our professional expertise rests on becoming research literate and developing leadership skills for both personal and community capacities to reach towards greater levels of health, vibrancy, equity and sustainability for the future.

As you read through the chapters you will encounter the Mason family in Australia and the Smith family in New Zealand. Their home lives revolve around their respective communities and the everydayness of busy families. Throughout the chapters you will see how each family deals with their lifestyle challenges and opportunities as they experience childcare, adult health issues and some of the characteristics of their communities that could potentially compromise their health and wellbeing. We hope you enjoy working with them and develop a deeper sense of their family and community development and how nurses and other health practitioners can help enable health and wellness.

Throughout the text, we have included boxes that will encourage you to stop and think on the content (Key points and Points to ponder) and direct you to find further information (Where to find more ...). We have also included group exercises and questions that can be used in practice or tutorial groups to help add depth to your conversations on how to improve community health and wellness. You will also find a number of practice profiles of nurses and other health practitioners who use a primary health care approach in their practice to contextualise the varying theoretical concepts that are presented. We hope you enjoy this new edition of *Community Health and Wellness: A Primary Health Care Approach*.

About the Authors

JILL CLENDON is a registered nurse and Fellow of the College of Nurses, Aotearoa. She is currently associate director of nursing and operations manager for ambulatory care at Nelson Marlborough Health in New Zealand. She is also an adjunct professor in the School of Nursing, Midwifery and Health at Victoria University of Wellington and chair of the College of Primary Health Care Nurses, New Zealand Nurses Organisation (NZNO). Jill spent the 24 years previous to her current position in nursing policy, research and child and family health. Jill's research has examined issues with contemporary nursing workforces, the efficacy of community-based nurse-led clinics and nursing history. Jill has taught at both undergraduate and postgraduate levels with a specific interest in primary health and the contemporary context of community-based well child care in New Zealand. Jill's qualifications include a PhD in Nursing and a Masters of Philosophy in Nursing from Massey University, and a Bachelor of Arts in Political Studies from Auckland University. She also holds a Diploma in Career Guidance and Certificate of Adult Teaching from the Nelson Marlborough Institute of Technology. She has held a range of community positions including chairperson of Victory Community Health in Nelson and president of the Nelson Orienteering Club. Jill has a clinical background in public health nursing and paediatrics. She has been actively engaged in the New Zealand COVID-19 vaccination program as a vaccinator and quality lead.

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Acknowledgements

We offer our sincere appreciation to our colleagues, clients, students and friends who encouraged us in the creation and development of this book; sharing their practice insights, thought-provoking recommendations, stories, profiles and photos which have highlighted the motivation and impact of community health. We express our thanks to the reviewers whose feedback strengthened the book and to the team at Elsevier who supported us in crafting this work.

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Section 2

Primary health care in practice

CHAPTER 4 Assessing the community

CHAPTER 5 Planning for intervention

CHAPTER 6 Primary health care in practice

Introduction to the section

While Section 1 outlined the fundamental principles that underpin primary health care practice, Section 2 shifts our focus to the practicalities of working in communities. Chapter 4 introduces us to methods that enable us to understand communities and the ways in which they function to achieve health and wellness. The chapter explores frameworks and approaches to community assessment including epidemiology, social epidemiology, asset mapping and the McMurray Community Assessment Framework. Global change such as pandemics and *climate change* require us to understand community need in ways that are different from in the past. With *equity* and *sustainability* underpinning our approach, our sources of information and development of appropriate interventions are changing too. The chapter discusses the different sources of assessment information health practitioners can access and introduces a range of community interventions for health and wellbeing including partnership and engagement, community development, community infection prevention and public health interventions such as contact tracing and communicable disease prevention.

Chapter 5 provides the framework for our work in communities, exploring models of care that are informed by the principles of primary health care. Working in and with communities requires us to work with individuals, families and communities to achieve health, each requiring different approaches and skill sets. In this chapter, we provide a framework for exploring structured approaches to planning care with individuals and families and examples of how the framework can be used in practice. Importantly,

we extend our discussion of planning to project planning in communities. With growing demand for health promotion in communities, project planning provides us with the skills to manage work in a structured way, ensuring we miss nothing in our endeavours to achieve social equity. The chapter goes on to describe how a strengths-based approach to planning care can result in flexible models of care delivery across local, national and global communities. We also touch briefly on the importance of evaluating our interventions and the varying ways in which this can be done within the context of primary health care practice.

Chapter 6 extends our knowledge of communities by examining the wide range of nursing and other health practitioner roles present in communities and the many ways in which we can enable community capacity. We can all assist communities using a *comprehensive primary health care* approach, which supports all aspects of community life, helping to conserve what is special and helpful, and assisting them in countering what is not. Other activities are aimed at *selective primary health care*, which is a more targeted approach, where specific groups or issues are given priority attention. Because primary health care has become integral to professional practice in both Australia and New Zealand, we examine primary health care roles in the context of various models of practice for nursing and other community-based health practitioners, and the situations that guide role development including: rural and remote nursing; child, school and occupational health nursing; community mental health; and the more generic roles of practice nurses and nurse practitioners. In today's healthcare environments nurses undertake a

range of these traditional roles and some that have evolved in response to contemporary lifestyles. We describe some of these new roles and examine their effectiveness in a range of health service contexts. We highlight the importance of interdisciplinary practice and ensuring teamwork in practice. We

also discuss a range of allied health roles and their contribution to interdisciplinary teams and to community health and wellness. At the end of each chapter we revisit the Smith and Mason families, using our case study to demonstrate how nurses can work effectively within communities.



CHAPTER 4

Assessing the community

Introduction

This chapter discusses the importance of assessment in the context of primary health care practice and the types of interventions—both systemic and local—that are needed to achieve community health and wellness. The chapter will: explore community assessment; introduce the practitioner to public health interventions such as contact tracing, case management and community infection prevention; and provide the practitioner with the tools to partner with a community to achieve change. We outline a range of existing assessment tools and focus on the McMurray community assessment framework as a comprehensive approach to community assessment founded on the principles of primary health care and the social determinants of health (SDH). We emphasise the importance of

working in partnership with the community in the assessment process.

Assessment is the foundation for planning to meet the needs of the community. These needs are identified on the basis of any known risks, hazards and strengths, as well as the priorities and preferences of community residents. To plan effective, efficient, adequate, appropriate and acceptable health interventions we need both scientific data gathered by health planners (top-down information) and community perspectives (bottom-up information). As we mentioned in Chapter 1, an ‘assets’ approach to promoting health focuses on community strengths as well as needs. To generate a list of community assets and needs it is important to create an asset ‘map’ of geographic, demographic and social information. Geographic data indicate what features or hazards exist or may exist in the future in

OBJECTIVES

By the end of this chapter you will be able to:

- 1 compare a range of assessment approaches and their usefulness in developing programmes and policies to promote community health
- 2 describe the importance of working in partnership with communities in the assessment process
- 3 identify a range of sources of information about communities
- 4 outline a range of interventions with communities relevant to the current context
- 5 assess a community using the McMurray community assessment framework.

the natural and built environment, the patterns of health and illness among various groups defined by age or gender, and what social conditions require health promotion interventions for community residents. Simultaneously, the assessment involves finding out from members of the community how they assess their health strengths and needs in terms of personal perspectives and experiences. Once this information has been gathered, the next stage of planning is to develop intervention strategies for improvement, or measures that can be taken to sustain positive aspects of community life. Global pandemics and climate change are changing our focus with communities but the fundamental principles of primary health care as well as equity and sustainability still underpin our interventions. The advantage of conducting a comprehensive assessment is that it allows us to forecast patterns of health or potential changes that may impact on people's lives or the lives of their children in the future. In the final analysis the information should produce a snapshot of strengths, weaknesses, opportunities and threats to community health.

General knowledge of the community has limited usefulness unless it is analysed in terms of subsequent steps that can be taken in partnership with community members to strengthen community resources and enable health and wellbeing. Selecting an assessment strategy should therefore be *goal directed*, so that the assessment information is linked to promoting and sustaining community health and wellness.

