

# PUBLIC HEALTH INFORMATICS: A NECESSARY SKILLSET FOR THE PUBLIC HEALTH WORKFORCE

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## WHAT IS PUBLIC HEALTH INFORMATICS?

Public health informatics (PHI) is the systematic application of information, analytics, computer science, and technology to support the day-to-day work of public health.<sup>1</sup> Effectively capturing and using health information are essential to responding to the needs of communities and protecting the health of communities.

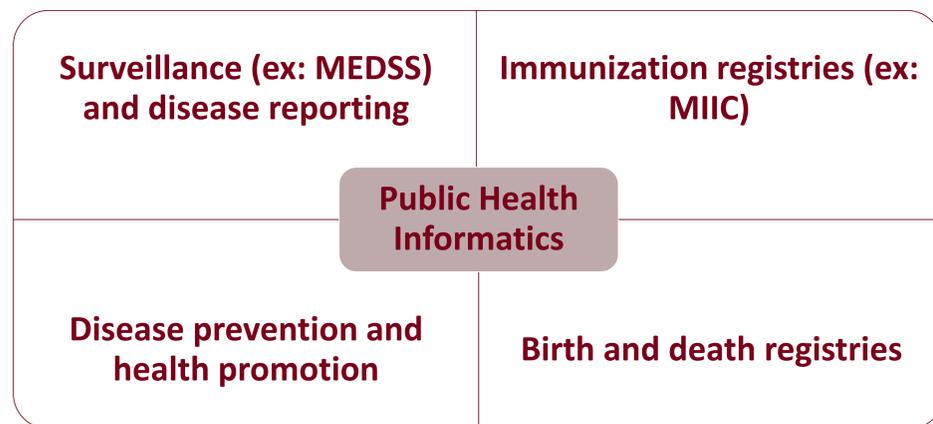


Figure 1: Examples of public health informatics systems

## CURRENT PUBLIC HEALTH INFORMATICS WORKFORCE NEEDS

Though PHI is embedded in many aspects of public health work, few public health staff have undergone dedicated PHI trainings and few public health departments have dedicated PHI informaticians or data analysts.

In a 2015 nationwide survey of local health department 40% of large local health departments indicated their staff had sufficient informatics training however only 5% of medium-sized local health departments and 2.6% of small local health departments indicated that their staff had sufficient training.<sup>2</sup>

Significant training needs exist for health departments across many areas of informatics from basic to specialized skills, including:<sup>3</sup>

- Data analytics (quantitative and qualities)
- Running reports from information systems
- Using statistical or analytical software
- Dashboards and Geographic Information Systems (GIS)

## EQUITY CONSIDERATIONS IN PUBLIC HEALTH INFORMATICS

PHI is a powerful tool to promote health equity by identifying, preventing and responding to health disparities, however this is often hindered by disconnected PHI frameworks and a workforce that does not represent the communities it serves.

During the COVID-19 pandemic, a lack of standardized collection of data on race and ethnicity led to delays in recognizing that racial and ethnic minority groups were disproportionately affected by COVID-19.

Progress on health equity will require timely and complete data with the granularity to yield insights into social determinants of health.

## TRAINING IN INFORMATICS FOR UNDERREPRESENTED MINORITIES IN PUBLIC HEALTH (TRIUMPH)

A consortium led by the University of Minnesota School of Nursing and School of Public Health, in partnership with Minnesota Department of Health and two other universities and health departments, in association with the Public Health Informatics Institute, recently received an \$8 million grant from the Office of the National Coordinator for Health IT for Public Health Information Technology (PHIT) Workforce Development. The consortium, **TR**aining in Informatics for **U**nderrepresented **M**inorities in **P**ublic Health (TRIUMPH), will address gaps in public health informatics education and training, with a particular focus on BIPOC learners that are underrepresented in PHI roles.

Local health departments can partner with TRIUMPH in several ways including PHI training for staff and hosting MPH students for informatics applied experience projects.

## TRIUMPH ACTIVITIES

Training in place for current Public Health workforce

Stipends for MPH student internships in health departments

Population Health Informatics and Technology Certificate

Public Health Informatics Course

## CONCLUSION

Public health is an information intense enterprise. The lack of a robust public health information technology infrastructure hindered an effective response to the COVID-19 pandemic. Informatics-savvy health departments can improve public health practice and population health but need an informatics skilled workforce to realize that vision.

## REFERENCES

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