

Special Article

Public Health Nursing after the COVID-19 Pandemic**Olympia Konstantakopoulou, MSc, PhD**

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Correspondence: Olympia Konstantakopoulou, 123 Papadiamantopoulou street, GR-11527, Athens, Greece, e-mail: olympiak1982@gmail.com**Abstract**

During the COVID-19 pandemic, nurses were the frontline and tireless healthcare workers providing their services to patients. At the same time, the role of nurses was not only limited to providing health care to COVID-19 patients, but was also crucial on the public health issues. For example, nurses played a key role in primary health care through both COVID-19 vaccination and through the collection of samples for coronavirus diagnostic testing in health centers, local health units and mobile health units. For example, nurses in primary health care were responsible for receiving, storing and safely administering vaccines against COVID-19. The cornerstones of public health nursing applications combine the principles and values of public health and nursing to create the right conditions for promoting the health of individuals and communities. Continuing education of nurses is extremely important, as they need to constantly update and enrich their knowledge in a clinical environment that is constantly changing, as exemplified by the huge changes brought about by the pandemic worldwide. There are several challenges and opportunities for public health nurses after the COVID-19 pandemic. The role of nurses is particularly important in the case of vulnerable populations. The role of school nurses is particularly important, as children are a vulnerable population group as they rely on adults to meet their needs. As children are in school for a large part of the day, everyone involved in their care should work together to meet their needs as best as possible. In this context, school nurses play an important role, as children face many health risks, such as poor nutrition, limited physical activity, asthma, sexually transmitted diseases, stress, bullying, etc. In conclusion, the action of nurses in public health can be multidimensional, contributing in various areas, such as schools, home care, health centers, etc.

Key words: public health, nurses, COVID-19 pandemic, vulnerable groups**Introduction**

Nurses during the COVID-19 pandemic were among the professional groups that suffered great physical and mental damage. For example, nurses experienced high rates of burnout, anxiety, depression and post-traumatic stress (Galanis et al., 2021; Li et al., 2021).

During the pandemic, nurses were the frontline and tireless healthcare workers providing their services to patients. Nurses met these challenges with commitment, empathy and respect for the patients.

However, burnout and stress overwhelmed the nurses, could result in compromised patient safety and health. For this reason, nurse leaders should adopt dynamic and flexible solutions to better allocate resources in order to meet patients' needs (Phillips et al., 2021).

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It is notable that the turnover intention among healthcare workers before the pandemic was 3.2%, while after the pandemic was 5.6% (Frogner & Dill, 2022). In fact, the turnover intention was higher among nurses than among other healthcare workers (Poon et al., 2022). The International Council of Nurses pointed out from the first year of the pandemic that this situation caused "mass trauma" to nurses due to high mortality among patients, occupational burnout, inadequate availability of personal protective equipment, fear and lack of knowledge (International Council of Nurses, 2021).

Public health nurses during the COVID-19 pandemic

According to Center for Disease Control and Prevention (CDC), about half of public health workers in July 2021 suffered from anxiety, depression, suicidal thoughts, and post-traumatic stress disorder (Bryant-Genevier et al., 2021). In this context, several public health nurses sought higher paying jobs or retired. In addition, during the pandemic the number of nurses seeking work in public health services was lower than in the past (Pittman & Park, 2021).

The crucial role of nurses in a health system was even more highlighted during the pandemic, as nurses were the frontline healthcare workers. At the same time, the role of nurses was not only limited to providing

health care to COVID-19 patients, but was also crucial on the public health issues. For example, nurses played a key role in primary health care through both COVID-19 vaccination and through the collection of samples for coronavirus diagnostic testing in health centers, local health units and mobile health units. For example, nurses in primary health care were responsible for receiving, storing and safely administering vaccines against COVID-19 (Mauricio Barría, 2021).

It is also clear that nurses, like all healthcare workers, can promote public health by acting as role models for the general public. A typical example in this case is vaccination, as high rates of acceptance and vaccination among nurses can have a positive effect on the psychology of individuals, reducing hesitancy and fears and thus increasing vaccination rates in the general population (Breckenridge et al., 2022; Galanis et al., 2022, 2023; Sadarangani et al., 2021).

