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Assessing local public health agency alignment with Public Health 3.0: A content analysis of Illinois community health improvement plans

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Abstract

Context: Public Health 3.0 described the need for public health agencies and the public health workforce to transform and obtain new skills and approaches to address the social determinants of health (SDOH) through cross-sectoral partnerships and collective action.

Objective: To assess the current state of local health departments' Public Health 3.0 alignment through interventions and initiatives documented in community health improvement plans (CHIPs).

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Method: We conducted a content analysis of Illinois Community Health Improvement Plans (CHIPs) from July to November 2020. A coding framework aligned with Public Health 3.0 concepts was developed based on constructs from the literature, faculty expertise, and preliminary reviews of the CHIPs. Two researchers deductively coded for health priorities and interventions in Microsoft Excel 2016 and calculated the number of CHIPs in which each code appeared.

Results: Ninety CHIPs representing 98 counties across the state were analyzed; 2 CHIPs were excluded due to a lack of strategies. Our content analysis found that 13% (n=12) of CHIPs had explicit priorities related to SDOH and 12% (n=11) included interventions that addressed socioeconomic factors. Ten percent (n=9) of CHIPs proposed multi-level multi-component interventions. Eighty-nine percent (n=80) of CHIPs included community-level interventions and 53% (n=48) of CHIPs included policy, systems, and environmental (PSE) strategies focused on specific health content. The majority of CHIPs (96%, n=86) had at least 1 partnership strategy. Thirty-two percent (n=29) of CHIPs mentioned the use of an evidence-based strategy.

Conclusions: Our content analysis found opportunities to improve Illinois public health agencies' Public Health 3.0 capacities and capability. Findings are limited to this data source and definitions of the Public Health 3.0 attributes, leaving room for practice and research opportunities to develop operational definitions of Public Health 3.0; capacity building to improve the public health workforce readiness; and research and evaluation to measure improvements.

Keywords

Community health assessment; implementation; public health practice; social determinants of health; training

INTRODUCTION AND BACKGROUND

COVID-19 has accelerated the need for public health practitioners and their agencies to take a more equitable, racially just, systems orientation to their work. Black, Latino, and Indigenous individuals have experienced profound differences in hospitalization and mortality due to COVID-19 as compared to their White counterparts.[1] These striking disparities principally stem from root causes in structural and social determinants of health (SDOH), eg, inequities in policies and practices in housing, employment, and education.[2]

Even before COVID-19, there were many calls for public health agencies and the public health workforce to become community health strategists that convene diverse stakeholders, address SDOH, and advance collective action toward systems change.[3–7] This transformation is often referenced as Public Health 3.0, whereby a public health agency's role transitions from addressing traditional public health risk factors and their prevention, such as restaurant inspections or tobacco cessation, to a larger role, tackling increasingly complex population health and systems issues which impact the upstream and SDOH.[4]

Achieving the Public Health 3.0 vision is not an easy endeavor. As noted by DeSalvo et al[4] and Fraser et al,[8] in addition to many human and fiscal resource and infrastructure barriers, public health practitioners will need support to undertake this new role. One response to transitioning toward a Public Health 3.0 vision has been to define, assess, and build the public health workforce strategic skills.

Released in 2017, de Beaumont Foundation's *Building skills for a more strategic public health workforce: a call to action,* highlighted the need for public health practitioners to develop crosscutting strategic and business skills, such as effective communications, use of data for decision making, and strategic and systems thinking as one foundation to achieving Public Health 3.0.[4,5] Gaps in strategic skills were documented when data from the Public Health Workforce Interests and Needs Survey of state health department workers found, for example, that 49% of respondents self-reported training gaps in strategic and systems thinking.[9] To address these workforce development gaps, multiple activities have occurred, including but not limited to the Health Resources and Services Administration funding $90 million dollars to Regional Public Health Training Centers to develop strategic skills trainings.[10]

While workforce development is vital to achieve Public Health 3.0, additional efforts are needed. Another marker for public health agencies' alignment and implementation of Public Health 3.0 may be found in the process of developing a community health improvement plan (CHIP) and the final product. Community improvement planning has been a hallmark activity for many public health agencies for decades and now serves as a prerequisite for public health accreditation.[11] The Public Health Accreditation Board (PHAB) recommends that a community health improvement process should be conducted in collaboration with cross-sectoral public health system partners to facilitate data-driven and community informed selection of health priorities, measurable objectives, improvement strategies, and activities. Ideally, strategies are evidence-based, practice-focused, or are based in promising practices or innovative approaches to meet the needs of the community.[12] While some have assessed CHIP processes such as Carroll et al[13] who reviewed PHAB accredited CHIPS for planning frameworks and cross-sector partnerships, CHIPS have not been analyzed for implementation strategies; nor in alignment with Public Health 3.0.