Community assessment

Many decades ago, community assessment was predominantly a checklist approach to assessing communities and their ability to support the needs of residents. A number of tools were developed to ensure that assessments took into account vital information on personal as well as community health hazards and risks. This information was then used to predict people's exposure to diseases or the risk of accidental ill health from such things as bushfires, drowning or other events common to the area. Many of these tools focused on the population and age-specific risks (e.g. asthma in children), with only

cursory evaluation of the relationship between health and place, or the assets (e.g. health services) that could help maintain better health. Some of those tools remain useful in assessing community health and the risk of ill health, but in the context of today's primary health care approach, we recognise that people are quite knowledgeable about their needs and the needs of their communities, and community assessment is incomplete without their input.

One of the earliest approaches to assessment was the epidemiological model, which focused on the determinants and distribution of health and disease. The epidemiological approach was embraced by all health professions on the basis that it reflected a whole-of-population approach and included comprehensive assessment of the person, host and environment, called the 'epidemiological triad'. Epidemiological assessments continue to be useful today in developing a base of scientific evidence on health and its determinants in specified populations. Epidemiology is essential for tracking communicable diseases such as COVID-19, measles or tuberculosis.

EPIDEMIOLOGICAL ASSESSMENT

Epidemiology can be defined as 'the study of the distribution of health and diseases in *groups of people* and the study of the factors that influence this distribution' (Wassertheil-Smoller & Smoller 2015, p. 83). The classic model of epidemiology is to examine specific aspects of the host (biology), the agent (a causative factor) and environment (factors that exacerbate or moderate the effects of the agent on the host), to see how each of these affects the spread of a disease or ill health in the population. The objective of epidemiological researchers is to collect data on the incidence of individuals 'at risk' of developing a particular disease in order to inform development of a vaccine or treatment for that disease. Data from epidemiological analyses are presented in terms of *incidence* and *prevalence*. Incidence is calculated by dividing the number of *new* cases in a population by the population at risk, then multiplying this by a base number (1000 or 100 000). This estimates the likelihood that a condition would occur in the population. The prevalence of a certain condition is the number of *new and existing* cases divided by the

BOX 4.1

EXAMPLE OF EPIDEMIOLOGICAL RATES

Population at risk

$$\text{Incidence} = \frac{\text{No. of new cases}}{\text{Population at risk}} \times 1000 \text{ (or 100000)}$$

$$\text{Prevalence} = \frac{\text{No. of existing cases (new and old)}}{\text{Population at risk}} \times 1000 \text{ (or 100000)}$$

The group of people who are susceptible to a disease or condition (e.g. non-immunised children) or who have been exposed to an agent that could cause disease (e.g. occupational dust).

population at risk multiplied by 1000 or 100 000 (see Box 4.1). Box 4.2 provides a case study of classic epidemiology in action.

KEY POINT

Rate

A measure of the frequency of a disease or condition, calculated by dividing prevalence by the incidence multiplied by a population base number (1000 or 100 000).

Incidence

The number of *new* cases of a disease or health issue in a specific period of time, divided by the population at risk multiplied by the base number.

Prevalence

The *total number* (new plus existing) of cases of a disease or health issue in a population at any one time, divided by the population at risk multiplied by the base number.

If an occupational group is exposed to a certain toxic substance, a measure of the 'relative risk' of becoming ill from that exposure can be calculated by comparing a group (called a cohort) who were exposed to the hazard with a cohort who were not exposed. If the group exposed to the hazard has a higher rate of the illness, that hazard is declared a risk factor. To confirm that it is a risk factor we would then assess its effect over a longer period of time in the entire population, which would provide greater insight. An example of how relative risk can be used to identify inequity is found in a study that examined the differences in disability outcomes between Māori and non-Māori 24 months after experiencing an injury (Wyeth et al 2019). The study collected data from 375 Māori and 1824 non-Māori on pre-injury, injury-related and early post-injury characteristics 3 and 24 months after injury. At 24 months after injury, 26% of Māori and 10% of non-Māori were experiencing disability. The authors found that the variables predicting disability 24 months after injury were the same for Māori and non-Māori with one noticeable difference—trouble accessing healthcare services. Trouble accessing healthcare services for injury placed Māori (but not non-Māori) at increased risk of disability at 24 months (RR = 2.58; 95% CI 1.4–4.9). The relative risk (RR) was 2.58. If RR is near to or equals 1, there is no or little association. If RR is greater than 1, then there is a positive association meaning the risk in the exposed population (in this case Māori with injury) is greater than the risk in non-exposed people. If RR is less than 1, there is a negative or inverse association (the risk from exposure is less than the risk in non-exposed people). The authors recommend that significant work has still to be done to improve access to healthcare services for Māori in New Zealand.

The findings from Wyeth and colleagues' 2019 study are important for providing insight into the inequities that exist in our health systems for some sectors of the population. Relatively small sample sizes make it difficult to draw definitive conclusions so further work is needed, but these findings add to the already substantial research identifying inequities in outcomes for Māori and Indigenous people in Australia (see Chapters 2 and 9). Studies like this help pinpoint where and how interventions can be made to improve health services to address inequity.

BOX 4.2

EPIDEMIOLOGY CASE STUDY

Australia and New Zealand's response to COVID-19 provides a classic example of epidemiology in action. As the world began to recognise the risk posed by the new corona virus emanating from Wuhan in China known as COVID-19, Australia's and New Zealand's public health units responded quickly and efficiently. First, the biology of the virus itself was identified enabling scientists to understand better the way in which it worked and how it might be counteracted (in this case through the development of a vaccine). Second, work was undertaken to identify how the virus was transmitted from person to person and what the risk was that a person would develop the disease if they were exposed to it. Third, factors that exacerbated or moderated the effects of the virus were identified so that risk of disease could be reduced; for example, using masks, physical distancing and good hand hygiene were all factors that reduced the risk of contracting the disease. While this work was underway, traditional approaches to communicable disease prevention were also underway to reduce the incidence (the number of new cases) of the disease in the population. In Australia and New Zealand this involved quarantine, isolation, testing and contact tracing. As a result, in both countries, the prevalence of the disease (i.e. the number of people actually with the disease in the population) was kept to a minimum.

- Quarantine occurs when a person or animal arrives from a place where they may have been exposed to an infectious agent or pest and spend a period of time isolated from others in order to prevent the spread of a disease or pest.
- Isolation is when a person or animal is kept separate or isolated from others in order to protect others from a disease or pest.
- Testing is undertaken to determine if a person or animal has an infectious agent or carries a pest.
- Contact tracing is the process of identifying all people or animals that may have been exposed to an infectious agent or pest. People or animals that are identified by contact tracing may be required to isolate from others for a period of time in case they carry the infectious agent or pest.

KEY POINT

Relative risk is a measure of the extent to which a group exposed to a risk has a higher rate of illness than those not exposed, calculated by dividing the incidence rate among those exposed by those not exposed. If the rate is higher among those exposed, it is called a *risk factor*.

Because traditional epidemiological measurements of an agent, host and environment are somewhat limited in terms of what we know about the causes of illness, an expanded model known as the web of causation, which includes the interconnections between each of these, provides a more comprehensive

basis for analysis (see Fig 4.1). The web of causation is also inclusive of demographic and social features such as age, gender, ethnicity and social circumstances, which is more closely aligned with a socio-ecological model of health and the SDH.

POINT TO PONDER

If the rate of asthma in preschool children was increasing in a community, how would you go about investigating whether the cause was a risk factor unique to that community, unique to only certain neighbourhoods or unique to only certain types of families?