The role of nurses in public health during the pandemic was multidimensional; contact tracing, educating individuals about isolation and quarantine, vaccinating individuals and communities, and guiding COVID-19 cases from the prospect of the primary care (Hassmiller, 2022). Moreover, public health nurses worked long shifts without adequate staffing in unfamiliar roles.

Special mention should be made of the role of school nurses during the pandemic, as children are a vulnerable group with many challenges. For example, the implementation of remote education made it even more difficult not only for the children but also for their families, as it was an unfamiliar situation.

Public health intervention model

The cornerstones of public health nursing applications combine the principles and values of public health and nursing to create the right conditions for promoting the health of individuals and communities. The principles of public health include social justice, population-centered program design, reliance on the science of epidemiology to conduct valid studies and thereby draw safe conclusions, health promotion, prevention, the achievement of the general good, and long-term commitment to the community.

Nursing also adds some additional principles, such as empathy, care delivery, holistic and person-centered approach, sensitivity to vulnerable groups and independent action (M. Schaffer & Strohschein, 2019).

The public health intervention model has been developed over the last 20 years and it is an excellent guide to how health professionals can promote public health (M. A. Schaffer et al., 2022). In particular, the model explains how nurses and all health professionals in general can contribute to public health. The model was first developed in 2001 in the United States and has been continuously updated to include updated public health interventions.

The primary purpose of nurses' action is to identify the target population on which they are then to intervene. The target population is essentially healthy, but interventions can be made either to maintain or to promote health. In addition to the target population, there is also the concept of a population at risk, which is the population of people exposed to a particular risk that threatens the health of the population.

The public health intervention model has seen great growth and has been implemented in several countries in recent years such as Norway, the UK, the USA, Ireland and New Zealand (Glavin et al., 2019; Keller et al., 2004). It is noted that the model's formulation over time adapts to ever-changing conditions, incorporating new parameters, such as social determinants of health, the preparation of nurses for emergencies and the more effective management of limited available resources (M. A. Schaffer et al., 2022).

Continuing education of nurses is also extremely important, as they need to constantly update and enrich their knowledge in a clinical environment that is constantly changing, as exemplified by the huge changes brought about by the pandemic worldwide.

The evidence regarding public health applications is growing at an extremely rapid pace and nurses must therefore be alert to the need to adapt to the new data and successfully respond to their work. In this context, nurses implementing public health practices in the community should be as knowledgeable as possible in research methodology and

biostatistics so that they can keep up with the ever-growing literature. In this way, they will be able to formulate and implement appropriate public health interventions to promote health at both individual and community level (M. A. Schaffer et al., 2022)

Challenges and opportunities after the COVID-19 pandemic

There are several challenges and opportunities for public health nurses after the COVID-19 pandemic. The role of nurses is particularly important in the case of vulnerable populations. These populations are more likely to experience health problems because they have more risk factors, less access to health services and higher morbidity and mortality than the general population (Roberts & Kreeger, 2019). Examples of vulnerable populations include people with special needs, homeless, refugees, elderly, chronically ill patients, etc. In addition, people with low income, as well as those who have experienced massive disasters such as hurricanes or earthquakes are vulnerable populations.

Nurses as healthcare workers providing health care understand and care for the needs of vulnerable populations. The areas where nurses can offer their assistance to vulnerable populations are summarized as follows (Egry et al., 2021):

- Assessing and improving living conditions.
- Assessing the knowledge of vulnerable populations on various health issues.
- Use of social and demographic characteristics to assess risks or vulnerabilities in the case of vulnerable populations.
- Assessment and monitoring of health-related needs.
- Promoting safety and confidence in health services.
- Assessing the progress of the health care provided.

The role of school nurses is particularly important, as children are a vulnerable population group as they rely on adults to meet their needs. As children are in school for a large part of the day, everyone involved in their care should work together to meet their

needs as best as possible (Roberts & Kreeger, 2019). In this context, school nurses play an important role, as children face many health risks, such as poor nutrition, limited physical activity, asthma, sexually transmitted diseases, stress, bullying, etc. School nurses should work with children and their families by identifying social determinants of health, such as access to health care, safe and healthy living environments for children and access to healthy food.

