# Nursing and the Sustainable Development Goals: From Nightingale to Now

With a shift in consciousness, nurses can take action to improve the health of the population and the planet.

### ABSTRACT

While health care often focuses on acute or chronic illness, the elements necessary for good health are far more complex than we tend to recognize. Florence Nightingale understood this complexity and wrote extensively on the myriad social and environmental factors that influence well-being. Today these factors are termed "health determinants" and undergird the United Nations 17 Sustainable Development Goals (SDGs). This article explores how nurses can contextualize the SDGs within their daily practice and create holistic plans of care for patients, families, communities, and nations.

Keywords: advocacy, environmental determinants of health, Florence Nightingale, social determinants of health, Sustainable Development Goals, United Nations

hile health care today often focuses on acute or chronic illness, the elements necessary for good health are far more complex than we tend to recognize.<sup>1</sup> For example, an emergency nurse caring for a patient wounded by gang gunfire may be unaware of the intricate factors underlying gang violence, which might include such social justice issues as drug trafficking, gun availability, and at-risk housing developments.<sup>2</sup> Likewise, a pulmonary nurse caring for a patient with chronic asthma may not consider that poor air quality can exacerbate this condition.<sup>3</sup>

In 2015, recognizing the multidimensional factors that affect the well-being of people and the planet, member states of the United Nations (UN) General Assembly unanimously adopted 17 Sustainable Development Goals (SDGs), calling on all countries to end poverty, redress inequality, and undertake climate change by 2030 (see Figure 1).<sup>4</sup> The common thread linking all SDGs is health.

#### **CIRCLING BACK TO THE 19TH CENTURY**

Remarkably, Florence Nightingale—the 19th-century social reformer and founder of modern nursing long ago identified the precursors to these SDGs. In "Sick-Nursing and Health-Nursing," a definitive essay dating from 1893, she not only defined the art of nursing the sick as a need "nearly as old as the world, nearly as large as the world, as pressing as life or death," but also emphasized the importance of "health-nursing," which she defined as "the art of health, . . . the cultivation of health."<sup>5</sup>

Throughout her life, Nightingale instituted educational programs for marginalized communities, and identified factors now seen as social health determinants, which have been defined as "conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks."<sup>6</sup> Examples include safe housing, access to health and education, and public safety.

SUSTAINABLE DEVELOPMENT G NO Poverty ZERO Hunger GOOD HEALTH AND WELL-BEING QUALITY EDUCATION GENDER EOUALITY CLEAN WATER AND SANITATION 5 4 **DECENT WORK AND** REDUCED SUSTAINABLE CITIES INDUSTRY, INNOVATION RESPONSIBLE **ECONOMIC GROWTH** AND INFRASTRUCTURI **INEOUALITIES** AND COMMUNITIES CONSUMPTION AND PRODUCTION 15 LIFE ON LAND LIFE Below water CLIMATE PEACE, JUSTICE PARTNERSHIPS 13 ACTION AND STRONG FOR THE GOALS SUSTAINABLE INSTITUTIONS DEVELOPMENT

Figure 1. UN Sustainable Development Goals

Reprinted with permission from The United Nations Sustainable Development Goals. https://sustainabledevelopment.un.org/sdgs.

She also emphasized the importance of what we now consider environmental health determinants, which have been defined as "all the physical, chemical, and biological factors external to a person," such as air and water quality, exposure to toxic substances, the condition of homes and communities, and the soundness of infrastructure and surveillance.<sup>7</sup> (See *Social and Environmental Determinants of Health* for more current examples.<sup>6,7</sup>)

In her seminal book, *Notes on Nursing*, Nightingale wrote<sup>8</sup>:

In watching diseases, both in private houses and in public hospitals, the thing which strikes the experienced observer most forcibly is this, that the symptoms or the sufferings generally considered to be inevitable and incident to the disease are very often not symptoms of the disease at all, but of something quite different—of the want of fresh air, or of light, or of warmth, or of quiet, or of cleanliness, or of punctuality and care in the administration of diet, of each or of all of these. And this quite as much in private as in hospital nursing.