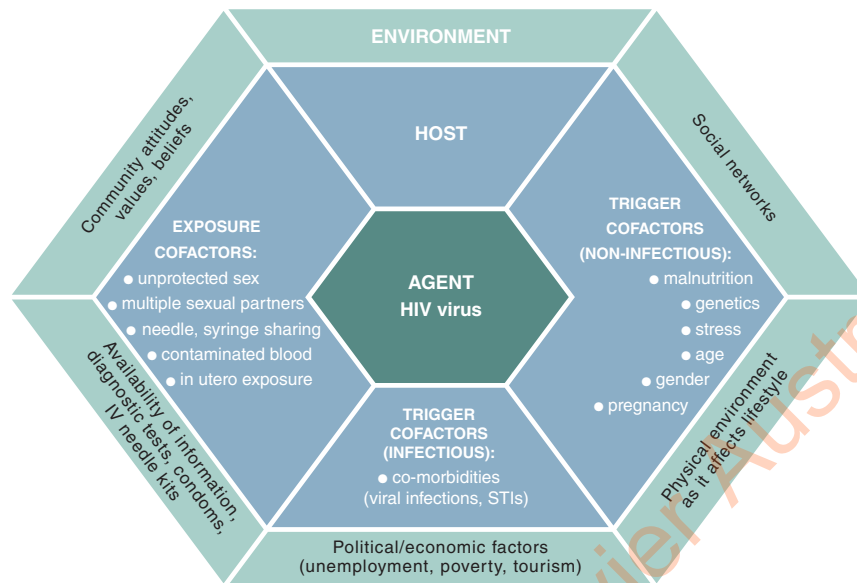


Figure 4.1 Web of causation

METHODS THAT SUPPORT EPIDEMIOLOGY

Contemporary methods to support epidemiological and other community assessment approaches enable information to be quickly and accurately compiled, presenting more quantitatively accurate assessments. For example, geographical information systems (GIS) are being commonly used to plan, administer and analyse community assessment information. Geospatial analysis in particular is being increasingly used to manipulate large and complex datasets according to location using GIS and global positioning systems (GPS) (Liu et al 2021). Liu and colleagues (2021) used geospatial analysis to identify the gaps in public dental service locations for people living with disability in Australia, identifying specific geographic locations where people with disabilities lived further than 5 km from public dental services. In another study, Hobbs and colleagues (2021) used geospatial analysis to show that over a 10-year period, there was a decrease in distance and time to both fast-food outlets and supermarkets but the biggest

decrease in distance to a supermarket was seen in the most deprived areas.

These types of studies improve our understanding of how geography is related to health; however, the risks of the GIS approach mean that some smaller population cohorts within a community may not have their needs identified (Fowler et al 2020). For example, the different needs of a small pocket of refugee families in a community or a group of families with children who have Down syndrome and are spread across a wider geographical area may not have their particular needs identified. Statistics from the geographic analysis reveal what is *typical* and what *trends* exist in the community, rather than what special needs exist for various segments of the population. This aggregated information contributes to the risk of 'ecological fallacy'; that is, when correlations between measures based on aggregate or combined data do not apply to individuals within the combined or aggregated group (Fowler et al 2020). To gain a more realistic picture of the community, a combination of information should be used concurrently, such as combining GIS and traditional epidemiology.

Where to find more...

On how to analyse your community using GIS ...

The United States (US) Environmental Protection Agency's community-focused exposure and risk screening tool (C-FERST) is a good example of how GIS can be used in real time, providing easy access to maps, locally specific environmental data and other information in a user-friendly format (www.epa.gov).

New Zealand's Department of Statistics (www.stats.govt.nz) and Australia's Bureau of Statistics (www.abs.gov.au) provide useful local data but are yet to develop the complexity of the US tool. However, like population trends, none of these tools capture the breadth of variation in human behaviour, which is a limitation of many systematic approaches.

individuals and their environment. Epidemiological models are also unable to predict the effects of alternative interventions, which are frequently non-Western in origin (e.g. acupuncture), because all interventions tend to be assessed on the basis of traditional Western scientific approaches. Epidemiology also struggles to articulate the experiences of those with multiple co-morbidities, tending once again to focus on an individual disease rather than the impact of multiple co-morbidities on a person or group. So, for example, a person who has worked in an occupation with a hazardous exposure to dust (such as in a flour mill), and who also has lived in a bushfire area, may develop pulmonary disease. The pulmonary condition may also predispose the person to a number of other risks (cardiac, renal, stress-related diseases). In this case it would be difficult to pinpoint the cause of ill health to the workplace, the natural environment or the lack of preventative programs that would have provided protection from agents that can cause respiratory problems. The message is that epidemiological data provides only part of the picture. It is also necessary to search for causes of ill health in the social and political factors that impact on health (Goodman et al 2019).

As researchers have become aware of epidemiological limitations, many have become committed to analysing community input in a way that would capture people's experience of certain risks. For example, some epidemiologists have identified that not all people on low incomes experience their life as deprived. This has led them

KEY POINT

The ecological fallacy is the risk of misunderstanding individual risk in terms of the overall population risk. Some people's health is determined by unique factors rather than those that are typical of the group or community.

CHALLENGES OF THE EPIDEMIOLOGICAL APPROACH

Epidemiological approaches to community assessment have traditionally struggled to reconcile the scientific approach with the broader contextual factors that impact on people's lives and contribute to their health status. Some of the challenges include the struggle to integrate epidemiologically or scientifically determined risk factors with behavioural and social strengths or risk factors, or an inability to identify risk factors whose origins lie in the interactions between individuals or between

KEY POINTS

Limitations of epidemiology

- No contextual information
- Human behaviour
- People's preferences
- Individual experiences
- Social and political factors ignored

to conclude that using income solely as a determinant of health may not be the most appropriate way to judge needs or risks. In fact, it is more helpful to health promotion planning to understand how people experience deprivation, and the ways deprivation may impinge on their health, than to simply link low income to poor health (Chung et al 2018). These types of studies provide useful information on population health status contributing to our knowledge of communities and their needs.

Social epidemiology

In a comprehensive primary health care context, assessment information should reveal where inequities exist in the community, what levels of disadvantage exist for which groups in the community, what links there are between community attitudes, local and centralised decisions and health outcomes, and myriad other relationships relevant to the SDH. One approach to collecting this information is to adopt a 'social epidemiological' approach. Social epidemiology is a subset of epidemiology that focuses on the health effects of social institutions, structures and relationships over time and the social factors that contribute to the distribution of disease (Kim 2021, Robinson & Bailey 2020). The goal of social epidemiology is to test associations between the socio-ecological aspects of community life and population health outcomes (Kim 2021). This approach is closer to the goals of both primary health care and the SDH than the types of assessment outlined earlier, in that it is aimed at resolving issues of inequity. Used in conjunction with community-based participatory research (CBPR) (see more details later this chapter), social epidemiology yields a depth and breadth of information that can be helpful for planning.

KEY POINT

Social epidemiology is an approach to assessing associations between the socio-ecological aspects of community life and population health outcomes.

A social epidemiological assessment begins with demographic and epidemiological data, mapping the main indicators of community life. Concurrently, a CBPR study can provide information on what people believe community life is like, what could be done to improve the community, what would improve health, how the health department could help and how the community nurse and other health practitioners can effectively participate in enabling health and wellbeing (Brush et al 2020, Hulen et al 2019). Next, the social epidemiological data will show the balance between resources and demand, strengths and needs. Among the information collected would be indicators of social capital such as indicators of cohesiveness and bonding, health behaviours, illness indicators and community perceptions. Integral to the process is evaluation of the power structures and how they affect certain groups, to provide policy planners with the information to challenge these conditions, including issues of racism, discrimination or other forms of social exclusion (Kim 2021). Identifying community assets or strengths can help community members develop empowering strategies to gain mastery and control over health decision-making—particularly in communities that have experienced social exclusion such as lesbian, gay, bisexual, transgender, intersex (LGBTI+) and other diverse groups. In this way, information can be inspiring, helping people participate fully in their community and expand their ability to negotiate, influence, control and hold accountable the institutions and decision-makers that control their lives.