To understand if and how CHIPs and proposed interventions and initiatives provide opportunities to integrate a Public Health 3.0-grounded approach, we propose a set of Public Health 3.0 CHIP strategy attributes (see Table 1). First, a public health agency CHIP centered in Public Health 3.0 would likely prioritize SDOH factors that promote health and well-being, such as economic development, education, housing, transportation, food, and the environment.[4,8]

Second, a Public Health 3.0-grounded CHIP requires moving beyond interventions that prioritize only individual-level competency and behavior change to instead address complex population-level issues.[7,16] Addressing these complex issues requires multi-level interventions at the organizational, community, and systems levels.[14,19,20] For example, Frieden[14] proposes the Health Impact Pyramid (HIP), a hierarchical framework for public health action. The base of the HIP includes interventions that have the highest population impact and require the least individual effort to create a change in health (ie, interventions that change the context to make individuals' default decisions healthy or address socioeconomic factors). Interventions toward the top of the pyramid require greater individual effort and have the least population impact (ie, counseling and education). Similarly, other public health scholars have posited that addressing multi-level interventions across the Socioecological Model (SEM) are most likely to create population-level impacts

to create change for both individuals and the contexts in which they live.[15,21] A Public Health 3.0-focused CHIP would include a variety of interventions across the levels of the HIP and SEM.

Third, a Public Health 3.0 CHIP would emphasize policy, systems, and environmental change (PSE) interventions. PSE interventions have been increasingly proposed as effective and sustainable approaches to address complex population health issues.[14,19,22,23] Working to address "modifications to the physical, social, political, and economic environment in which people make health-related decisions," PSE improvements can prompt and reinforce health behaviors at the population level.[14] These structural approaches are needed to shift power, money, and resources and improve SDOH inequities.[15,19]

Fourth, a Public Health 3.0-focused CHIP that employs PSE and multilevel approaches to address population health and health equity likely includes a greater number and diversity of cross-sectoral partnerships.[4,24,25] Cross-sectoral partners are needed to leverage resources, expertise, and collective action toward SDOH needs. Moreover, CHIPS focused on Public Health 3.0 concepts may demonstrate a greater diversity of collaboratively envisioned interventions and structural change initiatives across the SEM and population health levels.

Fifth and finally, Public Health 3.0 calls for actionable data to drive decision making[4]; while others have called for building or using the evidence-base of public health.[18] A Public Health 3.0 CHIP might therefore include evidence-based interventions or use evidence-based models to influence proposed interventions and initiatives.

Little is known about the current state of Public Health 3.0 interventions and initiatives in community health planning processes and resulting CHIPs. To assess the degree in which the Illinois CHIPs align with Public Health 3.0 and opportunities, the University of Illinois Chicago's (UIC) Policy, Practice and Prevention Research Center (P3RC), funded by the Centers for Disease Control and Prevention, partnered with the Illinois Public Health Institute (IPHI) and Illinois Department of Public Health (IDPH) to lead a systematic analysis of certified local health department CHIPs and their proposed interventions. Content analyses have previously been used to examine hospital community health needs assessments and their implementation strategies[26–29], as well as for CHIP planning approaches[13], and are appropriate for documenting the presence or absence of categories.[30,31]

Our goal in this analysis is to understand the current state of Public Health 3.0 as evidenced by local health department (LHD) CHIPs. The assessment aimed to: 1) categorize the CHIP priorities and 2) categorize CHIP strategies by their proposed Public Health 3.0 attributes (Table 1). Results were used, in part, to inform an update to the Illinois State Health Improvement Plan (SHIP) and to design training to promote Public Health 3.0 concepts. This paper reports the findings of the analysis and discusses implications for Illinois and public health agencies in general.