How would Nightingale have approached the health problems we face today? How would she have addressed the relationship between domestic and neighborhood violence and chronic health conditions? Would she have connected health with the pollutants in our air, soil, and water? Would she have linked today's obesity, poor nutrition, and fast food to deteriorating health? How would she have shaped national and global public opinion to make health a priority? And in what ways would she influence today's leaders and the media?

While it's impossible to know the exact answers to these questions, a closer examination of her writings reveals a remarkable kinship with the UN's 17 SDGs.

**SDG 1: No Poverty** seeks to "end poverty in all its forms everywhere."<sup>4</sup> Nightingale often stressed the effects of poverty and a lack of proper housing and clothing on health, particularly for children.<sup>8</sup>

**SDG 2: Zero Hunger** aims to "end hunger, achieve food security and improved nutrition and promote sustainable agriculture."<sup>4</sup> During the 1860s, Nightingale worked to reform the Liverpool Workhouse Infirmary, where hundreds of hungry, impoverished people were crowded in unsanitary and unsafe conditions.<sup>9</sup>

**SDG 3: Good Health and Well-Being** intends to "ensure healthy lives and promote well-being for all at all ages."<sup>4</sup> This was central to the philosophy of Nightingale, who understood that the work of nurses and midwives shouldn't be limited to caring for people during illness.<sup>8</sup>

**SDG 4: Quality Education** undertakes to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all."<sup>4</sup> With characteristic passion, Nightingale addressed the links between health and education: "Oh teach health, teach health, to rich and poor, to educated and if there be any uneducated, oh teach it all the more, to women especially."<sup>10</sup>

**SDG 5: Gender Equality** aims to "achieve gender equality and [the empowerment of] all women and

## Social and Environmental Determinants of Health<sup>6, 7</sup>

In its Healthy People 2020 initiative, the U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion lists the following examples of social and environmental determinants of health.

### Social health determinants

- Availability of resources to meet daily needs, such as educational and job opportunities, living wages, or healthful foods
- Social norms and attitudes, such as discrimination
- Exposure to crime, violence, and social disorder, such as the presence of trash
- Social support and social interactions
- Exposure to mass media and emerging technologies, such as the Internet or cell phones
- Socioeconomic conditions, such as concentrated poverty
- Quality schools
- Transportation options
- Public safety
- Residential segregation

#### **Environmental health determinants**

- Outdoor air quality
- Surface and groundwater quality
- Toxic substances and hazardous waste
- Homes and communities
- Infrastructure and surveillance
- Global environmental health

girls"<sup>4</sup> as a basic human right. Nightingale advanced this issue with her own work and deeply pondered women's experiences in a time when gender equality was mostly nonexistent: "Women dream till they no longer have the strength to dream, those dreams against which they so struggle, so honestly, vigorously and conscientiously, and so in vain, yet which are their life, without which they could not have lived."<sup>11</sup>

**SDG 6: Clean Water and Sanitation** seeks to "ensure availability and sustainable management of water and sanitation for all."<sup>4</sup> Nightingale understood that clean water is essential to good health. "In many parts of the country," she wrote, "well water of a very impure kind is used for domestic purposes. And when epidemic disease shows itself, persons using such water are almost sure to suffer."<sup>8</sup>

**SDG 7: Affordable and Clean Energy** undertakes to "ensure access to affordable, reliable, sustainable and modern energy for all."<sup>4</sup> While Nightingale lived into the era of electricity, she did not specifically anticipate renewable energy. However, she often called for relevant and necessary observation of issues of concern: "It must never be lost sight of what observation is for. It is not for the sake of piling up miscellaneous information or curious facts, but for the sake of saving life and increasing health and comfort."<sup>8</sup>

**SDG 8: Decent Work and Economic Growth** intends to "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all."<sup>4</sup> Nightingale consistently called for improved working conditions for nurses, including good pensions, sound living situations during training, hospitals designed to save nurses' energy and facilitate better patient care, and such benefits as a one-month annual holiday.<sup>9</sup>

**SDG 9: Industry, Innovation and Infrastructure** seeks to "build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation."<sup>4</sup> Nightingale contributed to designing the original St. Thomas' Hospital in London. Her innovations included incorporating windows in order to make sunlight available to both patients and nurses.<sup>9,12</sup>