Moreover, as was proven during the pandemic, the role of nurses in primary health care is crucial. Nurses can properly guide individuals visiting primary health care services so that unnecessary visits to hospitals can be avoided. The role of nurses is multi-dimensional and can include vaccination, screening and health promotion.

Conclusions

The action of nurses in public health can be multidimensional, contributing in various areas, such as schools, home care, health centers, etc. More studies are needed on the application of the intervention model in public health, especially in Greece, as it has been shown internationally to be an excellent model for formulating and implementing interventions on the part of nurses. Moreover, applying the model to different populations with different cultures and cultural backgrounds will provide even more insights and help especially vulnerable populations, for example refugees.

The public health intervention model essentially enables nurses internationally to use a common guide to promote public health. In this way, it is easier to compare results between different countries and improve the effectiveness of interventions through common components. In this way, the role of nurses in public health is strengthened and consolidated. The international collaboration of nurses can inspire them to generate new knowledge through well-designed studies, thus promoting the health of populations. Moreover, those who make decisions in public health will have another tool to reduce inequalities and achieve health equity.

References

Breckenridge, L. A., Burns, D., & Nye, C. (2022). The use of motivational interviewing to

- overcome COVID-19 vaccine hesitancy in primary care settings. *Public Health Nursing*, 39(3), 618–623. <https://doi.org/10.1111/phn.13003>
- Bryant-Genevier, J., Rao, C. Y., Lopes-Cardozo, B., Kone, A., Rose, C., Thomas, I., Orquiola, D., Lynfield, R., Shah, D., Freeman, L., Becker, S., Williams, A., Gould, D. W., Tiesman, H., Lloyd, G., Hill, L., & Byrkit, R. (2021). Symptoms of Depression, Anxiety, Post-Traumatic Stress Disorder, and Suicidal Ideation Among State, Tribal, Local, and Territorial Public Health Workers During the COVID-19 Pandemic—United States, March–April 2021. *MMWR. Morbidity and Mortality Weekly Report*, 70(26), 947–952. <https://doi.org/10.15585/mmwr.mm7026e1>
- Egry, E. Y., Fornari, L. F., Taminato, M., Vigeta, S. M. G., & Fonseca, R. M. G. S. D. (2021). Indicators of Good Nursing Practices for Vulnerable Groups in Primary Health Care: A Scoping Review. *Revista Latino-Americana de Enfermagem*, 29, e3488. <https://doi.org/10.1590/1518-8345.5203.3488>
- Frogner, B. K., & Dill, J. S. (2022). Tracking Turnover Among Health Care Workers During the COVID-19 Pandemic: A Cross-sectional Study. *JAMA Health Forum*, 3(4), e220371. <https://doi.org/10.1001/jamahealthforum.2022.0371>
- Galanis, P., Katsiroumpa, A., Sourtzi, P., Siskou, O., Konstantakopoulou, O., Katsoulas, T., & Kaitelidou, D. (2022). Social Support Mediates the Relationship between COVID-19-Related Burnout and Booster Vaccination Willingness among Fully Vaccinated Nurses. *Vaccines*, 11(1), 46. <https://doi.org/10.3390/vaccines11010046>
- Galanis, P., Katsiroumpa, A., Vraka, I., Siskou, O., Konstantakopoulou, O., Katsoulas, T., & Kaitelidou, D. (2023). Seasonal Influenza Vaccine Intention among Nurses Who Have Been Fully Vaccinated against COVID-19: Evidence from Greece. *Vaccines*, 11(1), 159. <https://doi.org/10.3390/vaccines11010159>
- Galanis, P., Vraka, I., Fragkou, D., Bilali, A., & Kaitelidou, D. (2021). Nurses' burnout and associated risk factors during the COVID-19 pandemic: A systematic review and meta-analysis. *Journal of Advanced Nursing*, 77(8), 3286–3302. <https://doi.org/10.1111/jan.14839>
- Glavin, K., Schaffer, M. A., & Kvarme, L. G. (2019). The Public Health Intervention Wheel in Norway. *Public Health Nursing*, 36(6), 819–828. <https://doi.org/10.1111/phn.12657>
- Hassmiller, S. B. (2022). Revitalizing Public Health Nursing for the Future. *American Journal of Public Health*, 112(S3), S262–S264. <https://doi.org/10.2105/AJPH.2022.306874>