METHODS

We conducted a content analysis of Illinois CHIPs required for LHD certification from July to November 2020. The IDPH collects and reviews LHD CHIPs as a part of the Illinois Certified Local Health Department Code (77 Ill Adm. Code pt. 600 (2017)).[32] The code stipulates that LHDs should engage the community for input and utilize local data to identify health problems, establish at least 3 health priorities, and create a CHIP that must be adopted by the local board of health. In this plan, each identified priority should include at least 1 measurable objective, with corresponding impact objectives and proven intervention strategies, documented in a Health Problem Worksheet (HPW). For the most recent CHIP on file for Illinois's certified LHDs, we reviewed the HPW or other descriptions of objectives and intervention strategies (Appendix A).

To analyze CHIP data, a UIC P3RC team including 2 faculty with extensive local, regional, and state public health agency community health improvement planning experience, a staff member, and student created a coding framework based on Public Health 3.0 attributes (Table 1). The coding framework was developed based on constructs from the literature, faculty expertise, and preliminary reviews of the CHIPs. Codes aligned with study aims and included health priorities (eg, chronic disease, mental health, SDOH, and access to care)[33]; intervention approaches that align with levels on the HIP[14] and the SEM[15,21]; collaboration and partnership; training, and evidence-based strategies, or categories that did not align with the aforementioned frameworks but appeared in the CHIPs (eg, harm reduction and provision of tangible resources). Code definitions, citations, and examples are located in ee Table 2, Supplemental Digital Content 1.The project was deemed non-research by the UIC Institutional Review Board (#2020–0815).

The P3RC team deductively coded CHIP priorities and interventions using predefined categories in Microsoft Excel 2016 and calculated the number of CHIPs in which each code appeared. We calculated frequencies according to the existence or absence of each code but did not record the number of times a code appeared in a single CHIP. After multiple rounds of practice-coding, 2 project coders reviewed and coded the same 2 CHIPs with 86.4% intercoder reliability.[59] Interventions or initiatives that were not detailed in their approach were coded as unclear (eg, did not describe a target population or mechanism for creating change). Coding categories were not mutually exclusive; multiple codes were applied to an individual intervention strategy as appropriate (eg, a CHIP strategy that utilized a key community partner to implement bike lanes was coded as an environmental change; a community-level intervention on the SEM; and would also be coded as collaboration, partnerships, and coalitions).

RESULTS

Illinois has 102 counties; 15 of the 102 counties were part of 4 cross-county collaborations, which submitted 1 CHIP each. The city of Chicago, which is part of Cook County, submitted its own CHIP. IDPH provided 92 CHIPs representing all 102 counties and Chicago for this content analysis. Illinois health departments represent populations from 4,800 to more than 2.7 million. CHIPs ranged from 25 to 150 pages, went into effect

between 2011–2019, and spanned anywhere from 2 to 5 years in duration. While the priority scan included all 92 CHIPs, we excluded 2 CHIPs from the strategy scan due to missing strategies for the defined priorities. The resulting strategy analysis includes data from 90 CHIPs representing 98 counties across Illinois (see Table 3, Supplemental Digital Content 2, which summarizes results by health priority and intervention strategy).

Priorities

All CHIPs included at least 3 proposed health priorities as required by Illinois Administrative Code.[32] The priority scan revealed that most CHIPs (84%, n =77) identified chronic disease as a health priority, such as 'cancer, diabetes, or obesity.' Mental health was listed as a priority in 52% (n=48) of the CHIPs with examples that included suicide, depression, or anxiety. Access to quality care (eg, access to dental care and primary health care) and substance abuse (eg, opioid/heroin use, and drug/alcohol abuse or tobacco use) were each listed as priorities in 37% (n=34) of the CHIPs. Priorities to address SDOH appeared in only 13% (n=12) of CHIPs and addressed issues such as income and education, food insecurity, or health equity. All other priorities, such as bullying, appeared in 10% or fewer of the CHIPs.