**SDG 10: Reduced Inequalities** aims to "reduce inequality within and among countries."<sup>4</sup> Nightingale concerned with inequalities arising from cultural intolerance—valued various spiritual beliefs and stressed that all the world's great religions should be respected and studied, because, as she put it, this gave "unity to the whole—one continuous thread of interest to all these pearls."<sup>13</sup>

**SDG 11: Sustainable Cities and Communities** undertakes to "make cities and human settlements inclusive, safe, resilient and sustainable."<sup>4</sup> Nightingale, who understood the importance of healthy communities, wrote, "The health of the unity is the health of the community. Unless you have the health of the unity there is no community health."<sup>5</sup>

**SDG 12: Responsible Consumption and Production** intends to "ensure sustainable consumption and production patterns."<sup>4</sup> Nightingale prioritized policies that sustain health over those designed only to increase wealth. She wrote, "Work-people should remember that health is their only capital."<sup>5</sup>

**SDG 13: Climate Action** aims to "take urgent action to combat climate change and its impacts."<sup>4</sup> While working for many decades on health concerns in India, Nightingale understood that deforestation was associated with both drought and excessive rainfall that resulted in floods. "[If] tree planting [were] properly carried out there would be *equalized* rainfall," she wrote. "We are so stupid, so like children: we go on cutting down wood without replacing it.... Tree planting would do much both to bring rainfall and to arrest floods."<sup>14</sup>

**SDG 14: Life Below Water** seeks to "conserve and sustainably use the oceans, seas and marine resources for sustainable development."<sup>4</sup> During her life, Nightingale took many ocean voyages and remarked about her love for the sea. "When I was a child, I remember reading that Sir Isaac Newton . . . said in his last hours: 'I seem to myself like a child who has been playing with a few pebbles on the sea-shore, leaving unsearched all the wonders of the great ocean beyond."<sup>15</sup>

**SDG 15: Life on Land** intends to "protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss."<sup>4</sup> From the 1850s to the 1880s, Nightingale worked with leaders throughout India to address the health of the Indian population, stressing the deforestation that caused losses of tillable soil during monsoon storms.<sup>9</sup>

SDG 16: Peace, Justice and Strong Institutions seeks to "promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels."4 Nightingale's contributions to the care of wounded soldiers during the Crimean War greatly inspired Henry Dunant, the founder of the Red Cross and the first recipient of the Nobel Peace Prize, whose ideas led to the establishment, in 1864, of the First Geneva Convention<sup>16</sup>—the treaty that served as the foundation for international humanitarian standards during war. In 1872, Dunant wrote, "Though I am known as the founder of the Red Cross and the originator of the Convention of Geneva, it is to an Englishwoman that all the honour of that Convention is due. What inspired me to go to Italy during the war of 1859 was the work of Miss Florence Nightingale in the Crimea."17

**SDG 17: Partnerships for the Goals** aims to "strengthen the means of implementation and revitalize the global partnership for sustainable development."<sup>4</sup> As a nurse, Nightingale often built collaborative

connections with like-hearted and like-minded people whose perspectives and professions were different from her own.<sup>9</sup>

#### **HOW NURSES ARE ACTUALIZING THE SDGs**

First and foremost, the SDGs are about taking intelligent, informed action in order to foster equity across various settings. The task of nurses is to contextualize these 17 goals and their corresponding targets to create holistic plans of care for patients, families, communities, and nations.<sup>18</sup> The following exemplars—developed from composite case studies illustrate how nurses are translating the SDGs into opportunities to address social and environmental determinants of health, advocate for greater levels of safety and well-being, and contribute to planetary sustainability.

It should be noted that SDG 17—Partnerships for the Goals—is pivotal. Nurses cannot achieve sustainable development alone; mutually beneficial partnerships must be fostered across disciplines and sectors to spark engagement and long-term commitment from various stakeholders.<sup>19</sup>

Exemplar 1: Social determinants of health. In part because of resource scarcity and poor access to health services, the Appalachian communities in the United States have become a perfect storm. Jerry—a public health nurse steeped in a holistic and integrative model of care-understands the interplay between the health of an individual and the wellness of a community.<sup>20</sup> Working with local towns throughout much of the Appalachian region to address the multidimensional sequelae of poverty, hunger, poor education, and high unemployment rates, he is building programs to teach the use of self-assessment for health screening, collaborating with school systems to deliver literacy workshops for adults, and mobilizing wealthier border towns to invest in improved food sourcing at decreased cost. With the opioid addiction epidemic affecting significant proportions of the Appalachian region, Jerry is also engaging the community, partnering with schools of social work and nursing, and enlisting social workers and nurse coaches to assist those who are at risk for, or are struggling with, opioid misuse disorder.21

Jerry's work encompasses five SDGs: No Poverty (SDG 1); Zero Hunger (SDG 2); Good Health and Well-Being (SDG 3); Quality Education (SDG 4); and Decent Work and Economic Growth (SDG 8).

