

Population-Based Public Health Nursing Practice: The Intervention Wheel

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ADDITIONAL RESOURCES

evolve EVOLVE WEBSITE
<http://evolve.elsevier.com/Stanhope>

- *Healthy People 2010*
- WebLinks
- Quiz
- Case Studies
- Glossary
- Answers to Practice Application
- Content Updates

OBJECTIVES

After reading this chapter, the student should be able to do the following:

1. Identify the components of the Intervention Wheel.
2. Describe the assumptions underlying the Intervention Wheel.
3. Define the wedges and interventions of the Intervention Wheel.
4. Differentiate among three levels of practice (community, systems, and individual/family).
5. Apply the nursing process at three levels of practice.

KEY TERMS

- | | | |
|--|--|--------------------------------------|
| advocacy, p. 204 | health teaching, p. 199 | prevention, p. 192 |
| case finding, p. 199 | individual-level practice, p. 193 | primary prevention, p. 194 |
| case management, p. 199 | intermediate goals, p. 208 | public health nursing, p. 191 |
| coalition building, p. 204 | interventions, p. 194 | referral and follow-up, p. 199 |
| collaboration, p. 204 | levels of practice, p. 189 | screening, p. 199 |
| community, p. 192 | outcome health status indicators, p. 208 | secondary prevention, p. 194 |
| community level practice, p. 192 | outreach, p. 199 | social marketing, p. 204 |
| community organizing, p. 204 | policy development, p. 204 | surveillance, p. 199 |
| consultation, p. 199 | policy enforcement, p. 204 | systems-level practice, p. 192 |
| counseling, p. 199 | population, p. 191 | tertiary prevention, p. 194 |
| delegated functions, p. 199 | population at risk, p. 191 | wedges, p. 193 |
| determinants of health, p. 191 | population of interest, p. 191 | —See <i>Glossary for definitions</i> |
| disease and other health event investigation, p. 199 | | |

CHAPTER OUTLINE

The Intervention Wheel Origins and Evolution

Assumptions Underlying the Intervention Wheel

Assumption 1: Defining Public Health Nursing Practice

Assumption 2: Public Health Nursing Practice Focuses on Populations

Assumption 3: Public Health Nursing Practice Considers the Determinants of Health

Assumption 4: Public Health Nursing Practice Is Guided by Priorities Identified Through an Assessment of Community Health

Assumption 5: Public Health Nursing Practice Emphasizes Prevention

Assumption 6: Public Health Nurses Intervene at All Levels of Practice

Assumption 7: Public Health Nursing Practice Uses the Nursing Process at All Levels of Practice

Assumption 8: Public Health Nursing Practice Uses a Common Set of Interventions Regardless of Practice Setting

Assumption 9: Public Health Nursing Practice Contributes to the Achievement of the 10 Essential Services

Assumption 10: Public Health Nursing Practice Is Grounded in a Set of Values and Beliefs

Using the Intervention Wheel in Public Health Nursing Practice

Components of the Model

Component 1: The Model Is Population Based

Component 2: The Model Encompasses Three Levels of Practice

Component 3: The Model Identifies and Defines 17 Public Health Interventions

Adoption of the Intervention Wheel in Practice, Education, and Management

APPLYING THE NURSING PROCESS IN PUBLIC HEALTH NURSING PRACTICE

Applying the Process to an Individual/Family Level

Community Assessment

Public Health Nursing Process: Assessment of a Family

Public Health Nursing Process: Diagnosis

Public Health Nursing Process: Planning (Including Selection of Interventions)

Public Health Nursing Process: Implementation

Public Health Nursing Process: Evaluation

Applying the Public Health Nursing Process to a Systems Level of Practice Scenario

Public Health Nursing Process: Assessment

Public Health Nursing Process: Diagnosis

Public Health Nursing Process: Planning (Including Selection of Interventions)

Public Health Nursing Process: Implementation

Public Health Nursing Process: Evaluation

Applying the Public Health Nursing Process to a Community Level of Practice Scenario

Community Assessment (Public Health Nursing Process: Assessment)

Community Diagnosis (Public Health Nursing Process: Diagnosis)

Community Coalition Plan (Public Health Nursing Process: Planning, Including Selection of Interventions)

Coalition Implementation (Public Health Nursing Process: Implementation)

Coalition Evaluation (Public Health Nursing Process: Evaluation)

In these times of change, the public health system is constantly challenged to keep focused on the health of populations. The Intervention Wheel is a conceptual framework that has proven to be a useful model in defining population-based practice and explaining how it contributes to improving population health.

The Intervention Wheel provides a graphic illustration of population-based public health practice (Keller et al, 1998, 2004a,b). It was previously introduced as the Public Health Intervention Model and was known nationally as the “Minnesota Model,” and it is now often simply referred to as the “Wheel.” The Wheel depicts how public health improves population health through interventions with communities, the individuals and families that comprise communities, and the systems that impact the health of communities (Figure 9-1). The Wheel was derived from

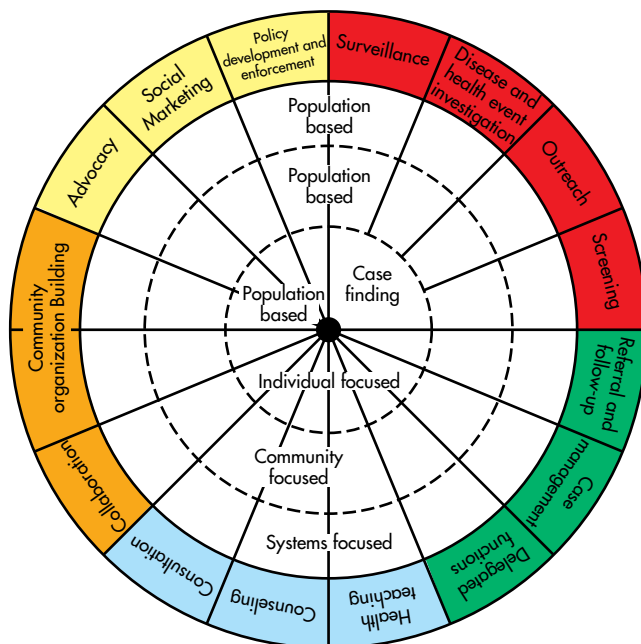
the practice of public health nurses and intended to support their work. It gives public health nurses a means to describe the full scope and breadth of their practice.

This chapter applies the Intervention Wheel framework to public health nursing practice. However, it is important to note that other public health members of the interdisciplinary team such as nutritionists, health educators, planners, physicians, and epidemiologists also use these interventions.

THE INTERVENTION WHEEL ORIGINS AND EVOLUTION

The original version of the Wheel resulted from a grounded theory process carried out by public health nurse consultants at the Minnesota Department of Health in the mid 1990s. This was a period of relentless change and considerable uncertainty for Minnesota’s public health nursing community. Debates about health care reform and its impact on the role of local public health departments created confusion about the contributions of public health nursing to population-level health improvement. In response to the uncertainty, the consultant group presented a series of workshops across the state highlighting the core functions of public health nursing practice (see Chapter 1 for a description of these core functions). A workshop activity required participants to describe the actions they undertook to carry out their work. The consultant group analyzed 200 practice scenarios developed at the workshops that ranged from home care and school health to home visiting and correctional health. In the final analysis, 17 actions common to the work of public health nurses regardless of their practice setting were identified. The analysis also demonstrated that most of these interventions were implemented at three levels. Interventions were carried out (1) with individuals, either singly or in groups, and with families; (2) with communities as a whole; and (3) with systems that impact the health of communities. A wheel-shaped graphic was developed to illustrate the set of interventions and the **levels of practice** (see Figure 9-1).

The interventions were subjected to an extensive review of supporting evidence in the literature though a grant from the federal Division of Nursing awarded to the Minnesota Department of Health in the 1990s. In 1999 the public health nurse consultant group at the Minnesota Department of Health designed and implemented a systematic process identifying more than 600 items from supporting evidence in the literature. These items were rated for their quality and relevancy by a group of graduate nursing students. The resulting subset of 221 items was further analyzed by 2 expert panels. One panel was composed of public health nursing educators and expert practitioners from five states (Iowa, Minnesota, North Dakota, South Dakota, and Wisconsin). The other panel was a similarly composed national panel. The result was a slightly modified set of 17 interventions. Figure 9-2 graphically illustrates the systematic critique. Each intervention



The Intervention Wheel is composed of three distinct elements of equal importance:

- First, the model is population based.
- Second, the model encompasses three levels of practice (community, systems, individual/family).
- Third, the model identifies and defines 17 public health interventions.

Each intervention and level of practice contributes to improving population health.

FIG. 9-1 The Intervention Wheel components. (Courtesy Minnesota Department of Health, Center for Public Health Nursing.)

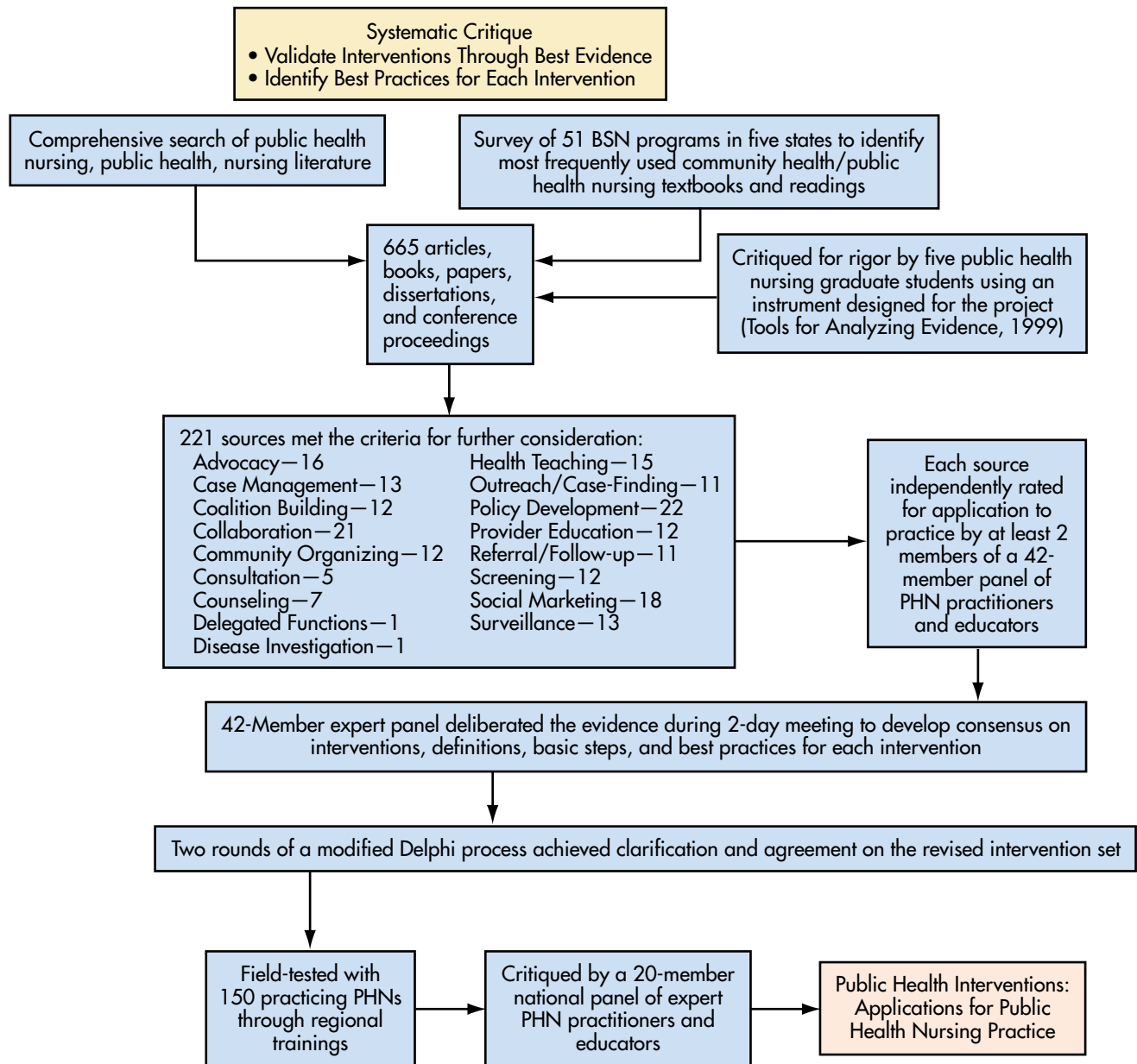


FIG. 9-2 Development of a conceptual framework using an evidence-based process. (Used with permission from Keller LO, Strohschein S, Lia-Hoagberg B et al: Population-based public health interventions: practice-based and evidence-supported, part I, *Public Health Nurs* 21:459, 2004a.)

was defined at multiple levels of practice; each was accompanied by a set of basic steps for applying the framework and recommendations for best practices.