- International Council of Nurses. (2021). *International Council of Nurses COVID-19 Update*.
<https://www.icn.ch/sites/default/files/inline-files/ICN%20COVID19%20update%20report%20FINAL.pdf>
- Breckenridge, L. A., Burns, D., & Nye, C. (2022). The use of motivational interviewing to overcome COVID-19 vaccine hesitancy in primary care settings. *Public Health Nursing, 39*(3), 618–623.
<https://doi.org/10.1111/phn.13003>
- Bryant-Genevier, J., Rao, C. Y., Lopes-Cardozo, B., Kone, A., Rose, C., Thomas, I., Orquiola, D., Lynfield, R., Shah, D., Freeman, L., Becker, S., Williams, A., Gould, D. W., Tiesman, H., Lloyd, G., Hill, L., & Byrkit, R. (2021). Symptoms of Depression, Anxiety, Post-Traumatic Stress Disorder, and Suicidal Ideation Among State, Tribal, Local, and Territorial Public Health Workers During the COVID-19 Pandemic—United States, March–April 2021. *MMWR. Morbidity and Mortality Weekly Report, 70*(26), 947–952.
<https://doi.org/10.15585/mmwr.mm7026e1>
- Egry, E. Y., Fornari, L. F., Taminato, M., Vigeta, S. M. G., & Fonseca, R. M. G. S. D. (2021). Indicators of Good Nursing Practices for Vulnerable Groups in Primary Health Care: A Scoping Review. *Revista Latino-Americana de Enfermagem, 29*, e3488.
<https://doi.org/10.1590/1518-8345.5203.3488>
- Frogner, B. K., & Dill, J. S. (2022). Tracking Turnover Among Health Care Workers During the COVID-19 Pandemic: A Cross-sectional Study. *JAMA Health Forum, 3*(4), e220371.
<https://doi.org/10.1001/jamahealthforum.2022.0371>
- Galanis, P., Katsiroumpa, A., Sourtzi, P., Siskou, O., Konstantakopoulou, O., Katsoulas, T., & Kaitelidou, D. (2022). Social Support Mediates the Relationship between COVID-19-Related Burnout and Booster Vaccination Willingness among Fully Vaccinated Nurses. *Vaccines, 11*(1), 46.
<https://doi.org/10.3390/vaccines11010046>
- Galanis, P., Katsiroumpa, A., Vraka, I., Siskou, O., Konstantakopoulou, O., Katsoulas, T., & Kaitelidou, D. (2023). Seasonal Influenza Vaccine Intention among Nurses Who Have Been Fully Vaccinated against COVID-19: Evidence from Greece. *Vaccines, 11*(1), 159.
<https://doi.org/10.3390/vaccines11010159>
- Galanis, P., Vraka, I., Fragkou, D., Bilali, A., & Kaitelidou, D. (2021). Nurses' burnout and associated risk factors during the COVID-19 pandemic: A systematic review and meta-analysis. *Journal of Advanced Nursing, 77*(8), 3286–3302. <https://doi.org/10.1111/jan.14839>
- Glavin, K., Schaffer, M. A., & Kvarme, L. G. (2019). The Public Health Intervention Wheel in Norway. *Public Health Nursing, 36*(6), 819–828. <https://doi.org/10.1111/phn.12657>
- Hassmiller, S. B. (2022). Revitalizing Public Health Nursing for the Future. *American Journal of Public Health, 112*(S3), S262–S264.
<https://doi.org/10.2105/AJPH.2022.306874>
- International Council of Nurses. (2021). *International Council of Nurses COVID-19 Update*.
<https://www.icn.ch/sites/default/files/inline-files/ICN%20COVID19%20update%20report%20FINAL.pdf>
- Keller, L. O., Strohschein, S., Lia-Hoagberg, B., & Schaffer, M. A. (2004). Population-Based Public Health Interventions: Practice-Based and Evidence-Supported. Part I. *Public Health Nursing, 21*(5), 453–468.
<https://doi.org/10.1111/j.0737-1209.2004.21509.x>
- Li, Y., Scherer, N., Felix, L., & Kuper, H. (2021). Prevalence of depression, anxiety and post-traumatic stress disorder in health care workers during the COVID-19 pandemic: A systematic review and meta-analysis. *PLoS One, 16*(3), e0246454.
<https://doi.org/10.1371/journal.pone.0246454>
- Mauricio Barría, R. (2021). Nursing and its Essential Role in the Vaccination against COVID-19: New Challenge in a Pandemic Scenario. *Investigación y Educación En Enfermería, 39*(3).
<https://doi.org/10.17533/udea.iee.v39n3e01>
- Phillips, J., LaFond, C., Stifter, J., Abraham, A., Morrow, S. W., Richard, A. L., & Brown, F. (2021). Surge Planning and Implementation: A Required Competency for Today's Nurse Leaders. *The Journal of Nursing Administration, 51*(11), 573–578.
<https://doi.org/10.1097/NNA.0000000000001066>
- Pittman, P., & Park, J. (2021). Rebuilding Community-Based and Public Health Nursing in the Wake of COVID-19. *OJIN: The Online Journal of Issues in Nursing, 26*(2).
<https://doi.org/10.3912/OJIN.Vol26No02Man07>
- Poon, Y.-S. R., Lin, Y. P., Griffiths, P., Yong, K. K., Seah, B., & Liaw, S. Y. (2022). A global overview of healthcare workers' turnover intention amid COVID-19 pandemic: A systematic review with future directions. *Human Resources for Health, 20*(1), 70.
<https://doi.org/10.1186/s12960-022-00764-7>
- Roberts, B., & Kreeger, L. (Eds.). (2019). *Attending to Vulnerable Populations Through Nurse Advocacy on Boards and in Public*

