



The Bigger Picture: Public Health and Its Impact on Healthcare Systems

Introduction

Public health is often discussed as a parallel system to healthcare, yet in reality it is the foundation upon which healthcare systems stand. While healthcare services focus largely on diagnosing and treating illness at the individual level, public health works upstream, shaping the conditions that determine whether populations become unwell in the first place.

When public health functions effectively, healthcare systems are more sustainable, equitable, and responsive. When it fails, hospitals, primary care services, and clinicians absorb the consequences.

Across high-income countries, healthcare systems are under growing pressure from ageing populations, increasing chronic disease burden, workforce shortages, and escalating costs. These pressures are not occurring in isolation. They are strongly influenced by social, economic, and environmental factors that sit squarely within the remit of public health. Understanding public health and its impact on healthcare systems is therefore essential for clinicians, educators, policymakers, and health service leaders.

This article examines the role of public health, the influence of social determinants of health, and the ways in which public health shapes healthcare system performance, equity, and sustainability, with a particular focus on implications for nursing practice and education.

Understanding Public Health in a Systems Context

Public health can be broadly defined as the organised efforts of society to prevent disease, promote health, and prolong life at a population level. Unlike clinical care,

which typically responds to illness once it has developed, public health focuses on prevention, early intervention, and risk reduction across communities and populations.

Key functions of public health include disease surveillance, health promotion, environmental health protection, vaccination programs, policy development, and addressing the social and structural factors that influence health outcomes. These functions operate across multiple sectors, including health, education, housing, transport, employment, and environmental planning.

From a systems perspective, public health acts as a demand-shaping force for healthcare services. Decisions made in public health policy and practice influence who presents to healthcare services, when they present, and with what level of complexity. As such, public health is not an adjunct to healthcare systems; it is a core determinant of their workload and effectiveness.

Social Determinants of Health: The Link Between Public Health and Healthcare Demand

The concept of social determinants of health has become central to modern public health discourse. Social determinants of health refer to the conditions in which people are born, grow, live, work, and age, as well as the broader systems that shape daily life, including economic policy, social norms, and political structures.

Evidence consistently demonstrates that these determinants exert a powerful influence on health outcomes, often outweighing the effects of medical care alone. Factors such as income security, education level, housing quality, food access, employment conditions, and social inclusion shape exposure to health risks and capacity to engage with healthcare services.



From a healthcare systems perspective, unmet social needs translate directly into increased service demand. Communities experiencing socioeconomic disadvantage have higher rates of preventable chronic disease, avoidable hospital admissions, and poorer health outcomes. This results in greater utilisation of emergency departments, longer hospital stays, and increased strain on already stretched services.

Public health strategies that address social determinants—such as improving housing standards, supporting early childhood development, enhancing health literacy, and promoting equitable access to preventive services—can significantly reduce downstream healthcare demand.

In this way, public health interventions function as structural supports for healthcare system sustainability.

Public Health and Healthcare System Performance

Healthcare system performance is often assessed using indicators such as access, quality, efficiency, and outcomes. Public health plays a critical role in shaping performance across all of these domains.

Prevention and Early Intervention

Preventive public health measures reduce the incidence and severity of disease, directly affecting healthcare system workload. Immunisation programs, smoking cessation initiatives, injury prevention strategies, and chronic disease prevention campaigns all contribute to lower rates of acute illness and long-term complications.

When prevention is prioritised, healthcare systems are better positioned to allocate resources to complex and unavoidable care needs rather than managing preventable conditions. Conversely, inadequate investment in prevention leads to rising demand that outpaces system capacity.

Efficiency and Resource Allocation

Public health interventions are widely recognised as cost-effective. By reducing disease burden over time, they lower expenditure associated with hospital admissions, long-term treatment, and disability support. However, these benefits often accrue over years rather than political or budgetary cycles, making sustained investment challenging.

From a systems viewpoint, failure to integrate public health considerations into healthcare planning results in inefficiencies, including reactive service expansion, crisis-driven funding, and workforce burnout. Effective public health policy supports more rational, planned, and equitable allocation of healthcare resources.

Equity, Access, and System Resilience

Equity is a defining concern of public health and a critical indicator of healthcare system performance. Health inequities arise when differences in health outcomes are systematic, avoidable, and unjust. These inequities are closely linked to social determinants and structural disadvantage.

Healthcare systems that operate without strong public health frameworks tend to reinforce inequities, as services are accessed most readily by those with greater resources, health literacy, and social capital.

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Public health interventions that prioritise outreach, culturally appropriate care, and accessible service models are essential for reducing these disparities.

System resilience—the ability of healthcare systems to absorb shocks and adapt to changing conditions—is also strongly influenced by public health capacity. Events such as pandemics, climate-related disasters, and economic crises expose the interconnectedness of public health infrastructure and healthcare delivery. Systems with robust public health surveillance, community engagement, and preventive capacity are better able to respond effectively to such challenges.