Adoption of the model was rapid and worldwide. Since its first publication in 1998, the Intervention Wheel has been incorporated into the public/community health coursework of numerous undergraduate and graduate curricula. The Wheel serves as a model for practice in many state and local health departments and has been presented in Mexico, Norway, Namibia, Kazakhstan, Uzbekistan, Kyrgyzstan, and Japan. It has served as an organizing framework for inquiry for topics ranging from doctoral dissertations (Sheridan, 2006) to the epidemiology of the lousy head louse (Monsen and Keller, 2002). The Wheel's strength comes from the common language it affords public health nurses to discuss their work (Keller et al, 1998).

ASSUMPTIONS UNDERLYING THE INTERVENTION WHEEL

As with all conceptual frameworks and models, assumptions are made that help to explain the model or framework. The Intervention Wheel framework is based on 10 assumptions.

Assumption 1: Defining Public Health Nursing Practice

The Section of Public Health Nursing of the American Public Health Association defines public health nursing as “the practice of promoting and protecting the health of populations using knowledge from nursing, social, and public health science” (APHA, 2006). The operational definition developed in conjunction with the Intervention Wheel is in accord with this statement and its precepts but states it in a slightly different manner: “**Public health nursing** is the synthesis of the art and science of public health and nursing” (Minnesota Department of Health, 1999, revised 2004).

Assumption 2: Public Health Nursing Practice Focuses on Populations

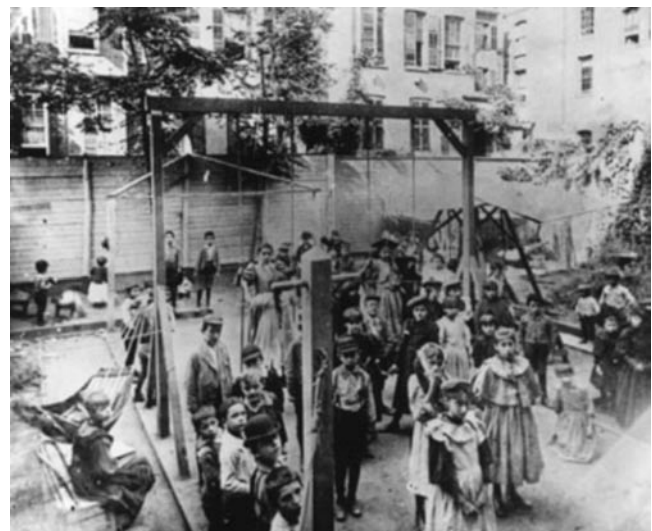
The focus on populations as opposed to individuals is a key characteristic that differentiates public health nursing from other areas of nursing practice. A **population** is a collection of individuals who have one or more personal or environmental characteristics in common (Williams and Highriter, 1978). Populations may be understood as two categories. A **population at risk** is a population with a common identified risk factor or risk exposure that poses a threat to health. For example, all adults who are overweight and hypertensive constitute a population at risk for cardiovascular disease. All under-immunized or un-immunized children are a population at risk for contracting vaccine-preventable diseases. A **population of interest** is a population that is essentially healthy but that could improve factors that promote or protect health. For instance, healthy adolescents are a population of interest that could benefit from social competency training. All first-time parents of newborns are a population of interest that could benefit from a public

health nursing home visit. Populations are not limited to only individuals who seek services or individuals who are poor or otherwise vulnerable.

Assumption 3: Public Health Nursing Practice Considers the Determinants of Health

Another key differentiating characteristic of public health nursing is its consideration of the **determinants of health**. *Healthy People 2010* describes the determinants of health, or those factors that influence health status throughout all stages of life, as personal behavior, biology, physical environment, and social environment (USDHHS, 2000). Factors related to the determinants of health include income and social status, social support networks, education and literacy, employment/working conditions, housing, transportation, personal health practices and coping skills, healthy child development, biology and genetic endowment, health services, gender, and culture. Addressing the determinants of health involves public health nurses in issues related to these factors.

DID YOU KNOW? *The practice of Lillian Wald, public health nursing's progenitor, offers plenty examples of understanding determinants of health. Besides the services of public health nurses, her Henry Street Settlement House offered numerous social programs, including drama and theater productions, vocational training for boys and girls, three kindergartens, summer camps for children, two large scholarship funds, study rooms staffed with people to help children with their homework, playgrounds for children, a neighborhood library, and classes in carpentry, sewing, art, diction, music, and dance. The photo below shows the settlement house's backyard playground.*



Settlement house.

From Jewish Women's Archive: This day in history, March 10, 1893, Resource information for backyard of a Henry Street branch. Retrieved 6/17/06 from <http://www.jwa.org/archive/jsp/gresInfo.jsp?resID=297>.

Assumption 4: Public Health Nursing Practice Is Guided by Priorities Identified Through an Assessment of Community Health

In the context of the Intervention Wheel, a **community** is defined as “a social network of interacting individuals, usually concentrated in a defined territory” (Johnston, 2000).

Assessing the health status of the populations that comprise the community requires ongoing collection and analysis of relevant quantitative and qualitative data. Community assessment includes a comprehensive assessment of the determinants of health. Data analysis identifies deviations from expected or acceptable rates of disease, injury, death, or disability as well as risk and protective factors. Community assessment generally results in a lengthy list of community problems and issues. However, communities rarely possess sufficient resources to address the entire list. This gap between needs and resources necessitates a systematic priority-setting process. Although data analysis provides direction for priority setting, the community’s beliefs, attitudes, and opinions as well as the community’s readiness for change must be assessed (Keller et al, 2002). Public health nurses, with their extensive knowledge about the communities in which they work, provide important information and insights during the priority-setting process.

DID YOU KNOW? *For a public health nurse employed by a unit of government, such as a city, county, or state public health department, a “community” is almost always a geopolitical unit. Accountability is to a board of elected officials and ultimately to the constituents who elect them. For public health nurses employed by visiting nurse associations, block nurse programs, and other non-governmental population-based entities, a “community” is usually assigned by the agency. In these cases, accountability typically is to an appointed board of directors.*

Assumption 5: Public Health Nursing Practice Emphasizes Prevention

Prevention is “anticipatory action taken to prevent the occurrence of an event or to minimize its effect after it has occurred” (Turnock, 2004). Prevention is customarily described as a continuum moving from primary to tertiary prevention (Leavell and Clark, 1965; Novick and Mays, 2001; Turnock, 2004). The Levels of Prevention box provides definitions and examples of the levels of prevention.

A hallmark of public health nursing practice is a focus on health promotion and disease prevention, emphasizing primary prevention whenever possible. While not every event is preventable, every event has a preventable component.

Assumption 6: Public Health Nurses Intervene at All Levels of Practice

To improve population health, the work of public health nurses is often carried out sequentially and/or simultaneously at three levels of prevention (see Figure 9-2).

LEVELS OF PREVENTION

Examples of Interventions Applied to Definition of Prevention

PRIMARY PREVENTION

Both promotes health and protects against threats to health. It keeps problems from occurring in the first place. It promotes resiliency and protective factors or reduces susceptibility and exposure to risk factors. Primary prevention is implemented before a problem develops. It targets essentially well populations. Immunizing against a vaccine-preventable disease is an example of reducing susceptibility; building developmental assets in young persons to promote health is an example of promoting resiliency and protective factors.

SECONDARY PREVENTION

Detects and treats problems in their early stages. It keeps problems from causing serious or long-term effects or from affecting others. It identifies risk or hazards and modifies, removes, or treats them before a problem becomes more serious. Secondary prevention is implemented after a problem has begun, but before signs and symptoms appear. It targets populations that have risk factors in common. Programs that screen populations for hypertension, obesity, hyperglycemia, hypercholesterolemia, and other chronic disease risk factors are examples of secondary prevention.

TERTIARY PREVENTION

Limits further negative effects from a problem. It keeps existing problems from getting worse. It alleviates the effects of disease and injury and restores individuals to their optimal level of functioning. Tertiary prevention is implemented after a disease or injury has occurred. It targets populations who have experienced disease or injury. Provision of directly observed therapy (DOT) to clients with active tuberculosis to ensure compliance with a medication regimen is an example of tertiary prevention.

From Minnesota Department of Health/Office of Public Health Practice: *Public health interventions: applications for public health nursing*, 2001, p 4. Accessed at www.health.state.mn.us/divs/cfh/ophp/resources/docs/phinterventions_manual2001.pdf.

Community-level practice changes community norms, community attitudes, community awareness, community practices, and community behaviors. It is directed toward entire populations within the community or occasionally toward populations at risk or populations of interest. An example of community-level practice is a social marketing campaign to promote a community norm that serving alcohol to under-aged youth at high school graduation parties is unacceptable. This is a community-level primary prevention strategy.

Systems-level practice changes organizations, policies, laws, and power structures within communities. The focus is on the systems that impact health, not directly on individu-

als and communities. Conducting compliance checks to ensure that bars and liquor stores do not serve minors or sell to individuals who supply alcohol to minors is an example of a systems-level secondary prevention strategy practice.

Individual-level practice changes knowledge, attitudes, beliefs, practices, and behaviors of individuals. This practice level is directed at individuals, alone or as part of a family, class, or group. Even though families, classes, and groups are comprised of more than one individual, the focus is still on individual change. Teaching effective refusal skills to groups of adolescents is an example of individual secondary prevention strategy level of practice.

Assumption 7: Public Health Nursing Practice Uses the Nursing Process at All Levels of Practice

Although the components of the nursing process (assessment, diagnosis, planning, implementation, and evaluation) are integral to all nursing practice, public health nurses must customize the process to the three levels of practice. Table 9-1 outlines the nursing process at the community, systems, and individual/family levels of practice.

Assumption 8: Public Health Nursing Practice Uses a Common Set of Interventions Regardless of Practice Setting

Interventions are “actions taken on behalf of communities, systems, individuals, and families to improve or protect health status” (ANA, 2003). The Intervention Wheel encompasses 17 interventions: surveillance, disease and other health investigation, outreach, screening, case finding, referral and follow-up, case management, delegated functions, health teaching, consultation, counseling, collaboration, coalition building, community organizing, advocacy, social marketing, and policy development and enforcement.