Asset mapping

In order to provide a comprehensive picture of a community, and in particular when working with Indigenous communities, it is essential to include assessment of positive community features or 'assets' (Adcock et al 2019, Bank of I.D.E.A.S. 2020). (See Fig 4.2.) Asset mapping is a more resourceful, inclusive approach that can help identify health inequities in the community, particularly if the assessment includes information on the capability of communities to identify problems and activate solutions. This approach to assessment is therefore responsive to the goals of primary health care and the

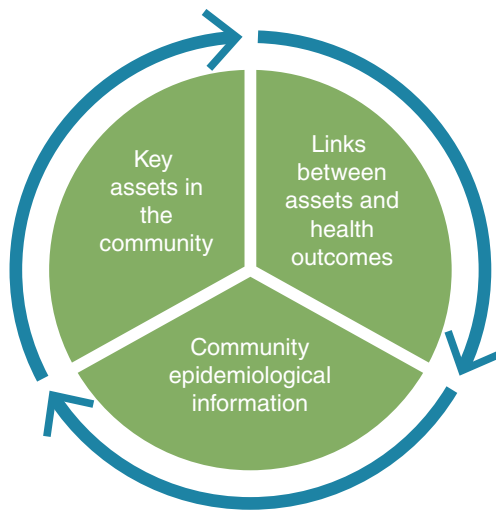


Figure 4.2 The asset model

KEY POINT

Asset mapping is the process of assessing community strengths and assets that will help develop community capacity.

SDH. An asset map is intended to build an inventory of community strengths in relation to the SDH. Data consists of epidemiological information on: the population; their key assets at each stage of life; the physical, environmental and social assets that exist within the community; and the links between these assets and health outcomes (Bank of I.D.E.A.S. 2020). Asset mapping aligns well with an Indigenous approach to understanding communities, one that recognises that the most important asset within a community is the people (Adcock et al 2019). This assessment information can provide a foundation for planning strategies to reduce health inequities. Categories of information include primary building blocks (assets and capacities of residents; their skills, talents and experiences; the presence of community associations under neighbourhood control); secondary building blocks (assets in the community

controlled primarily by outsiders, such as physical resources, land, waste, energy, public institutions and services); and potential building blocks (resources outside the community controlled externally, such as public capital and expenditures) (Bank of I.D.E.A.S. 2020). From this base of evidence members of the community can work with health practitioners to identify actions to improve health that will be evaluated for their effectiveness. In particular, the use of asset-based community development can help mobilise a community to address identified needs using identified assets (Adcock et al 2019, Mathie et al 2017).

However, in using this approach to assessment, consideration must be given to the way data are aggregated. As noted earlier in the chapter, if the information represents an epidemiological approach that focuses only on the total assets within each of these building blocks, it would be difficult to identify pockets of inequity among subgroups, even within a particular neighbourhood. As a guide for planning to meet the goals of primary health care, it would be necessary to ensure that information was *stratified*, or categorised according to groups such as the homeless, young people, older citizens and those with disabilities. Examples of how this can be achieved are growing. For example, researchers in New Zealand worked with local Iwi (Māori tribal group) to use asset mapping (Aka Matua) along with other Kaupapa Māori approaches (see Chapters 9 and 10) to address health inequities experienced by Māori women and pēpē (infants) in Te Wairoa. The approach has strengthened relationships within the community and resulted in development of a community-led maternity care pathway (Adcock et al 2019).

KEY POINTS

Assets that can be mapped include:

- primary—resident controlled features
- secondary—externally controlled features
- potential—external resources that could be mobilised.

Community-based participatory research (CBPR)

The strength of asset mapping is that it is a community-based approach to assessment intended to respond to the SDH, and it continues to evolve. A related assessment approach is encompassed in community-based participatory research (CBPR). CBPR is designed to equitably involve all partners in the research process and is increasingly used by community members and researchers to examine health inequities within a community and co-design approaches to addressing these (Brush et al 2020). One of the key elements of CBPR as an approach to community research is the engagement of the community at the earliest possible moment in the process. This ensures that community members are involved in identifying the most appropriate approach to data collection, analysis and reporting, that they have a say in how the information is interpreted, that they are encouraged to share their knowledge and skills with the researchers and that they can gain increased knowledge and skills in return. This reciprocal process aligns well with Indigenous approaches to health and wellness and contributes to community and individual improvements in health literacy reflecting the primary health care principle of community participation. Further information on CBPR can be found in Chapter 10.

The evolution of community assessment tools in nursing

Assessment tools to gather information on community health have evolved over time to incorporate more appropriate representation of the social characteristics of communities. This refinement of approaches to assessment is useful in prompting nurses and other health practitioners to base health policies and programs on knowledge of the SDH and to include community input. As far back as the 1980s several models of assessment were developed to be used in combination with epidemiological data. West (1984) devised an assessment tool based on the interaction between

people and their environments in a small community. The tool included analysis of interactions, actions and awareness, and, although it was comprehensive, it was somewhat diffuse and was not validated with larger communities. Its strength was that it was intended to capture extensive information about how people felt about their community, which was helpful in encouraging the primary health care principle of community participation. Another community assessment tool of the 1980s was developed to correspond to functional health assessment of individuals living in the community (Fritsch Gikow & Kucharski 1987). However, this tool did not reflect a primary health care approach, and instead was focused on structured assessment of community health patterns that corresponded to personal health patterns, such as health perception and management, intersectoral role relationships and social issues. The assessment was very 'top-down', and based on health practitioners' presumptions about health patterns among the population. Some of these patterns may be relevant to particular communities, but the assessment approach implied that we could use a 'one-size-fits-all' approach to community assessment. The major limitation of this type of tool is that it is inefficient and ineffective without valuable community input from which planners could predict the relative success of their interventions on the basis of community acceptability. In addition, simply assessing patterns of health and ill health fails to consider inequities between different groups of people, which is important to achieving the primary health care goal of social justice.

KEY POINT

Simply assessing patterns of health and ill health fails to consider inequities between different groups of people, which is important to achieving the primary health care goal of social justice.

The assessment tool just mentioned, and other assessment tools of the 1980s, reflected the commitment of nursing to the systematic approach

of the nursing process. The nursing process revolves around making nursing diagnoses, typically described as 'deficits' that nurses can address. Clark's 1984 model of assessment is a comprehensive tool specifically aimed at facilitating a nursing diagnosis. It was originally described as the 'epidemiologic prevention process model', and has more recently been known as the 'dimensions model of community health nursing' because of its later focus on the determinants of health and the dimensions of nursing (Bigbee & Issel 2012, p. 373). Categories of information include general information about the community, epidemiological information such as population characteristics and health status indicators, attitudes towards health, environmental

factors and community relationships with society. Box 4.3 provides a case study of the development of Clark's assessment model over time.

Like Clark's model, Anderson and McFarlane's (1988, 2014, 2019) assessment model is based on the nursing process and their philosophy of 'community as partner', which is congruent with primary health care, and a 'systems' approach to the community. Systems approaches are derived from the notion that a community is a living system that is more than the sum of its parts because of numerous and ongoing internal and external interactions that help maintain homeostasis (Neuman 1982, Neuman & Fawcett 2010). In Anderson and McFarlane's (2014, 2019) adaptation

BOX 4.3

THE EVOLUTION OF A COMMUNITY ASSESSMENT TOOL

Clark's assessment tool arose from having to undertake an assessment of health needs at a summer day camp in 1995. She began the task by categorising the various needs of campers, then identifying a set of primary and secondary interventions designed to address these needs. The process was intended to identify a series of nursing diagnoses that would illuminate the physical risks and service deficits that could potentially impact on camp participants. As was accepted practice at the time, there was no dialogue with staff or campers regarding their perspective on needs and means of addressing these. Nearly 10 years later, Clark (2003, p. 457) critiqued the model in terms of new ideas on community health, following feedback from a research project she was undertaking, where community members reported feeling 'researched to death'. She and her colleagues recognised the need for a community engagement process to round out the assessment information (Clark et al 2003). By using focus groups with community members, the researchers identified a range of community health needs and assets. The major needs identified by community members were housing, environmental and safety needs, followed by access to health care. The major assets included the proximity of the community to the larger metropolitan area, its mild climate and recreational opportunities. From the findings of this research, Clark and her colleagues were able to identify a number of community-led initiatives to address some of the needs. Clark's most recent text updated the model further (Clark 2015).