Implications for Nursing Practice and Education

Nurses are uniquely positioned at the interface between public health and healthcare systems. Across acute, primary, community, and aged care settings, nurses routinely encounter the impacts of social determinants on patient health and healthcare utilisation.

Discharge planning, care coordination, health education, and advocacy all require an understanding of public health principles. Assessing a patient’s capacity to manage their health after discharge often involves evaluating housing stability, financial resources, social support, and access to follow-up care—factors that sit squarely within a public health framework.

For nursing education, this highlights the need to move beyond a narrow clinical focus and embed public health, population health, and systems thinking into curricula. Preparing nurses to understand how upstream factors influence downstream care demands is essential for developing a workforce capable of contributing to sustainable healthcare systems.



Challenges in Integrating Public Health and Healthcare Systems

Despite clear evidence of its importance, integration between public health and healthcare systems remains inconsistent. Key challenges include fragmented governance structures, funding models that prioritise acute care, and limited workforce capacity in public health roles.

Measurement also presents a challenge. Public health outcomes are often complex, multifactorial, and long-term, making them harder to quantify than immediate clinical outputs. However, this complexity should not be mistaken for lack of impact.

Addressing these challenges requires deliberate policy alignment, cross-sector collaboration, and a shift in how success is defined and measured within healthcare systems.

Future Directions

Strengthening the relationship between public health and healthcare systems requires sustained investment in prevention, improved integration across sectors, and a workforce educated in systems thinking. Approaches such as “health in all policies” recognise that decisions made outside the health sector have profound implications for population health and healthcare demand.

For nurses and nurse leaders, engaging with public health is not an optional extra—it is central to professional practice, advocacy, and leadership. As healthcare systems face increasing complexity, the ability to understand and influence upstream determinants will be critical to delivering safe, equitable, and effective care.

Conclusion

Public health profoundly shapes healthcare systems by influencing disease patterns, service demand, equity, and system resilience. Addressing social determinants of health and investing in preventive strategies are not peripheral activities; they are essential components of sustainable healthcare delivery.

For healthcare systems to remain viable in the face of rising demand and constrained resources, public health must be recognised as a core strategic priority. Nurses, as the largest and most widely distributed health workforce, play a vital role in bridging public health principles and healthcare practice, contributing to healthier populations and stronger health systems.

Reference List

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Reflective Questions

1. How does public health influence the demand placed on healthcare systems in your current practice setting?

Reflection prompts:

- What examples do you see where preventable conditions increase workload?
- Are there patterns in presentations linked to social or environmental factors?
- How might upstream public health interventions change this demand?

2. In what ways do social determinants of health affect patient outcomes you observe in your role?

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Reflection prompts:

- Which social factors most commonly affect your patients (e.g. housing, income, education)?
- How do these factors impact treatment adherence or recovery?
- What challenges arise when social needs cannot be easily addressed?

3. Identify one public health intervention that could reduce preventable healthcare demand in your workplace or community.**Reflection prompts:**

- What health issues appear most preventable in your context?
- Who would need to be involved for this intervention to succeed?
- What barriers might limit its effectiveness?

4. How does understanding public health change the way you approach discharge planning or care coordination?**Reflection prompts:**

- What non-clinical factors do you routinely assess before discharge?
- How do social supports (or lack of them) influence readmission risk?
- What strategies help bridge gaps between hospital and community care?

5. What barriers exist in your organisation to integrating public health principles into everyday clinical practice?**Reflection prompts:**

- Are time pressures, workload, or role boundaries limiting this integration?
- How does organisational culture influence prevention-focused care?
- What small changes could improve alignment with public health goals?

6. How can nurses contribute to addressing health inequities within the healthcare system?

Reflection prompts:

- What advocacy roles do nurses already play in your setting?
- How can nurses influence policy, service design, or access to care?
- Where do ethical tensions arise when resources are limited?

7. Reflect on how preventive health strategies could improve workforce sustainability in your setting.

Reflection prompts:

- How does managing preventable illness affect staff workload and morale?
- What links do you see between public health and burnout?
- How could prevention support safer, more sustainable nursing practice?

8. How does public health preparedness influence healthcare system resilience during crises?

Reflection prompts:

- What lessons from recent public health emergencies stand out?
- How did public health planning (or lack of it) affect frontline care?
- What improvements would strengthen future system responses?

9. What further knowledge or skills do you need to strengthen your understanding of public health and systems thinking?

Reflection prompts:

- Are there gaps in your education related to population health or policy?
- What learning opportunities could support professional growth?
- How could these skills enhance your leadership or clinical practice?

10. How will this learning influence your future nursing practice or professional development?

Reflection prompts:

- What specific changes might you make in your day-to-day practice?

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- How will this knowledge inform your CPD planning?
- In what ways can you share or apply this learning within your team?