The interventions are grouped with related interventions; these **wedges** are color coordinated to make them more recognizable (Figure 9-3, *A*). For instance, the five interventions in the *red wedge* are frequently implemented in conjunction with one another. Surveillance is often paired with disease and health event investigation, even though either can be implemented independently. Screening frequently follows either surveillance or disease and health event investigation and is often preceded by outreach activities in order to maximize the number of those at risk who actually get screened. Most often, screening leads to case finding, but this intervention can also be carried out independently. The *green wedge* consists of referral and follow-up, case management, and delegated functions—three interventions that, in practice, are often implemented together (Figure 9-3, *B*). Similarly, health teaching, counseling, and consultation—the *blue wedge*—are more similar than they are different; health teaching and counseling are especially often paired (Figure 9-3, *C*). The interventions in the *orange wedge*—collaboration, coalition building, and community organizing—while distinct, are grouped together because they are all types of collective action and are most often carried out at systems

or community levels of practice (Figure 9-3, *D*). Similarly, advocacy, social marketing, and policy development and enforcement—the *yellow wedge*—are often interrelated when implemented (Figure 9-3, *E*). In fact, advocacy is often viewed as a precursor to policy development; social marketing is seen by some as a method of carrying out advocacy.

The interventions on the right side of the Wheel (i.e., the red, green, and blue wedges) are most commonly used by public health nurses who focus their work more on individuals, families, classes, and groups and to a lesser extent on work with systems and communities. The orange and yellow wedges, on the other hand, are more commonly used by public health nurses who focus their work on effecting systems and communities. However, a public health nurse may use any or all of the interventions.

WHAT DO YOU THINK? *No single public health nurse is expected to perform every intervention at all three levels of practice. From a management perspective, however, it is useful to ensure that a public health workforce has the capacity to implement all 17 interventions at all 3 practice levels. How could management ensure that a health agency has this capacity?*

Assumption 9: Public Health Nursing Practice Contributes to the Achievement of the 10 Essential Services

Implementing the interventions ultimately contributes to the achievement of the 10 essential public health services (see Chapter 1). The 10 essential public health services describe *what* the public health system does to protect and promote the health of the public. Interventions are the means through which public health practitioners implement the 10 essential services. Interventions are the *how* of public health practice (Public Health Functions Steering Committee, 1995).

Assumption 10: Public Health Nursing Practice Is Grounded in a Set of Values and Beliefs

The Cornerstones of Public Health Nursing (Box 9-1) were developed as a companion document to the Intervention Wheel. The Wheel defines the “what and how” of public health nursing practice; the Cornerstones define the “why.” The Cornerstones synthesize foundational values and beliefs from both public health and nursing. They inspire, guide, direct, and challenge public health nursing practice.

USING THE INTERVENTION WHEEL IN PUBLIC HEALTH NURSING PRACTICE

The Wheel is a conceptual model. It was conceived as a common language or catalog of general actions used by public health nurses across all practice settings. When those actions are placed within the context of a set of associated assumptions or relations among concepts, the Intervention Wheel serves as a conceptual model for public health nursing practice (Fawcett, 2005). It creates a structure for identifying and documenting interventions performed by public

Text continued on p. 197

TABLE 9-1 Public Health Nursing Process

<i>Public Health Nursing Process</i>	<i>Systems Level</i>	<i>Community Level</i>	<i>Individual/Family Level</i>
Recruit additional partners.	Recruit additional partners (local, regional, state, national) from systems that are key to impacting and/or who have an interest in the health issue/problem.	Recruit community organizations, services, and citizens who are part of the community intervention that have an interest in this health issue/problem.	
Identify population of interest.	Identify those systems for which change is desired.	Identify the population of interest at risk for the problem.	Identify new and current clients in caseload who are at risk for the priority problem.
Establish relationship.	Begin/continue establishing relationship with system partners.	Begin/continue establishing relationship with community partners and population of interest.	Begin/continue establishing relationship with the family.
Assess priority.	Assess the impact and interrelationships of the various systems on the development and extent of the health issue/problem.	Assess the health issue/problem (demographics, health determinants, past and current efforts). Identify the particular strengths, health risks, and health influences of the population of interest	Identify the particular strengths, health risks, social supports, and other factors influencing the health of the family and each family member.
Elicit perceptions.	Develop a common consensus among system partners of the health issue/problem and the desired changes.	Elicit the population of interest's perception of their strengths, problems, and health influences.	Elicit family's perception of their strengths, problems, and other factors influencing their health.
Set goals.	In conjunction with system partners, develop system goals to be achieved.	In conjunction with the population of interest, negotiate and come to agreement on community-focused goals.	In conjunction with the family, negotiate and come to agreement on meaningful, achievable, measurable goals.
Select health status indicators.	Based on systems goals, select meaningful, measurable health status indicators that will be used to measure success.	Based on the refined community goal/problem, select meaningful, measurable health status indicators that will be used to measure success.	Select meaningful, measurable health status indicators that will be used to measure success.
Select interventions.	Select system-level interventions considering evidence of effectiveness, political support, acceptability to community, cost-effectiveness, legality, ethics, greatest potential for successful outcome, nonduplicative, levels of prevention.	Select community-level interventions considering evidence of effectiveness, acceptability to community, cost-effectiveness, legality, ethics, greatest potential for successful outcome, nonduplicative.	Select interventions considering evidence of effectiveness, acceptability to family, cost-effectiveness, legality, ethics, greatest potential for successful outcome.
Select intermediate outcome indicators.	Determine measurable, meaningful intermediate outcome indicators.	Determine measurable and meaningful intermediate outcome indicators.	Determine measurable, meaningful intermediate outcome indicators.

Determine strategy frequency and intensity.	Using best practices, determine intensity, sequencing, frequency of interventions.	Using best practices, determine intensity, sequencing, frequency of interventions.	Using best practices, determine intensity, sequencing, frequency of interventions.	Using best practices, determine intensity, sequencing, frequency of interventions.
Determine evaluation methods.	Determine evaluation methods for measuring process, intermediate, and outcome indicators.	Determine evaluation methods for measuring process, intermediate, and outcome indicators.	Determine evaluation methods for measuring process, intermediate, and outcome indicators.	Determine evaluation methods for measuring process, intermediate, and outcome indicators.
Implement interventions.	Implement the interventions.	Implement the interventions.	Implement the interventions.	Implement the interventions.
Regularly reassess interventions.	Regularly reassess the system's response to the interventions and modify plan as indicated.	Reassess the population of interest's response to the interventions on an ongoing basis and modify plan as indicated.	Reassess the population of interest's response to the interventions on an ongoing basis and modify plan as indicated.	Reassess and modify plan at each contact as necessary.
Adjust interventions.	Adjust the frequency and intensity of the interventions according to the needs and resources of the community.	Adjust the frequency and intensity of the interventions accordingly.	Adjust the frequency and intensity of the interventions accordingly.	Adjust the frequency and intensity of the interventions according to the needs and resources of the family.
Provide feedback.	Provide feedback to system's representatives.	Provide feedback to the population of interest and informal and formal organizational representatives.	Provide feedback to the population of interest and informal and formal organizational representatives.	Provide regular feedback to family on progress (or lack thereof) of client goals.
Collect evaluation.	Regularly and systematically collect evaluation information.	Regularly and systematically collect evaluation information.	Regularly and systematically collect evaluation information.	Regularly and systematically collect evaluation information.
Compare results to plan.	Compare actual results with planned indicators.	Compare actual results with planned indicators.	Compare actual results with planned indicators.	Compare actual results with planned indicators.
Identify differences.	Identify and analyze differences in those systems that achieved outcomes compared to those that did not.	Identify and analyze differences in those in the population of interest who achieved outcomes compared to those who did not.	Identify and analyze differences in those who achieved outcomes compared to those who did not.	Identify and analyze differences in services received by families who achieved outcomes compared to those who did not.
Apply results to practice.	Apply results to identify needed system changes. Depending on readiness of the system to accept the results, present results to decision makers and the general population.	Apply results to modify community interventions. Present results to community for policy considerations as appropriate.	Apply results to modify community interventions. Present results to community for policy considerations as appropriate.	Report results to supervisor and other service providers as appropriate. Apply results to personal practice and agency for policy considerations as appropriate.

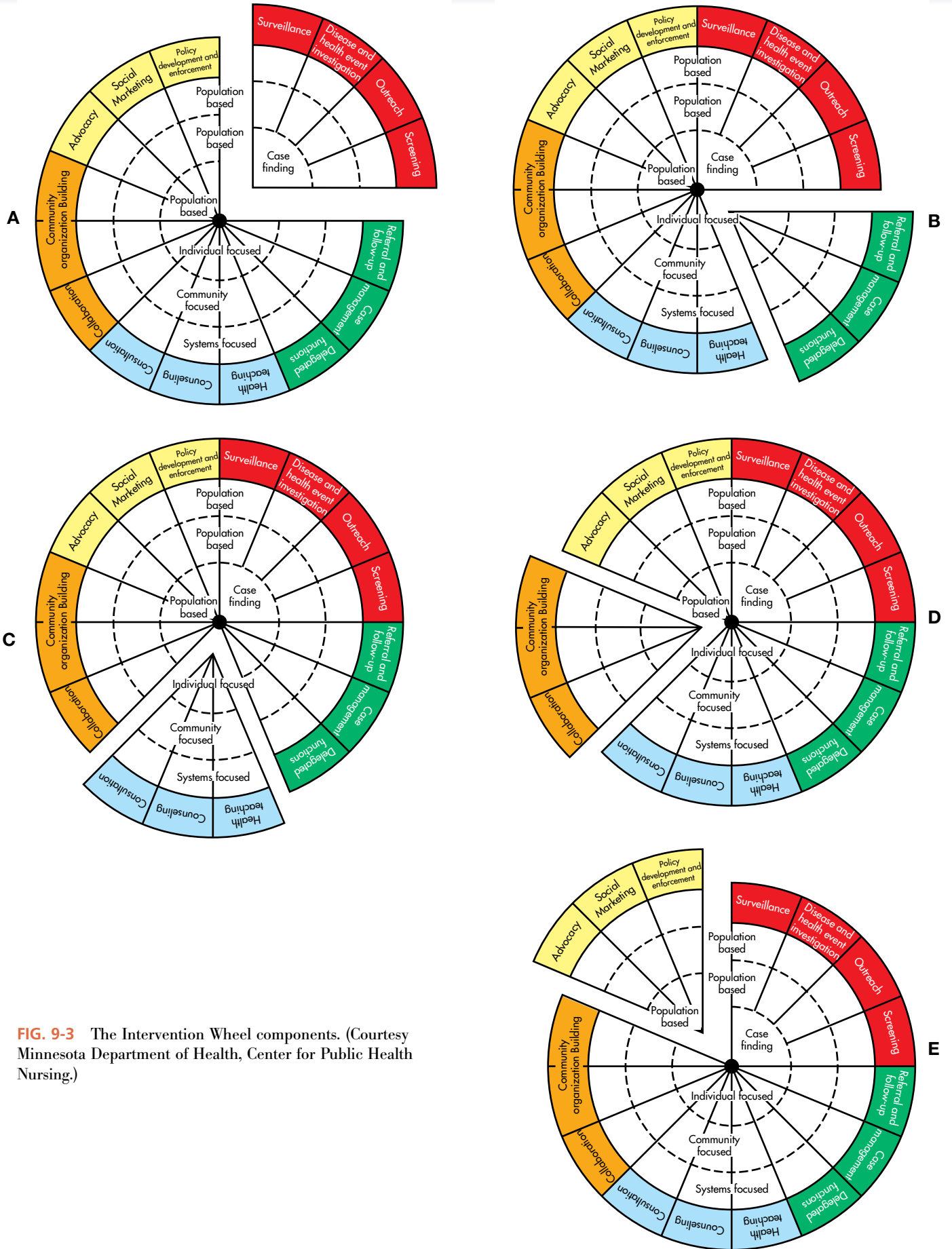


FIG. 9-3 The Intervention Wheel components. (Courtesy Minnesota Department of Health, Center for Public Health Nursing.)