So what does this tell us?

The development of models helps guide nursing practice with communities, and this case study demonstrates how models evolve over time as new knowledge is gained. Being aware of the history of model development helps nurses understand past practice in the context of contemporary practice and encourages us to explore new models and practices based on our previous experiences and knowledge.

What do you see as the next phase in community assessment model development?

BOX 4.4

A COMPARISON OF COMMUNITY ASSESSMENT: ANDERSON AND MCFARLANE, AND CLARK

Anderson and McFarlane (1988, 2011, 2014, 2019)

- Physical environment
- Economics
- Education
- Safety and transportation
- Health and social services
- Politics and government
- Communication
- Recreation

Clark (1984, 2003, 2015)

- Physical
- Biophysical
- Sociocultural
- Behavioural
- Health system

of Neuman's systems model, assessment is guided by an assessment wheel with eight subsystems, which include similar categories of information to those used by Clark with some expansion of the areas assessed (see Box 4.4). Despite the differences, the assessment processes remain the same. Nurses assess each of the categories or subsystems to diagnose the health of the community in order to inform implementation plans based on each.

Anderson and McFarlane's community assessment wheel has been one of the more widely used models of community assessment in nursing with adaptations of their wheel developed for Canadian, Australian and New Zealand users (Francis et al 2013, Vollman et al 2016). While providing a useful framework for community assessment, the model is limited by its 'top-down', deficit approach; that is, the identification of community problems rather than strengths, and seeking community input after problem identification. An existing concern with many community assessment approaches is a lack of community

involvement in the early stages of the process. Communities should be involved as early as possible, as we underline throughout the chapter.

POINT TO PONDER

Early assessment models included person–environment interactions and were not always inclusive of what we now call the SDH. They were also intended to provide a nursing diagnosis as a basis for systematic health planning.

What are the strengths and weaknesses of these early approaches?

Although the early assessment tools were devoid of community input, they did help advance nursing's scientific agenda, by recognising the processes of assessment. Over time, those using the tools began to recognise the importance of social and interactive factors that are so important to community health. However, by being prescriptive about categories of assessment data, sometimes critical information was overlooked, including the need to assess cultural factors within various community neighbourhoods and groups. Subsequent community assessment models have contributed to a deeper understanding of the cultural domain of assessment, following the lead of Leininger (1967) and other nursing theorists (Giger & Davidhizar 2002, Jirwe et al 2006, Leininger & McFarland 2006, Ramsden 2002, Tripp-Reimer et al 1984). Cultural assessment is now a major focus in community assessment, integrating cultural information with other assessment information. Cultural assessment strategies are intended to provide the depth and breadth of locally identified information that is crucial to ensuring their acceptability in the context of the nurse–client relationship.

KEY POINT

All cultural assessments must include the perspectives of members of the cultural groups on their assets, strengths and needs.

Cultural assessment information can include community members' perspectives on their worldview and relevant issues related to ethnicity, values, beliefs, history and social orientation. For refugee and migrant groups, information on pre-movement, migration and post-migration events is also collected to assess the combination of social, environmental, cultural and medical factors that determine health. Despite the often traumatic experiences of refugees prior to resettlement, a strengths-based approach to assessment enables the identification of resilience in the face of adversity, mediating factors that enable or constrain the ability to cope with adversity, and the facilitators that enable positive coping (Lewis et al 2021). Comprehensive assessment of refugee populations, which includes detailed information on family factors, family reactions to the transition to a new country, the impact of changes and aspects of the host community that cause or exacerbate the trauma and stress of dislocation is essential. An important element of the cultural assessment

involves assessing healthcare providers, as some researchers have found that accessibility and use of services depends on the cultural and language competencies of staff members (Neilly et al 2019, Tyrrell et al 2016). Including cultural assessment in all community assessments is congruent with the work of Ramsden (2002) in highlighting cultural safety in all professional interactions. Cultural information also provides a more realistic picture of the community and its sociocultural environment, and shifts the emphasis from the deficit model of the nursing process to the more positive 'asset mapping' model of assessment

Assessment tools specific to health education planning

Among the most specific, goal-directed tools is the PRECEDE-PROCEED tool for health education planning (Green & Kreuter 2005) (see Fig 4.3).

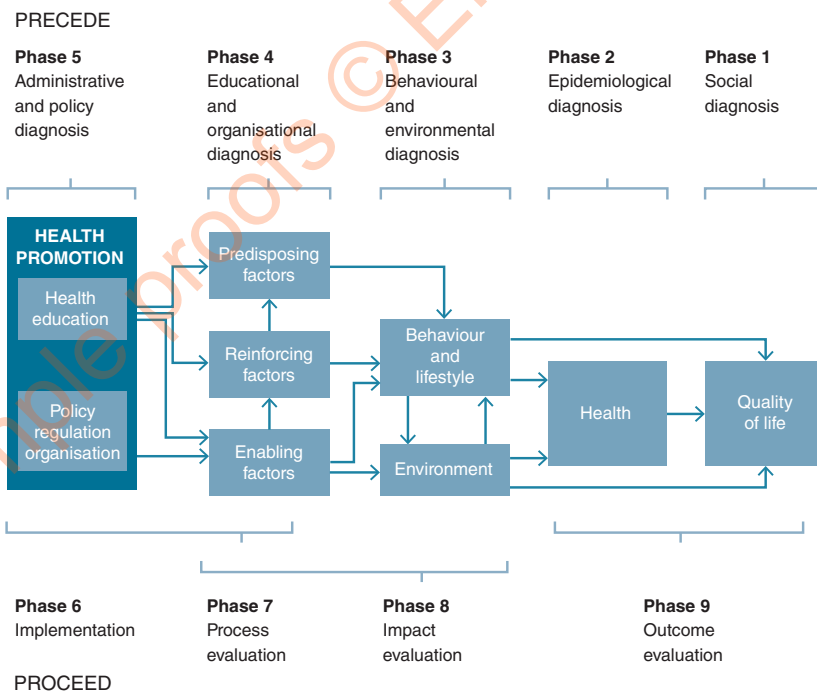


Figure 4.3 PRECEDE-PROCEED model

The objective of the tool is to provide a framework for planning and evaluating behaviour change programs among members of a community or group (Parker & Baldwin 2019). Like the nursing process models, Green and Kreuter's model revolves around gathering diagnostic information. First, a social diagnosis is undertaken which includes examining community issues such as crime, population density, education, unemployment and other aspects that are similar to the SDH. Second, an epidemiological diagnosis is made. This identifies rates of morbidity, mortality, disability and fertility and is aimed at determining the extent and nature of the determinants of health in the community (Green & Kreuter 2005). Third, a behavioural and environmental diagnosis is undertaken to identify factors related to actions people might take and how interactions with their physical and social environments might affect these (Green & Kreuter 2005). Included are preventative actions such as safe sexual behaviour, self-care indicators, dietary patterns and coping skills. The environmental diagnosis includes geographic and economic indicators of community health, as well as how people connect and relate to health services.

Fourth, an educational and organisational diagnosis is undertaken resulting in identification of Predisposing, Reinforcing and Enabling factors. Predisposing factors include knowledge, attitudes, values and perceptions of community members, making it essential to assess health literacy at this stage. Reinforcing factors include the attitudes and behaviours of others that can affect behaviour and environments for change (Green & Kreuter 2005). Enabling factors are those skills, resources, assets or barriers that may either support or obstruct wanted change. Finally, an administrative and policy diagnosis is undertaken to clarify what strengths and resources are present in the community to enable it to respond to needs. Once complete, such a detailed assessment allows implementation of changes to begin (Green & Kreuter 1991, 2005).

Examples of the PRECEDE-PROCEED model in action include developing strategies to address dental caries in Aboriginal children living in rural and remote communities in New South Wales (Dimitropoulos et al 2018) and exploring knowledge and attitudes towards physical activity among older

adults living in a North West England community (Sanders et al 2018). The PRECEDE-PROCEED model has been used for many years to make a community diagnosis, but like some of the other models, it is limited by the top-down perspective of the health practitioner on what a community needs or prefers. In this respect, it is limited in providing a comprehensive assessment that includes input from community members who feel empowered to participate in charting the course of community health.