Intervention Strategies

Intervention Alignment with the Health Impact Pyramid—The content analysis showed that 100% (n=90) of the CHIPs included counseling and education interventions, which, according to Frieden,[14] have the least potential for population health impact. Within the counseling and education subcategories, most CHIPs (86%, n=77) planned at least 1 health communication strategy, such as the use of brochures, resource guides for the community, or multimedia campaigns. A total of 77% (n=69) of CHIPs had at least 1 health education activity, such as a health fair or workshop, and 73% (n=66) planned at least 1 program, such as a Chronic Disease Self-Management Program.[60] Finally, 40% (n=36) of CHIPs mentioned a counseling intervention, such as an in-clinic counseling or support group.

For 41% (n=37) of CHIPs, strategies included ongoing clinical interventions, such as chronic disease treatment (eg, blood pressure treatment, routine screening for diabetes)). Thirty-two percent (n=29) of CHIPs proposed long-lasting interventions, such as cancer screenings and immunizations. For this content analysis, we divided HIP's "changing the context to make individuals' default decisions healthy"[14] category into 3 subcategories: policy, systems, and environmental change. Results indicate that 34% (n=31) of CHIPs had at least 1 systems change, such as implementation of care coordination or a new screening protocol and tools; 24% (n=22) had at least 1 policy change including the development of ordinances primarily around smoking; and 21% (n=19) had at least 1 environmental change, such as creation of a community garden. In the final HIP category, which has the greatest potential population-level impact,[14] only 12% (N=11) of CHIPs included interventions that addressed socioeconomic factors, such as identifying social and economic barriers for accessing behavioral health treatment.

Intervention Alignment with the Socioecological Model—Using the SEM, 97% (n=87) of CHIPs proposed intrapersonal interventions, which often included individual health education approaches. Sixty percent (n=54) of CHIPs proposed interpersonal interventions, and in many of these interventions the clinicians provided education to parents on child safety. Thirty-four CHIPs (38%) included mentions of institutional interventions, such as systematic training of employees, changes to the workplace environment, or development of an organizational policy or protocol. Community-level interventions, noted in 89% (n=80) of CHIPs, included community-wide communication campaigns (eg, a media campaign to increase mental health awareness) or enhancement of community services (eg, hiring additional medical professionals in the community). Finally, 48% (n=43) of CHIPs had policy-level intervention strategies, focused heavily on policies related to tobacco, such as the Smoke-free Illinois Act.[61] Only 10% (n=9) of CHIPs proposed robust, multi-level multi-component interventions.[49]

Intervention alignment with partnerships, training, and evidence-based strategies—Of the 90 CHIPs, 96% (n=86) had at least 1 strategy pertaining to collaboration, coalition building, or partnerships. Most of these partnerships focused on providing services to the community, such as health screenings. Training strategies to help improve specific skills like cultural competency, trauma informed care, or education on mental illness were proposed in 52% (n=47) of CHIPs. Lastly, 32% (n=29) of CHIPs mentioned use of at least 1 evidence-based strategy, such as Best Practices for Comprehensive Tobacco Control Programs from the Centers for Disease Control and Prevention[62] or the Coordinated Approach to Child Health (CATCH).[63]

Other codes—There were several strategies noted in CHIPs that did not align with our proposed Public Health 3.0 analysis framework. Three of these strategy types were content focused and included harm reduction (eg, prescription drug take back events), present in 8% (n=8) of CHIPs; strategies to increase access to health services (eg, helping residents to sign up for health insurance), present in 73% (n=66) of CHIPs; and tangible resource provision (eg, provision of food, toothbrushes, or condoms), present in 27% (n =24) CHIPs. Advocacy, not included in our Public Health 3.0 framework, was mentioned at least once in 31% (n=28) of CHIPs and included engagement policy makers to inform them about health issues. Compliance or enforcement activities appeared in 18% (n=16) of CHIPs and most were related to enforcement of existing smoke-free or alcohol policies. Fifty-six percent (n=50) of plans had at least 1 unclear strategy, and 16% (n=14) had at least 1 strategy that did not align with other codes and was categorized as ‘other’ (eg, neighborhood watch programs).

DISCUSSION

This content analysis provides a single point of evidence to understand public health agency alignment with collective, upstream Public Health 3.0 approaches through CHIPs. As public health agencies and their partners strive to address population health and health equity, more support is needed to build their capacity and capability for Public Health 3.0. Findings highlight several potential areas for workforce and system capacity development to better prepare LHDs and public health professionals to address complex public health problems

with a SDOH focus through community health improvement planning in general; and inform the UIC P3RC and their Illinois partners' development of a Public Health 3.0 aligned leadership institute and training opportunities.