BOX 9-1 Cornerstones of Public Health Nursing

PUBLIC HEALTH NURSING PRACTICE:

- Focuses on the health of entire populations
- Reflects community priorities and needs
- Establishes caring relationships with the communities, families, individuals, and systems that comprise the populations PHNs serve
- Grounded in social justice, compassion, sensitivity to diversity, and respect for the worth of all people, especially the vulnerable
- Encompasses the mental, physical, emotional, social, spiritual, and environmental aspects of health
- Promotes health through strategies driven by epidemiologic evidence
- Collaborates with community resources to achieve those strategies, but can and will work alone if necessary
- Derives its authority for independent action from the Nurse Practice Act

Cornerstones From Public Health

Population-based/
focused
Grounded in social
justice
Focus on greater good
Focus on health
promotion and
disease prevention
Does what others
cannot or will not
Driven by the science
of epidemiology
Organizes community
resources

Cornerstones From Nursing

Relationship-based
Grounded in an ethic
of caring
Sensitivity to diversity
Holistic focus
Respect for the worth
of all
Independent practice
Long-term commitment
to the community

health nurses and captures the nature of their work. The Intervention Wheel provides a framework, a way of thinking about public health nursing practice. The *Scope and Standards of Practice* of public health nursing includes the Intervention Wheel as one of several public health nursing frameworks used in practice today (Quad Council, 2005).

COMPONENTS OF THE MODEL

As depicted in Figure 9-1, on p. 189, the model has 3 components: a population basis, 3 levels of practice, and 17 interventions.

Component 1: The Model Is Population Based

The upper portion of the Intervention Wheel clearly illustrates that all levels of practice (community, systems, and individual/family) are population-based. Public health nursing practice is population-focused. It identifies populations of interest or populations at risk through an assessment of community health status and an assignment of priorities.

DID YOU KNOW? Are services to individuals and families population-based?

Services to individuals and families are population-based only if they meet the following criteria: (1) Individuals receive services because they are members of an identified population. (2) Services to individuals clearly contribute to improving the overall health status of the identified population.

The 2004 community health assessment completed by Dakota County (Minnesota), for example, identified 16 priority problems (Dakota County Public Health Department, 2004). One priority problem was an unacceptable rate of infants born with poor outcomes in the county. Poor outcomes included infants dying before their first birthday, those born weighing under 5.5 pounds, and those born before 37 weeks of gestation. The population at risk was identified as pregnant women who used alcohol, tobacco, or illegal substances during pregnancy. Additional risk factors included unintended pregnancy, multiple births, inadequate maternal nutrition, domestic violence, poverty, inadequate housing, language barriers, and inadequate access to resources. In 2004 the total number of live births in Dakota County was 5537. Sixteen full-time public health nurses provided services to 3496, or 63%, of pregnant and parenting women in the county (Dakota County Public Health Department, 2006).

DID YOU KNOW? Six percent of all Dakota County, Minnesota, babies born in 2000 weighed less than 5.5 pounds. The Dakota County Human Services Advisory Committee deemed these rates unacceptable when compared to the national target rate of 5%.

After instituting a program of public health nurse home visits to pregnant women at high risk for low birth weight infants, the rates among Dakota County women served by this program fell to 5.2% by 2004. The low birth weight rate in Minnesota in 2004 was 6.6%. The advisory committee considered Dakota's rate a "significant and excellent outcome given the high risk nature of the high-risk pregnant women [served]" (Dakota County Public Health Department, 2004).

The 2004 low birth weight rate for high-risk women served in Dakota County (Minnesota) was 5.2%, compared to an overall rate of 4.3% for the county and 4.8% for the state. This is "a significant and excellent outcome given the high risk nature of the pregnant women receiving home visits from public health nurses" (Dakota County Public Health Department, 2006). Public health nurses also decreased the percentage of high-risk pregnant women who decreased or quit smoking.

From Dakota County Public Health Department: Community health assessment: year 2004, pregnancy and birth. Retrieved 6/27/06 from www.co.dakota.mn.us/public_health/2004_Comm_Assess/Assess_PDFs/Preg_birth.pdf; and Dakota County Public Health Department: Department budget summary, 2006, p 21. Retrieved 6/27/06 from http://www.co.dakota.mn.us/public_health/pdf/PublicHealth2006Budget.pdf.

Component 2: The Model Encompasses Three Levels of Practice

Public health nursing practice intervenes with communities, the individuals and families that comprise communities, and the systems that impact the health of communities. Interventions at each level of practice contribute to the overall goal of improving population health. The work of public health nurses is accomplished at any or all levels. No one level of practice is more important than another; in fact, many public health priorities are addressed simultaneously at all three levels.

One public health priority that almost every public health nurse will encounter is the potential for the occurrence of vaccine-preventable disease because of delayed or missing immunizations. This is true regardless of the public health nurse's work setting (e.g., home, clinic, school, correctional facility, childcare center) or the population focus (e.g., maternal-child health, elderly chronic disease management, refugee health, disease prevention and control). Vaccine-preventable diseases, or diseases that may be prevented through recommended immunizations, include diphtheria, pertussis, tetanus, polio, mumps, measles, rubella, hepatitis A, hepatitis B, varicella, meningitis, *Haemophilus influenzae* type b (Hib), pneumococcal pneumonia, and influenza (Centers for Disease Control and Prevention, 2005).

This section illustrates strategies for reducing the occurrence of vaccine-preventable diseases at all three levels of practice. These are only selected examples of strategies to improve immunization rates; it is not an inclusive list.

Community Level of Practice

The goal of community-level practice is to increase the knowledge and attitude of the entire community about the importance of immunization and the consequences of not being immunized. These strategies will lead to an increase in the percentage of people who obtain recommended immunizations for themselves and their children.

At the community level, public health nurses work with health educators on public awareness campaigns. They perform outreach at schools, senior centers, county fairs, community festivals, and neighborhood laundromats.

Public health nurses conduct or coordinate audits of immunization records of all children in schools and childcare centers to identify children who are under-immunized. The public health nurses refer them to their medical providers or administer the immunizations through health department clinics.

When a confirmed case of a vaccine-preventable disease occurs, public health nurses work with epidemiologists to identify and locate everyone exposed to the index case. Public health nurses assess the immunization status of people who were exposed and ensure appropriate treatment.

In the event of an outbreak in the community, all public health nurses have a role and ethical responsibility to

take part in mass dispensing clinics. Mass dispensing clinics disperse immunizations or medications to specific populations at risk. For example, clinics may be held in response to an epidemic of mumps, a case of hepatitis A attributable to a foodborne exposure in a restaurant, or an influenza pandemic in the general population.

Systems Level of Practice

The goal of systems-level practice is to change the laws, policies, and practices that influence immunization rates, such as promoting population-based immunization registries and improving clinic and provider practices.

Public health nurses work with schools, clinics, health plans, and parents to develop population-based immunization registries. Registries, known officially by the Centers for Disease Control and Prevention as "Immunization Information Systems," combine immunization information from different sources into a single electronic record. A registry provides official immunization records for schools, day-care centers, health departments, and clinics. Registries track immunizations and remind families when an immunization is due or has been missed.

Public health nurses conduct audits of records in clinics that participate in the federal vaccine program. Public health nurses ascertain if a clinic is following recommended immunization standards for vaccine handling and storage, documentation, and adherence to best practices. Public health nurses also provide feedback and guidance to clinicians and office staff for quality improvement.

Public health nurses also work with health care providers in the community to ensure that providers accurately report vaccine-preventable diseases as legally required by state statute.

Individual/Family Level of Practice

The goal of individual/family-level strategies is to identify individuals who are not appropriately immunized, identify the barriers to immunization, and ensure that the individual's immunizations are brought up to date.

At the individual level of practice, public health nurses conduct health department immunization clinics. Unlike mass dispensing clinics, immunization clinics are generally available to anyone who needs an immunization, and do not target a specific population. These clinics often provide an important service to individuals without access to affordable health care.

Public health nurses use the registry to identify children with delayed or missing immunizations. They contact families by phone or through a home visit. The public health nurses assess for barriers and consult with the family to develop a plan to obtain immunizations either through a medical clinic or from a health department clinic. The public health nurse will follow-up at a later date to ensure that the child was actually immunized.

Public health nurses routinely assess the immunization status for clients in all public health programs, such as well-child clinics, family planning clinics, maternal-child

health home visits, or case management of elderly and disabled populations, and ensure that immunizations are up-to-date.

Component 3: The Model Identifies and Defines 17 Public Health Interventions

The Intervention Wheel encompasses 17 interventions: surveillance, disease and other health investigation, outreach, screening, case finding, referral and follow-up, case management, delegated functions, health teaching, consultation, counseling, collaboration, coalition building, community organizing, advocacy, social marketing, and policy development and enforcement.

All interventions, except case finding, coalition building, and community organizing, are applicable at all three levels of practice. Community organizing and coalition building cannot occur at the individual level. Case finding is the individual level of surveillance, disease and other health event investigation, outreach, and screening. Altogether, a public health nurse selects from among 43 different intervention-level actions.

Table 9-2 provides examples of the intervention at the 3 levels of practice for each of the 17 interventions.

- **Surveillance** describes and monitors health events through ongoing and systematic collection, analysis, and interpretation of health data for the purpose of planning, implementing, and evaluating public health interventions (adapted from *Mortality and Morbidity Weekly Review*, 1988).
- **Disease and other health event investigation** systematically gathers and analyzes data regarding threats to the health of populations, ascertains the source of the threat, identifies cases and others at risk, and determines control measures.
- **Outreach** locates populations of interest or populations at risk and provides information about the nature of the concern, what can be done about it, and how services can be obtained.
- **Screening** identifies individuals with unrecognized health risk factors or asymptomatic disease conditions in populations (Box 9-2).
- **Case finding** locates individuals and families with identified risk factors and connects them with resources.
- **Referral and follow-up** assists individuals, families, groups, organizations, and/or communities to identify and access necessary resources in order to prevent or resolve problems or concerns.
- **Case management** optimizes self-care capabilities of individuals and families and the capacity of systems and communities to coordinate and provide services.

DID YOU KNOW? Case management has long been a key service provided by public health nurses. The origins of this intervention are attributed to PHNs who staffed the settlement houses prevalent around the turn

of the century, such as Lillian Wald's Henry Street Settlement House in New York City. Wald and her colleagues provided direct patient care, as well as organized and mobilized family and community resources. Contemporary community-based case managers continue to address client needs and work to improve the quality of care provided to patients.

From Scott J, Boyd M: *Outcomes of community based nurse case management programs*. In Cohen EL, Cesta TG, editors: *Nursing case management: from essentials to advanced practice applications*, St Louis, Mo, 2005, pp 129-140, Mosby.

- **Delegated functions** are direct care tasks a registered professional nurse carries out under the authority of a health care practitioner as allowed by law. Delegated functions also include any direct care tasks a registered professional nurse entrusts to other appropriate personnel to perform.
- **Health teaching** communicates facts, ideas, and skills that change knowledge, attitudes, values, beliefs, behaviors, and practices of individuals, families, systems, and/or communities (Box 9-3).
- **Counseling** establishes an interpersonal relationship with a community, system, family, or individual intended to increase or enhance their capacity for self-care and coping. Counseling engages the community, system, family, or individual at an emotional level.