- Service. *Creative Nursing*, 25(2), 82–86. <https://doi.org/10.1891/1078-4535.25.2.82>
- Breckenridge, L. A., Burns, D., & Nye, C. (2022). The use of motivational interviewing to overcome COVID-19 vaccine hesitancy in primary care settings. *Public Health Nursing*, 39(3), 618–623. <https://doi.org/10.1111/phn.13003>
- Bryant-Genevier, J., Rao, C. Y., Lopes-Cardozo, B., Kone, A., Rose, C., Thomas, I., Orquiola, D., Lynfield, R., Shah, D., Freeman, L., Becker, S., Williams, A., Gould, D. W., Tiesman, H., Lloyd, G., Hill, L., & Byrkit, R. (2021). Symptoms of Depression, Anxiety, Post-Traumatic Stress Disorder, and Suicidal Ideation Among State, Tribal, Local, and Territorial Public Health Workers During the COVID-19 Pandemic—United States, March–April 2021. *MMWR. Morbidity and Mortality Weekly Report*, 70(26), 947–952. <https://doi.org/10.15585/mmwr.mm7026e1>
- Egry, E. Y., Fornari, L. F., Taminato, M., Viçeta, S. M. G., & Fonseca, R. M. G. S. D. (2021). Indicators of Good Nursing Practices for Vulnerable Groups in Primary Health Care: A Scoping Review. *Revista Latino-Americana de Enfermagem*, 29, e3488. <https://doi.org/10.1590/1518-8345.5203.3488>
- Frogner, B. K., & Dill, J. S. (2022). Tracking Turnover Among Health Care Workers During the COVID-19 Pandemic: A Cross-sectional Study. *JAMA Health Forum*, 3(4), e220371. <https://doi.org/10.1001/jamahealthforum.2022.0371>
- Galanis, P., Katsiroumpa, A., Sourtzi, P., Siskou, O., Konstantakopoulou, O., Katsoulas, T., & Kaitelidou, D. (2022). Social Support Mediates the Relationship between COVID-19-Related Burnout and Booster Vaccination Willingness among Fully Vaccinated Nurses. *Vaccines*, 11(1), 46. <https://doi.org/10.3390/vaccines11010046>
- Galanis, P., Katsiroumpa, A., Vraka, I., Siskou, O., Konstantakopoulou, O., Katsoulas, T., & Kaitelidou, D. (2023). Seasonal Influenza Vaccine Intention among Nurses Who Have Been Fully Vaccinated against COVID-19: Evidence from Greece. *Vaccines*, 11(1), 159. <https://doi.org/10.3390/vaccines11010159>
- Galanis, P., Vraka, I., Fragkou, D., Bilali, A., & Kaitelidou, D. (2021). Nurses' burnout and associated risk factors during the COVID-19 pandemic: A systematic review and meta-analysis. *Journal of Advanced Nursing*, 77(8), 3286–3302. <https://doi.org/10.1111/jan.14839>
- Glavin, K., Schaffer, M. A., & Kvarme, L. G. (2019). The Public Health Intervention Wheel in Norway. *Public Health Nursing*, 36(6), 819–828. <https://doi.org/10.1111/phn.12657>
- Hassmiller, S. B. (2022). Revitalizing Public Health Nursing for the Future. *American Journal of Public Health*, 112(S3), S262–S264. <https://doi.org/10.2105/AJPH.2022.306874>