Streamlining community assessment—the McMurray community assessment framework

It should be evident from the assessment models described so far that most community assessment tools combine epidemiological data with psychosocial, sociocultural and environmental indicators, including information about the health system and its use. The most useful tools are those that combine the multidimensional and dynamic nature of community life as well as capturing individual and family strengths and constraints (McMurray 2014). Community assessment does not need to be a complex process, although the more information that is included in the assessment, the more likely it will be that the interventions will be appropriate and acceptable to the community. Figure 4.4 shows the McMurray community assessment framework. The framework describes a step-by-step process for undertaking a community assessment. The difference between the McMurray community assessment framework and other models of community assessment is that each step in the McMurray model ensures community members are engaged in the process, which ultimately results in community empowerment.

1. ENGAGE with the community

Approach key community members to identify how you can work with their community to undertake a

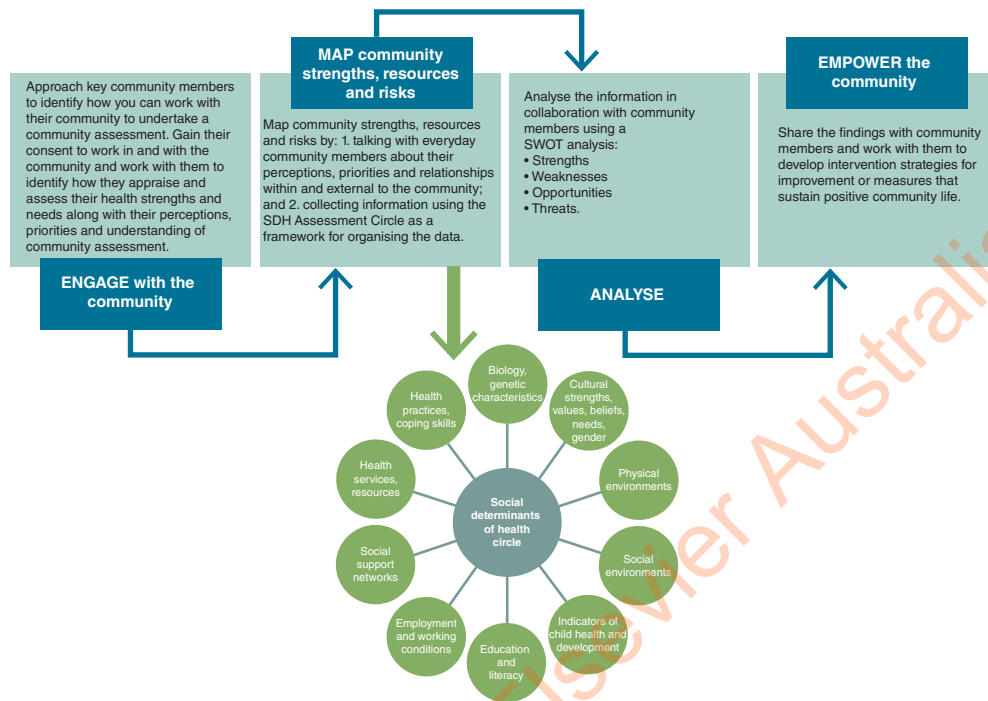


Figure 4.4 McMurray community assessment framework

community assessment. Gain their consent to work in and with the community and work with them to identify how they appraise and assess their health strengths and needs along with their perceptions, priorities and understanding of their community. Key community members are those who hold positions of respect and/or authority in the community, either through formal or informal leadership. These people may be community elders, local healthcare providers, teachers, social workers, town council or community board members and/or others who may provide services in the community. While speaking with some of these people may simply be a formality, speaking with community elders and gaining their consent to work with you in the community is an essential first step to community assessment. Talk to them about what *you* want to find out and what *they* want to find out, and let them tell you where to find the information. They will know who to talk to, where to look for

information and what not to do as you undertake your community assessment. This process will also help establish trust between you and the community and keeps everyone 'in the loop' as you go about your assessment.

2. MAP community strengths, resources and risks

Mapping is a two-step process (although both steps can occur concurrently). First, talking with community members yields a wide range of information that shows the demographic 'mix' in the community: how many people in which population groups may require certain specific services (e.g. older persons, young children), the mix of cultures in the community, what people think about their lives, opinions about environmental

strengths that may support healthy lifestyles, or barriers to health. Find out about people's perceptions, priorities and relationships—these are the relationships that exist between people, and between people and their environment. Once this information is obtained, the second part of this step involves mapping resources—trying to understand the capacity for supporting health, and the assets and support systems that may be mobilised for certain interventions. The SDH assessment circle outlined in Figure 4.5 comprises part of the McMurray community assessment framework and enables the mapping of these resources. The SDH assessment circle gathers information within the 10 categories of the SDH shown. The circle incorporates all the elements of community assessment, epidemiological data and social epidemiological information in one cohesive place. Appendix A shows the McMurray community assessment framework with the SDH assessment circle broken down into separate sections with accompanying questions. These questions will guide you as you undertake your review and many can only be answered by speaking with community members.



Figure 4.5 The SDH Community Assessment Circle

Further information on sources of assessment information can be found later in the chapter.

The following list outlines the SDH as found in the SDH Community Assessment Circle.

- Indicators of child health and development
- Biological or genetic population indicators
- Cultural strengths, values, beliefs, history and needs; gender
- Health services and resources and patterns of accessing these by various population groups
- Health practices, coping skills in the context of recreation and leisure, which may support or compromise health, such as drop-in centres, places that encourage health literacy and capacity, or drug and alcohol misuse
- Physical environments, including geographical factors such as climate change or transportation barriers to care, or activity-friendly neighbourhoods
- Social environments, indicators of social inclusion or exclusion
- Employment and financial status of the population, including unemployment rates, working conditions, types of employers, availability of workplace support
- Education and literacy indicators
- Social support networks, access for vulnerable groups, volunteer networks

3. ANALYSE the information in collaboration with community members using a strengths, weaknesses, opportunities and threats (SWOT) analysis

The third step is to analyse the information gathered using a SWOT analysis to identify strengths, weaknesses, opportunities and threats to community health. Included in the SWOT analysis will be a deeper level of analysis of the community that provides information on the SDH. This analysis should be done in collaboration with community members to ensure the way you interpret and make

sense of the information is aligned with community members' understanding of the data. This action will help build trust with the community and serve to facilitate the development of the community-led interventions that make up the final step in the process.

KEY POINTS

A SWOT analysis identifies:

Strengths

Weaknesses

Opportunities and

Threats ... to health

4. EMPOWER the community by sharing the findings with community members and working with them to develop intervention strategies for improvement or measures that sustain positive community life

The final step is where you work with the community to identify, develop and implement interventions to support the needs of the community. Interventions may be as simple as lobbying local government for a new pedestrian crossing or as complex as a multifaceted diabetes prevention program. Engaging with communities throughout the assessment process is key to empowering community members to identify, seek and implement solutions to their own issues and concerns. An example of the importance of community engagement can be found in a study that used participatory action research to engage with an Aboriginal community to develop localised, culturally appropriate stroke health resources. While the resources were an important

outcome from the study, it was the engagement and sense of community ownership that arose from the project that is likely to have most tangible long-term outcomes (Peake et al 2021).