NURSING TIP Differentiating Counseling from Psychotherapy

Although PHNs do not provide psychotherapy, much of public health nursing deals with emotionally charged "client situations." These range from individuals attempting to cope with chronic pain, a couple grieving for the loss of their infant to AIDS, women involved with partners who batter them, or an elderly couple attempting to cope with the loss of all their possessions in a flood. Public health nursing also occurs at systems and community levels of practice. Examples of this are mediating a heated debate between providers competing for the same public contract to provide home health services or a PHN facilitating a community meeting on teen pregnancy prevention where the members are polarized around their beliefs. While counseling as practiced by a PHN should have a therapeutic outcome (that is, have a healing effect), it should not be confused with providing psychotherapy. Counseling is intended to clarify problems, relieve tension, facilitate problem solving, encourage friendship and companionship, enhance understanding, encourage insight, and relieve stress.

From Corey G: *Theory & practice of counseling & psychotherapy*, ed 7, Stamford, Conn, 2005, Brooks Cole.

- **Consultation** seeks information and generates optional solutions to perceived problems or issues through interactive problem solving with a community, system, family, or individual. The community, system, family, or

Text continued on p. 204

TABLE 9-2 Examples of 17 Interventions at Three Levels of Practice

<i>Wedges of the Wheel</i>	<i>Systems</i>	<i>Community</i>	<i>Individual</i>
SURVEILLANCE	Together with the mosquito control board and environmental health, a PHN used geographical information system software to map out areas where adult <i>Aedes triseriatus</i> mosquitoes (transmit <i>La Crosse encephalitis</i>) had been detected. The PHN notified homeowners about the spraying schedule to eliminate the mosquitoes and provided information about cleanup of probable breeding sites and disease symptoms.	PHNs implemented a program that tracks the growth and development of all newborns in the county. Parents are sent questionnaires at regular intervals that they complete and return to the public health office. PHNs screen the questionnaires for potential problems or delays and contact the families when further action is indicated.	Surveillance at the Individual Level is CASE FINDING (see Case Finding Intervention).
DISEASE AND OTHER HEALTH EVENT INVESTIGATION	A PHN worked with the state health department and the federal vaccine program to coordinate a response to cases of rubella in a migrant population. They trained outreach workers and private providers to ensure that foreign-born persons were referred to public health. The PHNs arranged for a local migrant health office to be a satellite vaccine provider site.	The lone PHN in a rural county health department investigated a physician's concern about cancer clusters by working with the high school: the English class designed a county-wide survey, the computer class compiled the results, and the math class analyzed the data and plotted them on a county map. Their report, which found no cancer clusters, was presented at a community meeting.	Disease and other health event investigation at the Individual Level is CASE FINDING (see Case Finding Intervention).
OUTREACH	State PHN consultants conducted focus group interviews with new moms that revealed the best ways to encourage women to participate in universally offered home visiting program.	A PHN worked with Hmong health care professionals to conduct culturally sensitive outreach for depression to the elderly at an annual Hmong health fair.	Outreach at the Individual Level is CASE FINDING (see Case Finding intervention).
SCREENING	A rural community of 15,000 experienced a dramatic increase in their gonorrhea rate and a change in the characteristics of clients: increased transience and a pattern of commuting back and forth from a large city. The health department worked with five surrounding counties to provide training for PHNs to improve skills in obtaining contact identification information.	PHNs worked with the physical education teachers to screen a high school population and give each student a profile of their health. This provided a baseline for the educational, nutritional, and physical activity lifestyle changes component of the program.	Screening at the Individual Level is CASE FINDING (see Case Finding Intervention).

Wedges of the Wheel

REFERRAL AND FOLLOW-UP

Systems

PHNs participated in a community effort to investigate why children that failed school-based vision screening did not receive the recommended follow-up. Their 22-point action plan included arranging for eye clinic weekend and evening appointments, sending letters to notify parents before screening occurred, and providing financial assistance information in the referral letter.

CASE MANAGEMENT

Public health nurses from health agencies representing 10 county health departments, medical clinics, a large health plan company, and the state health department worked together to provide coordinated prenatal care to improve birth outcomes. The group created an integrated prenatal care system that promotes early prenatal care, improves nutrition, and links women to services in the communities.

DELEGATED FUNCTIONS

PHNs worked with hospitals, clinics, and emergency responders to design a regional plan and administer smallpox vaccinations as a counter-terrorism measure. Hundreds of nurses were trained to be proficient in screening, vaccination, and exit interviewing.

HEALTH TEACHING

PHNs worked with the epidemiologist in their health department to develop “best practice” guidelines for lice treatment from the perspectives of the scientific literature and the practice community. Clinics, schools, and pharmacists use the new guidelines.

Community

PHNs in a rural health department focused their environmental work on referring people to the correct agency and then assuring that the conditions had been corrected. They received calls on concerns such as controlling rodents and cockroaches, septic tank problems, and peeling paint. Referrals were made to a variety of resources that ranged from city hall to furnace installers to their own health department.

PHNs provided case management for all frail elderly and disabled persons at risk for institutionalization but deemed eligible for community placement. Case management maintained this vulnerable population in their home or community and ensured that their needs were met within the allotted amount of money that would otherwise be spent on hospitalization or nursing home care.

PHNs administered influenza immunizations at “drive thru” flu clinics held in a county highway garage. Residents received their assessment and flu shots in their vehicles. This unique access increased the numbers of immunizations in the community and was especially important to elderly residents with limited mobility.

PHNs participated in a campaign to teach communities to put babies on their backs to sleep, which prevents SIDS. It is vital that this effort reaches entire communities, not just parents.

Individual

A PHN received a referral on a mentally ill young man from a small town. He needed regular injections to prevent rehospitalization. Using investigative skills, the PHN located him at his regular “hangout” (where he only drank soda pop). She then worked with the local bar-keeper (while maintaining confidentiality) to set up regular appointment times.

A PHN coordinated the services of clinic providers, a WIC nutritionist, and a family health aide to provide ongoing support and appropriate parenting and feeding to a young mother who was overfeeding her infant. The PHN videotaped a feeding interaction assessment and obtained a high chair for the family through a nutrition program grant.

In a frontier territory, a rancher was exposed to rabies. The rancher lived 140 miles from the nearest health facility and had no health insurance. After he arranged to purchase immunoglobulin from the hospital, the PHN worked with the rancher and his physician to administer the rabies series at his ranch in a timely manner.

PHNs taught weekly prenatal and life skills classes to pregnant and parenting teens at an alternative high school program, which resulted in a repeat pregnancy rate significantly lower than the national average.

Continued

TABLE 9-2 Examples of 17 Interventions at Three Levels of Practice—cont'd

<i>Wedges of the Wheel</i>	<i>Systems</i>	<i>Community</i>	<i>Individual</i>
COUNSELING	PHNs partnered with a community family center to promote prenatal attachment for families who are isolated, have experienced previous pregnancy loss, or have other attachment issues. The project promoted attachment to the baby through the use of doulas, guided videotaping, nutrition counseling, and relaxation through music and imagery.	In response to multiple deaths within an American Indian community, a tribal health department worked with the community to design and implement a culturally appropriate grief and loss program.	“Never to have seen, but to have dreamed. Never to have held, but to have felt. Never to have known, but to have loved.” These are the words on a card that a PHN sent to mothers whose babies died at birth. The card was followed-up with a home visit for grief counseling and support.
CONSULTATION	After hearing about the risk for serious infectious disease for children in day care, PHN day-care consultants from eight local health departments developed a curriculum on handwashing for children. They obtained a grant to develop a video in several languages and widely distributed the handwashing materials.	An employer contacted public health nurses with a concern about prenatal health of their workers and their rising insurance rates. The PHN director worked with the factory management to identify the factors contributing to the problem and helped the employer plan an employee incentive program for behavior change.	A PHN/social worker team worked with frail elderly and their families to determine the appropriateness of nursing home placement versus home care alternatives and the level of care needed.
COLLABORATION	PHNs changed the way they had traditionally related to the 26 clinics in their community. They visited each clinic quarterly to provide information, answer questions, promote disease prevention programs, and resolve problems together, such as vaccine shortages. This relationship benefited the public health department and the clinics.	A PHN worked with a community action team to develop community assets (a caring, encouraging environment for youth and valuing of youth by adults) through strategies such as a mentoring program for at-risk elementary school students and a revitalized orientation program for ninth graders entering high school.	Over a period of years, a PHN was able to establish a trusting relationship with a Haitian client with HIV. Through her transactions with this client, the PHN came to understand her own values differently and honored his spiritual values and practices.
COALITION BUILDING	In a small rural county with a high proportion of elderly, a public health department formed a coalition composed of ambulance directors, hospitals, and the county sheriff. They received a grant to address the issues of insufficient funding, the need for more advanced communication equipment, and inadequate staffing.	PHNs facilitated the development of a parent coalition in ENABL (Education Now and Babies Later). The parent coalition influenced the community's attitudes and behaviors about delaying sexual activity and promoting life goals.	Coalition building is not implemented at the individual level of practice.
COMMUNITY ORGANIZING	A health department mobilized nearly 30 community agencies that were all stakeholders in the direct care worker shortage in the community. The group formed action teams that educated legislators, kept the shortage visible to the public, and generated strategies to assuage the shortage of direct care workers.	PHNs operated a community center called the <i>wad-is-swan</i> , or “nest,” where young mothers could exchange points they earn for maintaining a healthy lifestyle for diapers, infant clothing, toys, and other supplies. They promoted traditional Ojibwe nurturing child-rearing methods and provided an annual “welcoming feast” for all infants born within a year, which included a “baby parade” in the community.	Community organizing is not implemented at the individual level of practice.

ADVOCACY

Club 100 was a voluntary organization of community women associated with a visiting nurse association. The club provided “gifts” such as high chairs, strollers, diapers, books, toys, and tools to support family self-sufficiency. It personally connected community women with PHNs who identified families’ needs and delivered the gifts.

A population of predominantly Latino and non-English-speaking people lived in an apartment complex with deplorable living conditions for which they were being overcharged. PHNs who served this population worked with interpreters to convince clients to connect with legal services as a group, which resulted in improved conditions and refunding of some money.

PHNs staffed psychiatric clinics at a health care clinic in a large shelter. They encouraged and arranged for homeless people to receive treatment for their mental illness, stay on their treatment plan, and become connected with community resources.

SOCIAL MARKETING

A partnership of health departments, managed care organizations, pharmaceutical companies, health care insurers, and others sought to decrease unnecessary antimicrobial use and reduce the spread of antimicrobial resistance. “Moxie Cillin” and “Annie Biotic” were mascots that appeared on pamphlets, posters, stickers, and in person. They urged discontinuation of inappropriate requesting and prescribing of antibiotics.

PHNs worked with committees of teens and adults to help youth incorporate healthy diet and exercise into their lifestyle. The Toilet Paper Document, a monthly nutrition and health tip sheet, was displayed in 152 community bathrooms. The high school students also produced a videotape for a health fair that featured community members participating in exercise and healthy eating.

PHNs routinely conducted home safety checks with pregnant and parenting families to prevent childhood injuries. As an incentive, they distributed safety kits that included items to child-proof a home. In a situation that may have been considered intrusive to families (checking contents in cupboards and water temperatures), the kits increased the number of families who were receptive to home safety checks.

POLICY DEVELOPMENT AND ENFORCEMENT

PHNs and health educators partnered with the law enforcement community to establish ordinances prohibiting the sale of tobacco to underage youth, and then organized youth to conduct compliance checks, in which underage youth attempt to purchase cigarettes.

A PHN investigated a public health complaint about a fly problem originating from the manure pit of a farm that housed million of chickens. The PHN inspected the manure pits and found masses of maggots. After issuing a public health nuisance, the PHN successfully worked with the business owners to find a solution that involved the drying of manure to prevent the maggots from surviving.