**Exemplar 2: Environmental determinants of health.** Committed to becoming an "environmental detective," Chuck is a nurse who understands that a "holistic, integrative, and integral nursing lens offers new opportunities to use comprehensive assessments and translate these findings" into measurable health outcomes.<sup>22</sup> As an infusion nurse who works at a private cancer center, Chuck has sought extensive education about the environmental toxins to which his immune-compromised patients are particularly vulnerable. His small community, located on the southeastern coast of the United States, has been experiencing ongoing sea level rise due to climate change. In addition, multiple factors-including waste dumping from a power plant and irresponsible demolition practices of local construction businesses-are threatening the residents and the region's biodiversity and air quality. Many of Chuck's patients have required urgent admission related to respiratory infections or food poisoning from local seafood ingestion. Chuck is currently leading an environment-community alliance, lobbying local legislators to mandate that construction and power plants change their practices, create relocation and "safe space" preservation areas for wildlife, and engage in long-term planning to protect the local environment from the impact of climate change.

Working at individual and community-based levels, Chuck is protecting his patients through community engagement, and has been a mentor to other nurses striving to address similar environmental infractions, including the Flint water crisis in Michigan and the Dakota Access Pipeline expansion in the northern United States.

Chuck's work encompasses the following SDGs: Good Health and Well-Being (SDG 3); Clean Water and Sanitation (SDG 6); Climate Action (SDG 13); Life Below Water (SDG 14); and Life on Land (SDG 15).

Exemplar 3: Advocacy, safety, and well-being. Just davs after the 2014 murders of Michael Brown in Ferguson, Missouri, and Eric Garner in New York City, Jamie-a nurse who for many years has worked in the ED of a public city hospital-joined demonstrations in New York City's Harlem to protest with the Black Lives Matter movement.23 Having witnessed firsthand in the ED the devastating consequences of racial bias, health inequities, and gun violence-all of which disproportionately affect young men of color-Jamie, who self-identifies as white, has been attending local meetings with other nurses to explore the existence of conscious and unconscious prejudice in health care, and to discuss the implications of unspoken "white privilege" and the ways in which it contributes to the ongoing marginalization of underprivileged communities.

This past year, Jamie also joined the "me too" movement alongside other women throughout the United States and the world.<sup>24</sup> A survivor of gender violence, she had until now been afraid to speak out because of the potential retaliation of the perpetrator. However, as a believer in the American Nurses Association's Healthy Nurse, Healthy Nation philosophy,<sup>25</sup> she is invested in healing herself while also tending to those around her. To end violence against women and promote gender equality and women's economic empowerment, she has partnered with nurses engaged with UN Women, an entity dedicated to improving the status of women worldwide.<sup>26</sup> Her long-term goals

include creating support groups for young black men admitted to the ED as a result of gun violence in order to explore its root problems and solutions for creating safer communities, and to establish safe havens for women admitted to the ED for gender violence.

Jamie's work encompasses the following SDGs: Good Health and Well-Being (SDG 3); Gender Equality (SDG 5); Reduced Inequalities (SDG 10); and Peace, Justice and Strong Institutions (SDG 16).

**Exemplar 4: Planetary sustainability.** As a clinical nurse specialist on the cardiac telemetry unit of an urban hospital that's striving to reduce its environmental footprint, Kerry has been involved with Health Care Without Harm,<sup>27</sup> and serves as cochair of her hospital's Green Initiatives Committee. She has been working to transform the hospital's supply chain by encouraging a move from environmentally harmful products to more sustainable ones and building partnerships with other stakeholders to protect the planet.