CHIPs aligned with Public Health 3.0 would likely have both SDOH-related health priorities and SDOH-related intervention strategies. However, our content analysis found that at the time in which Illinois' CHIP plans were written, only 13% (n=12) included explicit priorities related to SDOH and only 12% (n=11) of CHIPs included interventions that addressed socioeconomic factors, such as housing quality. Explicitly addressing health equity may require more capacity building support for public health agencies to understand their role and how to address multi-level, PSE approaches with cross-sectoral partners.[64,65]

In addition, addressing SDOH in a Public Health 3.0 model calls for multi-level, cross-sectoral community-wide PSE approaches.[25,64,65] Our content analysis found limited presence of these approaches. Most Illinois CHIP strategies focused on single, short-term or one-time activities of a disease-specific nature, or around service provision. For example, all CHIPS included counseling and education strategies, but only 10% (n=9) of CHIPs proposed multi-level multi-component interventions (eg, providing technical assistance, assessment, community capacity building, and promotion and expansion of healthy foods through an intervention similar to the Healthy Corner Store Initiative).[66] While 89% (n=80) of CHIPs included community-level interventions, the majority of these were related to community-wide health communication activities focused on specific health content (eg, a mental health awareness campaign). Slightly over half the CHIPs (53%, n=48) included PSE strategies that focused on service clinical care coordination; or topical content areas (eg, various smoke-free and tobacco-control approaches). Finally, 96% (n=86) of CHIPs had at least 1 strategy pertaining to collaboration, coalition building, or partnerships but focused on coordination of services.

Our findings align with those of Asada et al[16] whose systematic review found that most PSE structural change initiatives focused on approaches that are health directed (eg, taxing sugar-sweetened beverages) rather than health related (eg, living wage laws). Further, Freudenberg et al[65] notes that reducing health inequities requires public health agencies to transition from content, disease-focused downstream thinking that emphasizes biomedical and behavioral paradigms toward a focus on upstream thinking and approaches. Developing capacity to address SDOH requires new mindsets, skills, experience, and evaluation approaches to truly understand SDOH and lead collaborations with cross-sectoral partners who may have more experience addressing inequity.[64,65,67] Further, support may be needed for developing CHIPs with a focus on SDOH and structural PSE change.

Public Health 3.0 also emphasizes the need to engage in data-driven, evidence-based decision making (EBDM).[4] Only 32% percent (n=29) of CHIPs mentioned the use of an evidence-based strategy in this analysis, leaving opportunity for improvement. Practitioner knowledge, skills, and abilities for integrating EBDM approaches in decision making and implementation remains an opportunity for researchers and practitioners.[54] Training remains a primary dissemination and translation strategy to increase capacity and competency for

data-driven, evidence-based decision making and implementation of EBDM approaches; however more approaches are needed to address this opportunity. [68, 69]

LIMITATIONS

Our findings are limited to the Illinois-specific CHIPs and are only one point of evidence in assessment of Public Health 3.0 alignment across Illinois LHDs. Other activities are underway that may reflect aspects of Public Health 3.0 readiness that CHIPs did not capture. In addition, while most LHDs used a similar planning approach in this sample, the plans varied in format, language, and content leaving room for misinterpretation of text and meaning; some strategies may have been inadvertently omitted or misclassified. It is also important to note that funding to support certified LHDs in Illinois is allocated specifically to communicable disease and environmental health functions. Moreover, there is little financial incentive to support community-based multi-level cross-sectoral strategies, skewing CHIP interventions and initiatives toward a service orientation rather than more robust approaches. In addition, due to the varied content in the CHIPs, our assessment did not capture the contextual factors listed by LHDs related to SDOH (ie., root causes of SDOH or disparities). Another limitation is that there is not yet an operational definition of Public Health 3.0; findings are limited to our definitions used for this study. Finally, it remains unclear how COVID-19 may impact readiness of LHDs to undertake Public Health 3.0.