A PHN received a referral regarding the safety of an 80-year-old woman living alone on a littered farm site; she lived with 18 cats in a house without heat that was ankle-deep with cans, clothes, and cat feces. The PHN initiated a vulnerable adult evaluation that resulted in a “not sufficiently vulnerable” finding under state statute. Through repeated contacts, the PHN was able to establish a trusting relationship and a referral for care to a physician. However, she was not successful in changing the woman’s living situation.

individual selects and acts on the option best meeting the circumstances.

- **Collaboration** commits two or more persons or organizations to achieve a common goal through enhancing the capacity of one or more of the members to promote and protect health (Henneman et al, 1995).
- **Coalition building** promotes and develops alliances among organizations or constituencies for a common purpose. It builds linkages, solves problems, and/or enhances local leadership to address health concerns.
- **Community organizing** helps community groups to identify common problems or goals, mobilize resources, and develop and implement strategies for reaching the goals they collectively have set (Minkler, 1997).

DID YOU KNOW? *The Orange Wedge interventions are all examples of collective action, or groups of people or organizations coming together for mutual gain or problem solving. Collective action is part of the American democratic tradition. Alexis de Tocqueville, writing in Democracy in America in 1840, notes: "Americans are a peculiar people. If, in a local community, a citizen becomes aware of a human need that is not met, he thereupon discusses the situation with his neighbors. Suddenly a committee comes into existence. The committee thereupon begins to operate on behalf of the need, and a new common function is established. It is like watching a miracle."*

- **Advocacy** pleads someone's cause or acts on someone's behalf, with a focus on developing the capacity of the community, system, individual, or family to plead their own cause or act on their own behalf.
- **Social marketing** uses commercial marketing principles and technologies for programs designed to influence the knowledge, attitudes, values, beliefs, behaviors, and practices of the population of interest.

BOX 9-2 Screening

Three types of screening are described in the literature:

1. **Mass:** A process to screen the general population for a single risk (such as cholesterol screening in a shopping mall) or for multiple health risks (such as health fairs at worksites or health appraisal surveys at county fairs)
2. **Targeted:** A process to promote screening to a discrete subgroup within the population (such as those at risk for HIV infection)
3. **Periodic:** A process to screen a discrete, but healthy subgroup of the population on a regular basis, over time, for predictable risks or problems; examples include breast and cervical cancer screening among age-appropriate women, well-child screening, and the follow-along associated with early childhood development programs

NURSING TIP Social Marketing

Social marketing is a relatively new intervention, first introduced in 1971. In many respects it is similar to other, longer-established interventions. For instance, social marketing is like health teaching in that both are implemented to change attitude and behavior. In fact, some would argue that social marketing is a special application of health teaching. In public health nursing, health teaching is probably more frequently used at the individual/family and systems (that is, provider education) practice levels. Social marketing, on the other hand, is more frequently used at the community level of practice. At this level, social marketing overlaps with advocacy at the community level, where it is often implemented as media advocacy. In this role, it has the potential to be implemented simultaneously with any other intervention using a mass media strategy.

From Maibach EW, Rothschild ML, Novelli WD: Social marketing. In Glanz K, Rimer BK, Lewis FM, editors: Health behavior and health education: theory, research, and practice, San Francisco, 2002, pp 437-461, Jossey-Bass.

- **Policy development** places health issues on decision-makers' agendas, acquires a plan of resolution, and determines needed resources. Policy development results in laws, rules, regulations, ordinances, and policies. **Policy enforcement** compels others to comply with the laws, rules, regulations, ordinances, and policies created in conjunction with policy development.

In addition to the definition and examples, each intervention has basic steps for implementation at each of the three levels (i.e., community, systems, and individual/family) as well as a listing of best practices for each intervention. The

BOX 9-3 Health Teaching

Health teaching communicates facts, ideas, and skills that change knowledge, attitudes, values, beliefs, behaviors, practices, and skills of individuals, families, systems, and/or communities.

- Knowledge is familiarity, awareness, or understanding gained through experience or study.
- Attitude is a relatively constant feeling, predisposition, or set of beliefs directed toward an object, person, or situation, usually in judgment of something as good or bad, positive or negative.
- Value is a core guide to action.
- Belief is a statement or sense, declared or implied, intellectually and/or emotionally accepted as true by a person or group.
- Behavior is an action that has a specific frequency, duration, and purpose, whether conscious or unconscious.
- Practice is the act or process of doing something or the habitual or customary performance of an action.
- Skill is proficiency, facility, or dexterity that is acquired or developed through training or experience.

basic steps are intended as a guide for the novice public health nurse or the experienced public health nurse wishing to review his/her effectiveness. Box 9-4 describes the basic steps of the counseling intervention.

The best practices are provided as a resource for public health nurses seeking excellence in implementing the interventions. They were constructed by a panel of expert public health nursing educators and practitioners after a thorough analysis of the literature. Many practices of public health

nursing are either not researched or, if they are researched, not published. The process used to develop this model considered this limitation and met the challenge with the use of expert practitioners and educators. The best practices are a combination of research and other evidence from the literature and/or the collective wisdom of experts. Box 9-5 outlines an example of a set of best practices for the intervention of referral and follow-up, some supported by evidence and others supported by practice expertise.

BOX 9-4 Basic Steps for the Intervention of Counseling¹

Working alone or with others, PHNs . . .

1. Meet the "client"—the individual, family, system, or community.
2. Establish rapport by listening and attending to what the client is saying and how it is said.²
3. Explore the issues.
4. Gain the client's perception of the nature and cause of the identified problem or issue and what needs to change.³
5. Identify priorities.
6. Gain the client's perspective on the urgency or importance of the issues; negotiate the order in which they will be addressed.
7. Establish the emotional context.
8. Explore, with the client, emotional responses to the problem or issue.
9. Identify alternative solutions.
10. Establish, with the client, different ways to achieve the desired outcomes and anticipate what would have to change in order for this to happen.
11. Agree on a contract.
12. Negotiate, with the client, a plan for the nature, frequency, timing, and end point of the interactions.
13. Support the individual, family, system, or community through the change.
14. Provide reinforcement and continuing motivation to complete the change process.
15. Bring closure at the point the PHN and client mutually agree that the desired outcomes are achieved.

¹Complete version can found at http://www.health.state.mn.us/divs/cfh/ophp/resources/docs/phinterventions_manual2001.pdf.

²Modified from Burnard P: *Counseling: a guide to practice in nursing*, Oxford, England, 1992, Butterworth-Heinemann.

³Understanding the client's cultural or ethnic context is important to perception. For further information, please see Sue DW, Sue D: *Counseling the culturally different: theory and practice*, ed 3, New York, 1999, Wiley.

BOX 9-5 Best Practices for the Intervention of Referral and Follow-up

BEST PRACTICE

Successful implementation is increased when the . . .

- PHN respects the client's right to refuse a referral.
- PHN develops referrals that are timely, merited, practical, tailored to the client, client-controlled, and coordinated.
- Client is an active participant in the process and the PHN involves family members as appropriate.
- PHN establishes a relationship based on trust, respect, caring, and listening.
- PHN allows for client dependency in the client-PHN relationship until the client's self-care capacity sufficiently develops.
- PHN develops comprehensive, seamless, client-sensitive resources that routinely monitor their own systems for barriers.

EVIDENCE

- McGuire, Eigsti Gerber, Clemen-Stone, 1996 (expert opinion)
- Stanhope and Lancaster, 1984 (text)
- Will, 1977 (expert opinion)
- Wolff, 1962 (expert opinion)

EXPERT PANEL RECOMMENDATION

- McGuire, Eigsti Gerber, Clemen-Stone, 1996 (expert opinion)
- Stanhope and Lancaster, 1984 (text)
- Will, 1977 (expert opinion)
- Wolff, 1962 (expert opinion)

McGuire S, Eigsti Gerber D, Clemen-Stone S: Meeting the diverse needs of clients in the community: effective use of the referral process, *Nurs Outlook* 44(5):218-222, 1996; Stanhope M, Lancaster J: *Community health nursing: process and practice for promoting health*, St Louis, 1984, p 357, Mosby; Will M: Referral: a process, not a form, *Nursing* 77:44-55, 1977; Wolff I: Referral—a process and a skill, *Nurs Outlook* 10(4):253-262, 1962.

ADOPTION OF THE INTERVENTION WHEEL IN PRACTICE, EDUCATION, AND MANAGEMENT

The speed at which the Intervention Wheel was adopted may be attributed to the balance between its practice base and its evidence support. The Wheel has led to numerous innovations in practice and education since the original Intervention Wheel was first published in 1998 (Keller et al, 2004a) and highlighted in a three-part conference series broadcast on Minnesota's Public Health Training Network in 2000. The series "Competency Development in Population-based Public Health Nursing" was produced by the Minnesota Department of Health in conjunction with the Division of Nursing, the Health Resources and Services Administration (HRSA), and the Centers for Disease Control and Prevention, and has been viewed by thousands of public health nurses in all 50 states and several countries.

One example of agencies who have adopted the Wheel into their practice is the Los Angeles County Department of Health Services (Los Angeles County Department of Health Services, 2002; Avilla and Smith, 2003; Smith and Bazini-Barakat, 2003). They used the model to re-invigorate public health nursing practice for their 500 public health nurse generalists and specialists. Public health departments in Nebraska, Missouri, Minnesota, Illinois, Alaska, and Washington use the Intervention Wheel to orient new staff to population-based practice. Several local health departments specifically use the Wheel to orient interdisciplinary staff, newly hired nurses, physicians, social workers, health educators, and nursing students, because the Wheel provides them with a common frame of reference and language.

The Wisconsin Division of Public Health is using the Intervention Wheel as the basis for their Secure Public Health Electronic Record Environment (SPHERE), a Web-based reporting system for maternal-child health. Public health nurses in the Shiprock Service Unit of the Indian Health Service adapted the Intervention Wheel to reflect the Navajo culture. The Navajo Intervention Wheel (Figure 9-4) is presented as a Navajo basket and uses the traditional colors of the Navajo nation.

Numerous graduate and undergraduate schools of nursing throughout the United States have adopted the Intervention Wheel as a framework for teaching public health nursing practice. Colleges and universities from over 30 states have ordered products from the satellite broadcasts, including manuals, videos, and teaching kits. Educators use the Intervention Wheel to prepare the public health nursing workforce of the future. For example, public health nursing faculty at Bethel University, a private liberal arts college in St. Paul, Minnesota, require students in all settings to complete a community project that incorporates interventions at the community and/or systems levels. During their clinical experience, public health nursing students from Bethel University partici-

HEALTHY PEOPLE 2010

Objective

Focus area 23 includes 17 objectives to ensure an effective public health infrastructure. Objective 23-10 specifically describes the need for state and local health departments to provide continuing education and training to "develop competency in essential public health services for their employees." The Intervention Model is used by numerous state and local health departments to provide orientation and training on population-based practice.