Sources of assessment information

For health practitioners who are new to a community, comprehensive assessments can be daunting, and the sources of information a bit confusing. Some information will be available online in government documents. For example, Australian data on morbidity, mortality and age-related conditions are included in the document 'Australia's Health', which is updated every 2 to 4 years. This can be found at www.aihw.gov.au/reports-data/australias-health. Australian Government census and health department reports on a variety of topics are also available online. The New Zealand Ministry of Health has a range of publications that provide background data on the health status of New Zealanders. The New Zealand Health Survey is now a continuous study and provides the most up-to-date information on population health in New Zealand. Findings are published on the Ministry of Health website: www.health.govt.nz. Statistics New Zealand (www.stats.govt.nz) is also a useful portal for accessing any statistical data on communities and publishes many existing community profiles developed from census data. For the more enthusiastic practitioner, it is also possible to manipulate Excel data tables to find the specific statistics required for a geographical area. The Yellow Pages (www.yellowpages.com.au) are another source of community information, as are community business directories. Some of the most useful information for community assessment comes from local surveys that may have been conducted in recent years, or from observations of community life. A search of websites like Google or PubMed, or any of the research databases (see Chapter 10) may also reveal whether there have been any research studies in the community, which may provide additional information.

Most community nurses and other health practitioners have their own strategies for collecting various types of information, depending on

whether they are responsible for the whole community, or practising in specific areas, such as: general practice; child, school or occupational health; or in a visiting nurse service. In the first instance health practitioners can become familiar with a community by conducting a 'windscreen survey', driving around to gain a sense of the community—a big picture of life in that context. Such a survey can yield information about: spaces for recreation; transportation and access; childcare services; the location of schools, clinics, hospitals and other health services; places of employment; the state of available housing such as whether there are affordable homes; or whether certain sections of the community seem to be in decline. This type of information can also be confirmed by speaking to various community groups or by analysing records of community activities such as immunisation rates, public health indicators and data from other policy documents that indicate activities of the local council or other authorities (fitness programs, elder daycare facilities). Community assets, strengths and risks can also be identified by being attentive to people's visible

health behaviours such as observing people out walking, older persons engaging in Tai Chi, and/or parent get-togethers.

KEY POINT

A windscreen survey is an effective way of gaining an understanding of the 'lay of the land' in a community.

On completion of a community assessment, presentation of your work to the community and/or to your colleagues and peers is a useful way of disseminating the information you have gathered. These groups may have useful ideas on where further information can be obtained, how the information can be used and what the next steps in the process may be. In the context of community student placements, discussion of assessment information with community nurses or the teaching staff supervising your placement can also provide locally relevant information for health promotion.

Conclusion

Assessment of the community enables a deeper understanding of strengths, weaknesses, opportunities and threats to community health. The McMurray community assessment framework provides us with a structure to grow our understanding of a community and work alongside community members to identify and develop interventions to empower communities to address their own health and social needs. Chapter 5 builds on our assessment knowledge to help us plan interventions with individuals, families and communities. Before we move on, take some time to consider how the McMurray community assessment framework may help the Mason and Smith families.

Reflecting on the Big Issues

- Community assessment includes mapping strengths, resources, risks and needs with input from members of the community.
- Epidemiological data provide information on the determinants and distribution of risks and diseases in the population, usually defined as incidence and prevalence rates.
- Quantifying rates of health risks and diseases is useful in some ways, but is not inclusive of community

Reflecting on the Big Issues—cont'd

- perspectives and preferences or the particular needs of subgroups in the population.
- Socio-ecological assessment tools have evolved over the years to reflect an increasing emphasis on the SDH.
- Asset mapping is a tool for assessment that outlines primary, secondary and potential features and resources that can be mobilised for community health.
- CBPR can be combined with asset mapping to provide a realistic assessment of community health needs.
- Social epidemiological assessment integrates demographic and epidemiological assessment data with information from the community, often in the context of CBPR.
- The McMurray community assessment framework is an ideal way to ensure data are collected on all the SDH in a community.

CASE STUDY

Assessing community needs for the Mason and Smith families

We now return to the Smith and Mason families to provide an example of some of the information you may collect as part of assessing their communities' strengths, weaknesses, opportunities and threats to health. There are distinctive differences in the three communities that influence health and wellness for both families. The mining camp where Colin works is sparse and functional, approximately 1000 km from Perth, the capital of Western Australia and the epicentre of the 'resources boom'. In the area surrounding the mining camp are several small towns, where each community is composed of a mix of long-term residents and newcomers. Many of the townspeople live in caravan parks because of the shortage and high cost of housing. Some are service workers who service the mine and the local population. The physical environment is challenging, with extreme dry, dusty heat during the day and little rainfall.

Maddington is known as a family-friendly but diverse community with many young families, some of them migrants, and older residents. The Smith family has ready access to the train station and the shopping

centre, which they can reach by bus from the stop on their street. There is moderate unemployment in the suburb because there are so many opportunities across a range of jobs to work in the mines, and access to the airport is ideal, within 10 km of Maddington. The Smiths' neighbourhood has a large number of fly-in fly-out (FIFO) families, and an informal mining wives' club that meets regularly at the community centre. There is a shortage of GPs in the area, but several child health clinics, and a school health nurse attends the public school. The day care is staffed by accredited early childhood educators.

Papakura is a low socioeconomic community with moderate levels of unemployment and a high multicultural population. The area has a large number of young families, single-parent households and older retired people. There is also a large number of state houses and private rental properties, and some home ownership. The community has a local integrated family health centre which offers general practice, pharmacy and physiotherapy services. There is a local Plunket room and a playground near the shops.

Reflective questions: How would I use this knowledge in practice?

- 1 Using the McMurray community assessment framework, identify the most important priorities for promoting health in the mining community.
- 2 What information will you use to assess the Maddington community in relation to its strengths, weaknesses, threats and opportunities for socio-ecological support for the Smith family?
- 3 What strengths, weaknesses, threats and opportunities are readily identifiable in Papakura?
- 4 What information do you need to glean from Rebecca and Huia on their family and community needs? Compile a list of questions to prompt your assessment interview with each of the women.
- 5 What gaps in assessment data did you find from your assessment interviews?
- 6 What extra sources of information did you use to complete the assessments in both communities?
- 7 From the assessment data of all three communities, what provisional plans would you put in place for health promotion?
- 8 Group exercise: Community assessment
Working in small groups, brainstorm the various ways you think information about your community can be collected. Make a list of where you will find this information locally.
- 9 Group exercise: SDH assessment
Working in groups of two to three, undertake a windscreen survey in your local community. Make notes on what you observe. Consider how the notes you have made (the data you collected) fit into the McMurray community assessment framework and where. Make some notes on how useful you found this exercise and what you learned. Share your findings with the wider group.

References

- Adcock, A., Storey, E., Lawton, B., et al, 2019. He Korowai Manaaki: mapping assets to inform a strengths-based, Indigenous-led wrap-around maternity pathway. *Aust. J. Prim. Health*, 25 (5), 509–514. Online. Available: <https://doi.org/10.1071/PY19029>.
- Anderson, E., McFarlane, J., 1988. *Community as partner: Theory and practice in nursing*. JB Lippincott.
- Anderson, E., McFarlane, J., 2014. *Community as partner: Theory and practice in nursing*, seventh ed. Lippincott, Williams & Wilkins.
- Anderson, E., McFarlane, J., 2019. *Community as partner: Theory and practice in nursing*. Anderson, E., McFarlane, J. (eds.), eighth ed. Wolters Kluwer.
- Bank of I.D.E.A.S., 2020. A guide to asset mapping. Online. Available: <https://boifiles.s3-ap-southeast-2.amazonaws.com/2020/Asset+Mapping+A+Guide%5B14734%5D.pdf>.
- Bigbee, J.L., Issel, L.M., 2012. Conceptual models for population-focused public health nursing interventions and outcomes: The state of the art. *Public Health Nurs.*, 29 (4), 370–379. Online. Available: <https://doi.org/10.1111/j.1525-1446.2011.01006.x>.
- Brush, B.L., Mentz, G., Jensen, M., et al, 2020. Success in long-standing community-based participatory research (CBPR) partnerships: A scoping literature review. *Health Educ. Behav.*, 47 (4), 556–568. Online. Available: <https://doi.org/10.1177/1090198119882989>.
- Chung, R.Y.-N., Chung, G.K.-K., Gordon, D., et al, 2018. Deprivation is associated with worse physical and mental health beyond income poverty: A population-based household survey among Chinese adults. *Qual. Life Res.*, 27 (8), 2127–2135. Online. Available: <https://doi.org/10.1007/s11136-018-1863-y>.
- Clark, M., 1984. *Community nursing: Health care for today and tomorrow*. Reston Publishing.
- Clark, M.J., 2003. *Community health nursing: Caring for populations*, fourth ed. Pearson Education Inc.
- Clark, M.J., 2015. *Population and community health nursing*, sixth ed., Pearson.
- Clark, M.J., Cary, S., Diemert, G., et al, 2003. Involving communities in community assessment. *Public Health Nurs.*, 20 (6), 456–463. Online. Available: <https://pubmed.ncbi.nlm.nih.gov/14629677/>.
- Dimitropoulos, Y., Holden, A., Gwynne, K., et al, 2018. An assessment of strategies to control dental caries in Aboriginal children living in rural and remote communities in New South Wales, Australia. *BMC Oral Health*, 18 (1), 177. Online. Available: <https://doi.org/10.1186/s12903-018-0643-y>.