CONCLUSION

Community health improvement planning is a cornerstone activity for many public health agencies. . A CHIP led by a multi-sectoral collaborative using robust, local, and actionable data to identify upstream SDOH community priorities with high population impact strategies, including PSE, is likely to have a greater opportunity to address inequities and facilitate Public Health 3.0 capacities. This content analysis provided one source of evidence in analyzing CHIP interventions and initiatives against Public Health 3.0 attributes to understand the current state of LHDs in their Public Health 3.0 journey. Findings suggest that there may be opportunity to improve the capacity of Illinois public health agencies to enhance their Public Health 3.0 capacities and capability. Illinois and other public health agencies might enhance CHIP processes to align with Public Health 3.0 through capacity building approaches as well as clearer definitions of expected strategies to advance with Public Health 3.0 transformation.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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References

1. COVID-19 racial and ethnic disparities. Centers for Disease Control and Prevention website. https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/index.html. Updated December 2020. Accessed May 5, 2021.
2. Egede LE, Walker RJ. Structural racism, social risk factors, and covid-19—A dangerous convergence for black americans. N Engl J Med. 2020;383(12):E77. [PubMed: 32706952]
3. Erwin PC, Brownson RC. The public health practitioner of the future. Am J Public Health. 2017;107(8):1227–1232. [PubMed: 28640683]
4. DeSalvo KB, Wang YC, Harris A, Auerbach J, Koo D, O'Carroll P. Public health 3.0: A call to action for public health to meet the challenges of the 21st century. Prev Chronic Dis. 2017; 14:E78. [PubMed: 28880837]
5. de Beaumont Foundation. Building skills for a more strategic workforce: a call to action. http://www.debeaumont.org/consortiumreport/. Published July 18th, 2017. Accessed May 5, 2021.
6. Chehimi S, Cohen L. Prevention Institute. Towards a 21st century approach. https://www.preventioninstitute.org/sites/default/files/publications/Towards%20a%2021st%20Century.Final.5.pdf. Published October 2013. Accessed March 24th, 2021.
7. Resnick BA, Morlock L, Diener-West M, Stuart EA, Spencer M, Sharfstein JM. PH WINS and the future of public health education. J Public Health Manag Pract. 2019;25(suppl 2): S10–S12. [PubMed: 30720612]
8. Fraser M, Castrucci B, Harper E. Public health leadership and management in the era of public health 3.0. J Public Health Manag Pract. 2017;23(1):90–92. [PubMed: 27870719]
9. Bogaert K, Castrucci BC, Gould E, Rider N, Whang C, Corcoran E. Top training needs of the governmental public health workforce. J Public Health Manag Pract. 2019;25(suppl 2):S134–S144. [PubMed: 30720626]
10. de Beaumont Foundation. Adapting and aligning public health strategic skills. https://debeaumont.org/wp-content/uploads/2021/04/Adapting-and-Aligning-Public-Health-Strategic-Skills.pdf. Published March 2021. Accessed May 5, 2021.
11. Public Health Accreditation Board. National Public Health Department Accreditation: Readiness Checklists. https://www.phaboard.org/wp-content/uploads/2019/01/checklist-revisedFINAL.pdf. Updated July 2015. Accessed May 5, 2021.
12. Public Health Accreditation Board. Standards & Measures. Version 1.5. https://phaboard.org/wp-content/uploads/PHABSM_WEB_LR1-1.pdf. Published December 2013. Accessed May 5, 2021.
13. Carroll LD, Wetherill MS, Teasdale TA, Salvatore AL. Community health improvement plans: an analysis of approaches used by local health departments. J Public Health Manag Pract. 2021;00(00):1–8.
14. Frieden TR. A framework for public health action: the health impact pyramid. Am J Public Health. 2010;100(4):590–595. [PubMed: 20167880]
15. Golden SD, Earp JL. Social ecological approaches to individuals and their contexts: twenty years of health education & behavior health promotion interventions. Health Educ Behav. 2012;39(3):364–372. [PubMed: 22267868]
16. Asada Y, Lieberman LD, Neubauer LC, Hanneke R, Fagen MC. Evaluating structural change approaches to health promotion: An exploratory scoping review of a decade of US progress. Health Educ Behav. 2018;45(2):153–166. [PubMed: 28810806]
17. Wolff T, Minkler M, Wolfe SM, Berkowitz B, Bowen L, Butterfoss FD, Lee KS. Collaborating for equity and justice: Moving beyond collective impact. NPQ. 2017; 9: 42–53.