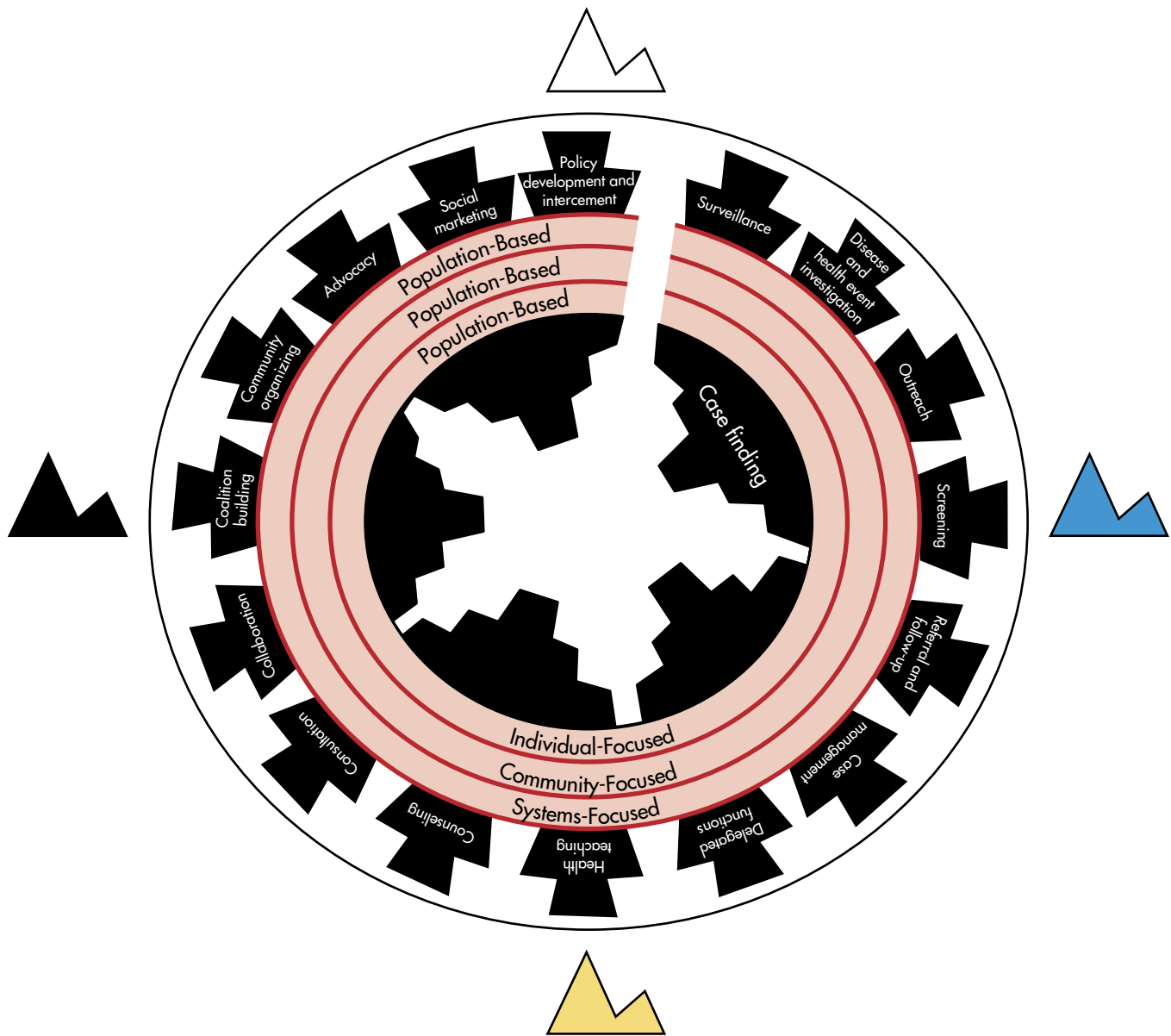
pated in a local health department's effort to survey and identify head lice control practices of providers and school nurses in the community (Monsen and Keller, 2002). Using information obtained from the survey, the health department developed a brochure for families and providers that was based on the epidemiology of the louse. This brochure is used nationwide (Washington County, MN, 2000).

THE CUTTING EDGE *Business processes are a set of related work tasks designed to produce a specific desired programmatic (business) result. Understanding the business processes of public health is the key to developing information systems that support the work of all public health departments. A collaborative project between the Public Health Informatics Institute and the National Association of City and County Health Officers (NACCHO) designed a business process model for local health departments (NACCHO, 2006). By analyzing its business processes, the workgroup identified the commonalities of what they did across all programs, for example, community assessment and immunization administration. The workgroup demonstrated the commonalities by crosswalking the business processes they identified with 4 major public health frameworks: the core functions of public health, the 10 essential services of public health, NACCHO's operational definition of a local health department, and the Intervention Wheel.*

National Association of City and County Health Officers: Taking care of business. Retrieved 6/22/06 from http://www.phii.org/Files/Taking_Care_of_Business.pdf.

APPLYING THE NURSING PROCESS IN PUBLIC HEALTH NURSING PRACTICE

Public health nurses use the nursing process at all levels of practice. Public health nurses must customize the components of the nursing process (assessment, diagnosis, planning, implementation, evaluation) to the three levels of practice. Table 9-2 outlines the nursing process at the community, systems, and individual/family levels of practice (see page 200).



The Navajo basket represents mother earth (the tan area), the black design represents the four sacred mountains that surround the Navajo Nation, and the red area represents the rainbow, which symbolizes harmony. In Navajo philosophy, one should not enclose oneself without an opening. Therefore, the basket has an opening, or doorway, to receive all that is good/positive, and allow all the bad/negative to exit.

Neva Kayaani

FIG. 9-4 Navajo Wheel. (Courtesy Shiprock Service Unit, Shiprock, NM, Indian Health Service.)

APPLYING THE PROCESS TO AN INDIVIDUAL/FAMILY LEVEL

Community Assessment

During a health department's community assessment process, information on the health status of children was obtained from the following:

- Staff public health nurses who worked with families in clinics, schools, and homes
- Community partners who worked with families, including health care providers, mental health workers, social workers, and school personnel
- Preschool screening program data on the number of young children with developmental delays and problems for the past 5 years
- Data from the county social services department on the number of substantiated child maltreatment and neglect cases for the 5 years

Public health nurses participated in the community meeting that prioritized the long list of issues identified in the community assessment. One of the top community priorities that emerged was the following: *Increasing numbers of children at risk for delayed development, injury, and disease because of inadequate parenting by parents experiencing mental health problems.*

The community health plan developed a goal to decrease the number of children with delayed development, injury, and disease attributable to inadequate parenting. The local health department, with the support of community partners, decided they would address this priority through a home visiting strategy. Home visiting enhances a child's environment and increases the capacity of parents to behave appropriately. Although parental mental health problems are a major source of stress for children, this vulnerability can be tempered through support from others and a caring environment (Barnard et al, 1988).

Home visiting to families is an example of practice at the individual level because the interventions are delivered to families with the goal of changing parental knowledge, attitudes, practices, and behaviors.

Public Health Nursing Process: Assessment of a Family

A public health nurse received a referral on Johnny, age 3. He was the only child of Tiffany, a 19-year-old single mother with severe depression. Tiffany lived in an old rented house in the small town where she grew up. She had a boyfriend who was not Johnny's biological father. Tiffany survived on limited public assistance and occasional help from her mom.

The public health nurse (PHN) assessed the resilience, assets, and protective factors as well as the problems, deficits, and health risks of this family. The PHN also tried to elicit Tiffany's perception of her situation, which was difficult because of her depressed state. This step is important because

often a client's perception of their problems or strengths may not align with the PHN's professional assessment.

All public health nursing practice is relationship based, regardless of level of practice. An established trust relationship increases the likelihood of a successful outcome. One of the public health nurse's main priorities was to establish a trusting relationship with Tiffany. This was difficult because Tiffany was seldom out of bed when the PHN arrived, but the PHN persisted and eventually developed the relationship.

Public Health Nursing Process: Diagnosis

Diagnosis: *Increased risk for delayed development, injury, and disease because of inadequate parenting by a primary parent experiencing depression*

Population at risk: Young children who are being parented by a primary parent who is experiencing mental health problems

Prevention level: Secondary prevention, because the families have an identified risk

Public Health Nursing Process: Planning (Including Selection of Interventions)

Based on the assessment of this family, the public health nurse negotiated with Tiffany to establish meaningful, measurable, achievable **intermediate goals**. In families experiencing mental illness (actually, in most families), behavior change occurs in very small steps. For this family, client goals included the following outcomes:

- Tiffany will get out of bed at least 3 days in the week.
- Johnny will be dressed when the public health nurse arrives.
- Johnny will get to the bus on time 3 days in a row.
- The clutter will be cleaned off the steps.
- Tiffany will call to make a doctor's appointment for Johnny's well-child check.
- Tiffany will use "time outs" instead of spanking.
- Tiffany will read a story to Johnny twice a week. (Intermediate indicators at the individual level of practice are changes in an individual's knowledge, attitudes, motivation, beliefs, values, skills, practices, and behavior that lead to desired changes in health status.)

The public health nurse also selected meaningful, measurable **outcome health status indicators** to measure the impact of the interventions on population health. Examples include no signs or reports of child maltreatment; child regularly attends preschool; child receives well-child exams according to recommended schedule; child's immunizations are up-to-date; the family seeks medical care for acute illness as needed and does not seek medical care inappropriately; and child falls within normal limits on developmental tests.

The public health nurse selected the interventions, which included collaboration, case management, health

teaching, delegated functions, and referral and follow-up. In selecting these interventions, the public health nurse considered evidence of effectiveness, political support, acceptability to the family, cost-effectiveness, legality, ethics, greatest potential for successful outcome, nonduplication, and level of prevention.

Public Health Nursing Process: Implementation

The public health nurse determined the sequence and frequency of her home visits based on her assessment of each family. Some families received home visits once a week, some twice a week, and others twice a month. The public health nurse visited this family weekly in the beginning and then spaced the home visits farther apart. She used the following interventions:

Collaboration

The public health nurse identified and involved as many alternative caregivers in Johnny's care as possible, including Johnny's biological father, aunt and uncle, and grandparents as well as Tiffany's boyfriend.

Case Management

The public health nurse arranged childcare services and coordinated transportation for Johnny to spend significant portions of his day outside of the home.

Health Teaching

The public health nurse provided information on child growth and development, nutrition, immunizations, safety, medical and dental care, and discipline to Tiffany and the alternative caregivers.

Delegated Functions (Public Health Nurse to Paraprofessional)

The public health nurse placed a family health aide in the home to provide role modeling for Tiffany. As part of this intervention, the public health nurse monitored and supervised the aide.

Referral and Follow-up

Based on the assessment, the public health nurse referred Tiffany to community resources and services that included early childhood services, legal aid, food stamps, mental health counselors, and transportation.

Public Health Nursing Process: Evaluation

The public health nurse reassessed and modified her plan at each home visit. She provided regular feedback to Tiffany and the other caregivers on their progress. The public health nurse documented her results and compared them with the selected indicators. After 6 months of home visits, Tiffany got out of bed most days of the week but rarely got dressed. Tiffany was more successful in getting Johnny to the bus and to preschool. The family health aide helped Tiffany clean the clutter off the steps. Tiffany scheduled a doctor's appointment for Johnny's well-child visit but failed to get Johnny to the appointment. Tiffany was successful in learning to substitute "time outs" for spanking,

with the help of the family aide. Johnny exhibited no signs of child maltreatment. He attended preschool regularly. Johnny still was behind on his immunizations because of the missed appointment. All of Johnny's developmental tests were within normal limits.

The public health nurse reported her results to her supervisor during their regular supervisory meetings. The public health nurse also talked with other public health nurses who worked with similar families about common issues and best practices, and applied what she had learned to her practice.

APPLYING THE PUBLIC HEALTH NURSING PROCESS TO A SYSTEMS LEVEL OF PRACTICE SCENARIO

Health departments conduct assessments of community health status, a core function of public health, on an ongoing basis. The identification of some community problems emerges out of practice, rather than through a formal community assessment. This scenario is such an example.