Currently Kerry is collaborating with service-based champions in various departments across the hospital, as well as the local city councilwoman, to decrease hospital waste products and identify sustainable disposal options, invite local farmers to supply food for patients and families, and integrate renewable energy into the hospital's lighting and energy system throughout outpatient clinics. To that end, she is creating a proposal to become the hospital's first official "Green Nurse"—a full-time role that will add the voice of nurses to environmentally conscious initiatives.

Kerry's work encompasses the following SDGs: Good Health and Well-Being (SDG 3); Affordable and Clean Energy (SDG 7); Industry, Innovation and Infrastructure (SDG 9); Sustainable Cities and Communities (SDG 11); Responsible Consumption and Production (SDG 12); and Partnerships for the Goals (SDG 17).

#### **TRANSLATING THE SDGs INTO ACTION**

Below are suggestions for integrating the SDGs into everyday awareness and purposeful action.

- Explore the 17 SDGs and their associated targets and reflect on the information available (go to https://sustainabledevelopment.un.org/content/ documents/21252030%20Agenda%20for%20 Sustainable%20Development%20web.pdf). Identify one or more SDGs that capture your immediate attention. What type of "green initiatives" can you undertake in your personal and professional life? How can you act more responsibly when it comes to consumption, waste, water, and clean air?
- Examine U.S. national statistics (see www.sdgusa. org/uploads/SDGreport2018.pdf) and the UN's Sustainable Development Goals Report 2018 (https://unstats.un.org/sdgs/files/report/2018/The SustainableDevelopmentGoalsReport2018-EN. pdf), and join with other groups and community

members to increase public awareness of the SDGs.

- Review the Healthy People 2020 goals and targets (www.cdc.gov/nchs/healthy\_people/hp2020.htm) and link them to your community endeavors.
- Analyze the American Nurses Credentialing Center's Magnet structural empowerment, which provides standards for nursing excellence. These could offer further insight into integrating SDGs into daily practice (see www.americannursetoday.com/structural-empowerment-magnet-model-perfect-fit).
- Educate colleagues about the SDGs.
- Include the wider lens of the SDGs throughout nursing curricula and in clinical settings.
- Design research studies that further explore the interconnectedness of humans, animals, and the planet.
- Address SDGs in hospitals, schools, businesses, and communities. Connecting the dots among various sectors is necessary for improving the health of populations and the earth.<sup>28</sup>

Nightingale's legacy informs the critical global health issues of our time—issues addressed in the UN 17 SDGs. Nurses are encouraged to perceive themselves as "global citizens"—defined as people who recognize the growing interconnectedness among individuals, countries, and economies, and who identify as belonging to a world community.<sup>20,29</sup> With this understanding, we can, as nurses, bring healing, caring, and compassion back to health care. The SDG framework can help us contribute to global health through local means, empowering us to nurture healthy people living on a healthy planet. ▼

Barbara M. Dossey and Deva-Marie Beck are codirectors of the Nightingale Initiative for Global Health in Santa Fe, NM, and Kelwood, Manitoba, Canada. William E. Rosa is a Robert Wood Johnson Foundation Future of Nursing Scholar at the University of Pennsylvania School of Nursing in Philadelphia. Contact author: Barbara M. Dossey, barbara@dosseydossey.com. The authors have disclosed no potential conflicts of interest, financial or otherwise.

#### REFERENCES

- 1. Disch J. The nursing lens. Nurs Outlook 2012;60(4):170-1.
- Drucker J. Risk factors of shootings. Newark, NJ: Rutgers Center on Public Security; 2011 Mar. Issue 14. RTM insights; http://www.rutgerscps.org/uploads/2/7/3/7/27370595/shooting risks.pdf.
- 3. Guarnieri M, Balmes JR. Outdoor air pollution and asthma. *Lancet* 2014;383(9928):1581-92.
- United Nations. The sustainable development goals report 2018. New York; 2018. https://unstats.un.org/sdgs/files/ report/2018/TheSustainableDevelopmentGoalsReport2018-EN.pdf.
- Nightingale F. Sick-nursing and health-nursing. In: Burdett-Coutts A, editor. Woman's mission: a series of congress papers on the philanthropic work of women by eminent writers. London: Sampson Low, Marston and Company, Ltd.; 1893. p. 184-205.
- 6. U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. *HealthyPeople*.

gov: social determinants of health. 2019. https://www.healthy people.gov/2020/topics-objectives/topic/social-determinants-ofhealth.