- Fowler, C.S., Frey, N., Folch, D.C., et al, 2020. Who are the people in my neighborhood? The 'contextual fallacy' of measuring individual context with census geographies. *Geogr. Anal.*, 52 (2), 155–168. Online. Available: <https://doi.org/10.1111/gean.12192>.
- Francis, K., Chapman, Y., Hoare, K., et al, 2013. *Community as partner: Theory and practice in nursing* (Australasian edition), second ed. Lippincott, Williams & Wilkins.
- Fritsch Gikow, F., Kucharski, P., 1987. A new look at the community: Functional health pattern assessment. *J. Community Health Nurs.*, 4 (1), 21–27. Online. Available: https://doi.org/10.1207/s15327655jchn0401_4.
- Giger, J., Davidhizar, R., 2002. Culturally competent care: Emphasis on understanding the people of Afghanistan, Afghanistan Americans, and Islamic culture and religion. *Int. Nurs. Rev.*, 49, 79–86.
- Goodman, R.A., Buehler, J.W., Mott, J.A., et al, 2019. Defining Field Epidemiology. In: Rasmussen, S.A., Goodman, R.A. (Eds.), *The CDC field epidemiology manual*, third ed., pp. 3–20. Online. Available: <https://doi.org/10.1093/oso/9780190933692.003.0001>.
- Green, L., Kreuter, M., 1991. *Health promotion planning: An educational and environmental approach*. Mayfield Publishing Company.
- Green, L., Kreuter, M., 2005. *Health program planning: An educational and ecological approach*, fourth ed. McGraw-Hill Higher Education.
- Hobbs, M., Mackenbach, J.D., Wiki, J., et al, 2021. Investigating change in the food environment over 10 years in urban New Zealand: A longitudinal and nationwide geospatial study. *Soc. Sci. Med.*, 269, 113522. Online. Available: <https://doi.org/10.1016/j.socscimed.2020.113522>.
- Hulen, E., Hardy, L.J., Teufel-Shone, N., et al, 2019. Community Based Participatory Research (CBPR): A Dynamic Process of Health care, Provider Perceptions and American Indian Patients' Resilience. *J. Health Care Poor Underserved*, 30 (1), 221–237. Online. Available: <https://doi.org/10.1353/hpu.2019.0017>.
- Jirwe, M., Gerrish, K., Emami, A., 2006. The theoretical framework of cultural competence. *J. Multicult. Nurs. Health*, 12(3), 6–16.
- Kim, D., 2021. *New horizons in modeling and simulation for social epidemiology and public health*. Wiley.
- Leininger, M., 1967. The culture concept and its relevance to nursing. *J. Nurs. Educ.*, 6 (2), 27–37.
- Leininger, M., McFarland, M., 2006. *Culture care diversity and universality: A worldwide theory of nursing*, second ed. Jones and Bartlett Publishers.
- Lewis, F.J., Tor, S., Rappleyea, D., et al, 2021. Behavioral health and refugee youth in primary care: An ecological systems perspective of the complexities of care. *Child. Youth Serv. Rev.*, 120. Online. Available: <https://doi.org/10.1016/j.childev.2020.105599>.
- Liu, N., Kruger, E., Tennant, M., 2021. Identifying the gaps in public dental services locations for people living with a disability in metropolitan Australia: a geographic information system (GIS)-based approach. *Aust. Health Rev.*, 45 (2), 178–184. Online. Available: <https://doi.org/10.1071/AH19252>.
- Mathie, A., Cameron, J., Gibson, K., 2017. Asset-based and citizen-led development: Using a diffracted power lens to analyze the possibilities and challenges. *Prog. Dev. Stud.*, 17 (1), 54–66. Online. Available: <https://doi.org/10.1177/1464993416674302>.
- McMurray, A., 2014. Healthy communities: The evolving roles of nursing. In J. Daly, S. Speedy, D. Jackson (Eds.), *Contexts of nursing*, fourth ed., pp. 305–324. Elsevier Inc.
- Neilly, C.-H., Rader, A., Zielinski, S., et al, 2019. Using transcultural nursing education to increase cultural sensitivity and cultural assessment documentation by staff in an in-home chronic disease self-management program. *J. Dr. Nurs. Pract.*, 12(1), 16–23. Online. Available: <https://doi.org/10.1891/2380-9418.12.1.16>.
- Neuman, B., 1982. *The Neuman systems model*. Appleton-Century-Crofts.
- Neuman, B., Fawcett, J., 2010. *The Neuman systems model*, fifth ed.. Pearson.
- Parker, E., Baldwin, L., 2019. Contemporary practice. In M. Fleming, E. Parker, I. Correa-Velez (Eds.), *Introduction to public health*, fourth ed., pp. 184–196. Elsevier.
- Peake, R.M., Jackson, D., Lea, J., et al, 2021. Meaningful engagement with Aboriginal communities using participatory action research to develop culturally appropriate health resources. *J. Transcult. Nurs.*, 32 (2), 129–136. Online. Available: <https://doi.org/10.1177/1043659619899999>.
- Ramsden, I., 2002. *Cultural safety and nursing education in Aotearoa and Te Waipounamu*. Doctoral thesis. Victoria University of Wellington.
- Robinson, W.R., Bailey, Z.D., 2020. Invited commentary: What social epidemiology brings to the table—reconciling social epidemiology and causal inference. *Am. J. Epidemiol.*, 189 (3), 171–174. Online. Available: <https://doi.org/10.1093/aje/kwz197>.
- Sanders, G.J., Roe, B., Knowles, Z.R., et al, 2018. Using formative research with older adults to inform a community physical activity programme: Get Healthy, Get Active. *Prim. Health Care Res. Dev.*, 20, 1–10. Online. Available: <https://doi.org/10.1017/S1463423618000373>.
- Tripp-Reimer, T., Brink, P., Saunders, J., 1984. Cultural assessment: content and process. *Nurs. Outlook*, 32 (30), 78–82.

- Tyrrell, L., Duell-Piening, P., Morris, M., et al, 2016. Talking about health and experiences of using health services with people from refugee backgrounds. Victorian Refugee Health Network, Melbourne.
- Vollman, A., Anderson, E., McFarlane, J., 2016. Canadian community as partner: Theory and multidisciplinary practice, fourth ed. Lippincott, Williams & Wilkins.
- Wassertheil-Smoller, S., Smoller, J., 2015. Mostly about epidemiology. In: Biostatistics and epidemiology: A primer for health and biomedical professionals. Springer New York, pp. 83–132. Online. Available: https://doi.org/10.1007/978-1-4939-2134-8_4.
- West, M., 1984. Community health assessment: The man-environment interaction. *J. Community Health Nurs.*, 1 (2), 89–97. Online. Available: https://doi.org/10.1207/s15327655jchn0102_3.
- Wyeth, E.H., Samaranayaka, A., Lambert, M., et al, 2019. Understanding longer-term disability outcomes for Māori and non-Māori after hospitalisation for injury: Results from a longitudinal cohort study. *Public Health (Elsevier)*, 176, 118–127. Online. Available: <https://doi.org/10.1016/j.puhe.2018.08.014>.