Public Health Nursing Process: Assessment

For several years, public health nurses had been very concerned about the poor living conditions in an apartment complex in which many of their clients lived. The walls were moldy, the carpet was unclean and deteriorated, and closet doors had fallen off their runners and struck children living in the apartment. The public health nurses were suspect of the required cash payments that the manager required for repairs, extra security deposits, and increased rent after the birth of a baby.

Many of the tenants were undocumented Latinos and tried not to create problems. Most could not speak or read English well, and often signed lease agreements without taking note of damage or existing problems in the apartment and were therefore blamed for them. In addition, the manager blamed the tenants for the mold on the walls, implying that their cooking created too much humidity. Citing these "problems," the manager often gave bad references for the tenants, which made it difficult for them to move.

Over the years, the public health nurses had diligently worked with their clients to correct these problems, but with little success. When the public health nurses met with the manager to discuss the issues, he became angry. As a result, the manager had the public health nurses' cars towed whenever he saw them in the parking lot. The public health nurses also had sought help from city officials, but the officials had no legal recourse to remedy the situation.

Finally, several events occurred that spurred the public health nurses to action. One of the public health nurses found a nonfunctioning smoke detector in an apartment during a home safety check. The family reported that the

apartment manager had dismantled the smoke detector and left it that way. At the same time, another public health nurse was working with a family that was trying to move to a new, safer, cleaner apartment. The family had found a new apartment but could not move because the manager gave them a bad (though false) reference. The family no longer had a lease, but the manager said they could not move. The public health nurses realized that there were many complex legal issues related to the living conditions of their clients.

Public Health Nursing Process: Diagnosis

Diagnosis: *Families at risk of illness and injury because of hazardous housing and abuse of legal rights*

Population at risk: Families living in hazardous housing in an apartment complex

Prevention level: Secondary, because families are at risk for injury and illness

Public Health Nursing Process: Planning (Including Selection of Interventions)

At the systems level of practice, the goal is to change policies, laws, and structures. The public health nurses' goals were to enforce the tenants' legal rights and improve the living conditions in the apartment complex. Their plan was to seek advice from a housing advocate service and connect their clients with legal counsel. Before they could pursue this plan, the public health nurses consulted with their supervisor. Their supervisor supported their decision but also had to clear the plan with the health department director and the city manager.

The public health nurses selected their interventions, which included consultation, referral and follow-up, advocacy, policy development, and surveillance. In selecting these interventions, the public health nurses considered evidence of effectiveness, political support, acceptability to the family, cost-effectiveness, legality, ethics, greatest potential for successful outcome, nonduplication, and level of prevention.

Public Health Nursing Process: Implementation

The public health nurses worked with the tenants and the housing advocacy service to implement the following interventions:

Consultation

The public health nurses consulted with attorneys at a housing advocate service.

Referral and Follow-up

The attorneys informed the public health nurses that they needed to hear directly from the tenants in order to proceed. The public health nurses set up a meeting time between the tenants and the attorneys from the housing advocate service.

Advocacy

The public health nurses arranged for their public health interpreter to go door to door with an advocate from the housing service to invite tenants to the meet-

ing. They also arranged for the interpreter to attend the meeting to interpret each family's concerns. The public health nurses strongly encouraged all of the tenants to attend.

Policy Development

The public health nurses worked with the attorneys from the housing advocate service to develop the meeting agenda.

Surveillance

The public health nurses continued to conduct ongoing monitoring of living conditions in the apartment complex.

Public Health Nursing Process: Evaluation

Many of the tenants attended the meeting. As a result of the meeting, the attorney chose to have the rent paid to the court and put in escrow until a legal determination could be made. During this process the apartment owner became aware of these issues and dismissed the manager, who was discovered to have been acting fraudulently. A new manager was employed who worked to improve the living conditions of the apartments.

APPLYING THE PUBLIC HEALTH NURSING PROCESS TO A COMMUNITY LEVEL OF PRACTICE SCENARIO

NOTE: At the community level of practice, the community assessment, program planning, and evaluation process is the public health nursing process.

Community Assessment (Public Health Nursing Process: Assessment)

A health department contracted with the Search Institute to conduct a survey to measure the community's "Developmental Assets"—the Institute's term for the building blocks of healthy development that help young people grow up healthy, caring, and responsible. The community was very concerned about the results of the survey, which revealed that young people did not feel valued in the community, and that the community did not support youth in several important dimensions. These findings were substantiated by additional data on the health status of youth, including an analysis of data from the student health survey (a statewide survey that is repeated every 3 years).

Community Diagnosis (Public Health Nursing Process: Diagnosis)

Issue identified by community: *Increasing numbers of youth are at risk of alcohol, tobacco, and illicit drug use, depression/suicide, early sexual experiences, antisocial behavior, dropping out of school because of lack of meaningful engagement with the community*

Population of interest: All youth in the community

Level of prevention: Primary prevention/health promotion

Community Coalition Plan (Public Health Nursing Process: Planning, Including Selection of Interventions)

The community determined that this was an important issue and that they needed to form a coalition to address this issue. They asked the health department to lead the project, and a public health nurse was assigned to spearhead it. The public health nurse convened a coalition that included a social worker, several pastors, a student, parents of youth, representatives from youth organizations, a school counselor, a teacher, a local physician, a chemical health counselor, the school liaison officer, and the local newspaper editor. Based on research on the effectiveness of building on strengths and developing resiliency, the coalition decided to implement asset-building strategies.

The public health nurse led the coalition's development of meaningful, measurable, achievable intermediate indicators. Community-level intermediate indicators measure changes in community norms, attitudes, awareness, practices, and behavior. Based on Search research evidence, the coalition selected these intermediate community-level indicators:

- Schools will provide a caring, encouraging environment.
- Young persons will perceive that adults in the community place increased value on youth.
- Young persons will read for pleasure 3 or more hours per week.
- Young persons will spend 3 or more hours per week in lessons or practice in music, theater, or the arts.
- No stores will have policies prohibiting more than two young persons in a store at any one time.

The public health nurse also worked with the community coalition to select meaningful, measurable outcome health status indicators for evaluation of the project. Selected outcome indicators included level of developmental assets in subsequent Search surveys and indicators from the student survey on alcohol use, tobacco use, illicit drug use, sexual activity, and experience with violence.

The public health nurse worked with the coalition to select its interventions, which included counseling, outreach, social marketing, collaboration, and advocacy. In selecting these interventions, the coalition considered evidence of effectiveness, political support, acceptability to the family, cost-effectiveness, legality, ethics, greatest potential for successful outcome, nonduplication, and level of prevention.

Coalition Implementation (Public Health Nursing Process: Implementation)

The public health nurse worked with the coalition and the community on these asset-building strategies:

1. **Counseling:** The coalition established mentor programs, pairing high school students with a community member with similar interests and younger students with high school students.
2. **Outreach:** The coalition provided information on the 40 assets and the community effort to increase youth assets through the following:
 - a. Posters in schools, businesses, and offices
 - b. Paper placemats for community events and celebrations
 - c. Ads in student planners, school calendars, student phone books, and newspapers
3. **Health teaching:** The coalition provided presentations on the importance of community asset building at high school parent orientations and service organization meetings (e.g., Rotary club, Lions club, chamber of commerce).
4. **Social marketing:** The coalition coordinated an incentive program that provided a pizza party for students with perfect school attendance for the quarter.
5. **Collaboration:** The coalition worked with their area art council to sponsor class projects that created school and community murals, which were very popular with the students! They also arranged for local authors to participate in book readings and signings that counted as student credit.
6. **Advocacy:** Coalition representatives met with the chamber of commerce to request that stores remove policies prohibiting the number of youth in a store.

Coalition Evaluation (Public Health Nursing Process: Evaluation)

A subsequent survey demonstrated an increased level of developmental assets, including youth perception of their community and their school as caring, encouraging environments. All the stores in the community removed signs prohibiting more than two young persons in the store. Many students participated in the book program. Students created several murals in the school and the community, including a mosaic made of glass. The levels of alcohol use, tobacco use, illicit drug use, sexual activity, and experience with violence will be monitored over time through future student health surveys.

CHAPTER REVIEW

PRACTICE APPLICATION

Outreach locates populations of interest or populations at risk and provides information about the nature of the concern, what can be done about it, and how services can be obtained. Outreach activities may be directed at whole communities, at targeted populations within those communities, and/or at systems that impact the community's health. Outreach success is determined by the proportion of those considered at risk that receive the information and act on it.

The chance of a woman under the age of 30 developing breast cancer is 1 in 1985. From ages 30 to 39, a woman's chance of developing breast cancer is 1 in 229; from ages 40 to 49, it is 1 in 68; from ages 50 to 59, it is 1 in 37; from ages 60 to 69, it is 1 in 26; and from ages 70 to 79, it is 1 in 24 (retrieved on 10/24/06 from <http://www.bcaction.org/Pages/GetInformed/Facts.html>).

A health system decided to offer free mammograms in recognition of National Breast Cancer Month. They sponsored a mobile mammography van at a large shopping mall every Saturday in October. The van offered mammograms to everyone, regardless of age. The health system advertised the service by placing windshield flyers on all the cars in the shopping mall parking lot. The van provided 180 mammograms, mostly to women in their thirties who had health insurance that covered preventive services.

- What is the population most at risk of breast cancer?
- Did the mammograms in the parking lot reach this population?
- What types of outreach would public health nurses conduct to reach the population at risk?

Answers are in the back of the book.

KEY POINTS

- In these times of change, the public health system is constantly challenged to keep focused on the health of populations.
- The Intervention Wheel is a conceptual framework that has proven to be a useful model in defining population-based practice and explaining how it contributes to improving population health.
- The Wheel depicts how public health improves population health through interventions with communities, the individuals and families that comprise communities, and the systems that impact the health of communities.
- The Wheel serves as a model for practice in many state and local health departments.
- The Wheel is based on 10 assumptions.

- The Intervention Wheel encompasses 17 interventions.
- Other public health members of the interdisciplinary team such as nutritionists, health educators, planners, physicians, and epidemiologists also use these interventions.
- Implementing the interventions ultimately contributes to the achievement of the 10 essential public health services.
- The *Cornerstones of Public Health Nursing* were developed as a companion document to the Intervention Wheel.
- The original version of the Wheel resulted from a grounded theory process carried out by public health nurse consultants at the Minnesota Department of Health in the mid 1990s.
- The interventions were subjected to an extensive review of supporting evidence in the literature.
- The Wheel is a conceptual model. It was conceived as a common language or catalog of general actions used by public health nurses across all practice settings.
- The Intervention Wheel serves as a conceptual model for public health nursing practice and creates a structure for identifying and documenting interventions performed by public health nurses and captures the nature of their work.
- The Wheel has 3 main components: a population basis, 3 levels of practice, and 17 interventions.
- The Wheel has led to numerous innovations in practice and education since the original Intervention Wheel was first published in 1998.
- Public health nurses in the Shiprock Service Unit of the Indian Health Service adapted the Intervention Wheel to reflect the Navajo culture.
- Numerous graduate and undergraduate schools of nursing throughout the United States have adopted the Intervention Wheel as a framework for teaching public health nursing practice.

CLINICAL DECISION-MAKING ACTIVITIES

- Describe the three components of the Intervention Wheel. How do the components relate to each other? Explain how you can apply them to your clinical practice.
- Go to Chapter 1 and reread the definitions of the core functions of public health practice and look at the 10 essential services. How does the Wheel address the core functions? How does it relate to the 10 essential services?
- Go to the Wheel website: www.health.state.mn.us/divs/cfh/ophp/resources/docs/wheel.pdf. Choose one of the 17 interventions to explore. Read about the recommended strategies to use when intervening with a client. Explain which level of practice and how you can apply the intervention. Give a concrete example.

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