- International Council of Nurses. (2021). *International Council of Nurses COVID-19 Update*. <https://www.icn.ch/sites/default/files/inline-files/ICN%20COVID19%20update%20report%20FINAL.pdf>
- Keller, L. O., Strohschein, S., Lia-Hoagberg, B., & Schaffer, M. A. (2004). Population-Based Public Health Interventions: Practice-Based and Evidence-Supported. Part I. *Public Health Nursing*, 21(5), 453–468. <https://doi.org/10.1111/j.0737-1209.2004.21509.x>
- Li, Y., Scherer, N., Felix, L., & Kuper, H. (2021). Prevalence of depression, anxiety and post-traumatic stress disorder in health care workers during the COVID-19 pandemic: A systematic review and meta-analysis. *PloS One*, 16(3), e0246454. <https://doi.org/10.1371/journal.pone.0246454>
- Mauricio Barría, R. (2021). Nursing and its Essential Role in the Vaccination against COVID-19: New Challenge in a Pandemic Scenario. *Investigación y Educación En Enfermería*, 39(3). <https://doi.org/10.17533/udea.iee.v39n3e01>
- Phillips, J., LaFond, C., Stifter, J., Abraham, A., Morrow, S. W., Richard, A. L., & Brown, F. (2021). Surge Planning and Implementation: A Required Competency for Today's Nurse Leaders. *The Journal of Nursing Administration*, 51(11), 573–578. <https://doi.org/10.1097/NNA.0000000000001066>
- Pittman, P., & Park, J. (2021). Rebuilding Community-Based and Public Health Nursing in the Wake of COVID-19. *OJIN: The Online Journal of Issues in Nursing*, 26(2). <https://doi.org/10.3912/OJIN.Vol26No02Man07>
- Poon, Y.-S. R., Lin, Y. P., Griffiths, P., Yong, K. K., Seah, B., & Liaw, S. Y. (2022). A global overview of healthcare workers' turnover intention amid COVID-19 pandemic: A systematic review with future directions. *Human Resources for Health*, 20(1), 70. <https://doi.org/10.1186/s12960-022-00764-7>
- Roberts, B., & Kreeger, L. (Eds.). (2019). Attending to Vulnerable Populations Through Nurse Advocacy on Boards and in Public Service. *Creative Nursing*, 25(2), 82–86. <https://doi.org/10.1891/1078-4535.25.2.82>
- Sadarangani, T. R., David, D., & Travers, J. (2021). Engaging Nursing Assistants to Enhance Receptivity to the Coronavirus

- Disease 2019 Vaccine. *Journal of the American Medical Directors Association*, 22(6), 1125–1127. <https://doi.org/10.1016/j.jamda.2021.03.016>
- Schaffer, M. A., Strohschein, S., & Glavin, K. (2022). Twenty years with the public health intervention wheel: Evidence for practice. *Public Health Nursing*, 39(1), 195–201. <https://doi.org/10.1111/phn.12941>
- Schaffer, M., & Strohschein, S. (2019). *Public health interventions: Applications for public health nursing practice* (2nd ed.). Minnesota Department of Health.