- U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. *HealthyPeople.* gov: environmental health. 2019. https://www.healthypeople. gov/2020/topics-objectives/topic/environmental-health.
- Nightingale F. Notes on nursing. London: Harrison and Sons; 1860. p. 1, 15, 70.
- Dossey BM. Florence Nightingale: mystic, visionary, healer. Commemorative ed. Philadelphia: F.A. Davis Company; 2010. p. 267-77, 291-9, 302-3.
- McDonald L, editor. Florence Nightingale's spiritual journey: biblical annotations, sermons, and journal notes. Waterloo, ON: Wilfrid Laurier University Press; 2001. 16 vols. Collected works of Florence Nightingale; 2; p. 536.
- McDonald L, editor. Florence Nightingale's suggestions for thought. Waterloo, ON: Wilfrid Laurier University Press; 2008. 16 vols. Collected works of Florence Nightingale; 11; p. 584.
- Richardson R. Florence Nightingale and hospital design. London: King's College; 2010. Online exhibitions; http://www. kingscollections.org/exhibitions/specialcollections/nightingaleand-hospital-design/florence-nightingale-and-hospital-design.
- Cook ET. The life of Florence Nightingale. London: Macmillan and Co., Ltd.; 1913. 2 vols.; 1; p. 74.
- Vallée G, editor. Florence Nightingale on social change in India. Waterloo, ON: Wilfrid Laurier University Press; 2007. 16 vols. Collected works of Florence Nightingale; 10; p. 293.
- Nightingale F. Address from Miss Nightingale to the probationer-nurses in the 'Nightingale Fund' school at St. Thomas' Hospital, and the nurses who were formerly trained there. 1872.
- International Committee of the Red Cross. Founding and early years of the ICRC (1863-1914). 2010. https://www.icrc. org/en/document/founding-and-early-years-icrc-1863-1914.
- Cook ET. The life of Florence Nightingale. London: Macmillan and Co., Ltd.; 1914. 2 vols.; 2;205.
- International Council of Nurses. Nurses' role in achieving the Sustainable Development Goals. International Nurses Day resources and evidence. Geneva, Switzerland; 2017. Nurses: a voice to lead: achieving the SDGS; https://www.icnvoice tolead.com/wp-content/uploads/2017/04/ICN\_AVoiceToLead\_ guidancePack-9.pdf.
- Rosa W, editor. A new era in global health: nursing and the United Nations 2030 Agenda for Sustainable Development. New York, NY: Springer Publishing Company; 2017.
- Kreitzer MJ, Koithan M, editors. *Integrative nursing*. 2nd ed. New York, NY: Oxford University Press; 2019. Weil Integrative Medicine Library.
- Dossey BM, et al. Integrative health and wellness assessment. In: Dossey BM, et al., editors. *Nurse coaching: integrative approaches for health and wellbeing*. North Miami, FL: International Nurse Coach Association; 2015. p. 109-21.
- 22. Luck S. Informed and impactful: stewarding the environmental determinants of health and well-being. In: Rosa W, editor. Nurses as leaders: evolutionary visions of leadership. New York, NY: Springer Publishing Company; 2017. p. 333-43.
- Black Lives Matter. *Herstory*. n.d. https://blacklivesmatter. com/about/herstory.
- 24. Me Too. You are not alone. n.d. https://metoomvmt.org.
- 25. American Nurses Association. *Healthy nurse, healthy nation.* n.d. https://www.nursingworld.org/practice-policy/workenvironment/health-safety/healthy-nurse-healthy-nation.
- UN Women. Ending violence against women. n.d. http://www. unwomen.org/en/what-we-do/ending-violence-against-women.
- Health Care Without Harm. Green building and energy: Chicago green healthcare initiative. n.d. https://noharm-uscanada. org/content/us-canada/chicago-green-healthcare-initiative.
- 28. Nightingale Initiative for Global Health. What is our 2020 vision? 2016.
- 29. Israel RC. What does it mean to be a global citizen? *Kosmos: Journal for Global Transformation* 2012 (Spring/Summer). https://www.kosmosjournal.org/article/what-does-it-mean-tobe-a-global-citizen.