18. Brownson RC, Fielding JE, Maylahn CM. Evidence-based public health: a fundamental concept for public health practice. Ann Rev Public Health. 2009; 30:175–201. [PubMed: 19296775]
19. Lieberman L, Golden SD, Earp JAL. Structural approaches to health promotion: What do we need to know about policy and environmental change? Health Educ Behav. 2013;40(5):520–525. [PubMed: 24048612]
20. Schölmerich VL, Kawachi I. Translating the socio-ecological perspective into multilevel interventions: Gaps between theory and practice. Health Educ Behav. 2016;43(1):17–20. [PubMed: 26747715]
21. McLeroy KR, Bibeau D, Steckler A, Glanz K. An ecological perspective on health promotion programs. Health Educ Q. 1988;15:351–37. [PubMed: 3068205]
22. Asada Y, Gilmet K, Welter C, Massuda-Barnett G, Kapadia DA, Fagen M. Applying theory of change to a structural change initiative: evaluation of model communities in a diverse county. Health Educ Behav. 2019;46(3):377–387. [PubMed: 30592224]
23. Brownson RC, Haire-Joshu D, Luke DA. Shaping the context of health: a review of environmental and policy approaches in the prevention of chronic diseases. Annu Rev Public Health. 2006;27:341–370. [PubMed: 16533121]
24. Fick-Cooper L, Williams A, Moffatt S, Baker EL. Boundary spanning leadership: promising practices for public health. J Public Health Manag Pract. 2019;25(3):288–290. [PubMed: 30933007]
25. Wolff T, Minkler M, Wolfe SM, et al. Collaborating for equity and justice: Moving beyond collective impact. NPQ. 2017;9:42–53.
26. Fischer KR, Schwimmer H, Purtle J, et al. A content analysis of hospitals' community health needs assessments in the most violent U.S. cities. J Community Health. 2018;43:259–262. [PubMed: 28852912]
27. Powell RE, Doty AMB, Rising KL, Karp DN, Baehr A, Carr BG. A content analysis of nonprofit hospital community health needs assessments and community benefit implementation strategies in Philadelphia. J Public Health Manag Pract. 2018;24(4):326–334. [PubMed: 28832433]
28. Singh S, Kiessling K, Rhodes J. Nonprofit hospitals' response to the opioid epidemic in urban communities: a content analysis of hospitals' community health needs assessments and implementation strategies. J Public Health Manag Pract. 2020;26(3):243–251. [PubMed: 32235206]
29. Apatu E, Sinnott W, Piggott T,et al. Where are we now? A content analysis of Canadian master of public health course descriptions and the public health agency of Canada's core competencies. J Public Health Manag Pract. 2021;27(2):201–207. [PubMed: 32371629]
30. Krippendorff K. Content analysis: An introduction to its methodology. In: Barnouw E, Gerbner G, Schramm W, Worth TL, Gross L. International encyclopedia of communication. New York, NY: Oxford University Press. 1989: 403–407. https://repository.upenn.edu/cgi/viewcontent.cgi?article=1232&context=asc_papers. Accessed May 5, 2021.
31. Neuendorf KA. Content analysis and thematic analysis. In Brough P. (Ed.) Research methods for applied psychologists: Design, analysis and reporting. New York, NY: Routledge. 2019; 211–223. https://academic.csuohio.edu/kneuendorf/vitae/NeuendorfCA_TA_19.pdf. Accessed May 5, 2021.
32. Certified Local Health Department Code. Section 600.400. Public Health Practice Standards. https://www.ilga.gov/commission/jcar/admincode/077/077006000D04000R.html. Accessed May 5, 2021.
33. Illinois Department of Public Health. Healthy Illinois 2021: State Health Improvement Plan. http://www.healthycommunities.illinois.gov/documents/SHIP-FINAL.pdf. Accessed May 5, 2021.
34. Illinois Department of Public Health. Healthy Illinois 2021: State Health Assessment. http://www.healthycommunities.illinois.gov/documents/State-Health-Assessment-Final-091316.pdf. Accessed May 5, 2021.
35. Mental Health. Center for Disease Control and Prevention website. https://www.cdc.gov/mentalhealth/learn/index.htm. Updated January 26, 2018. Accessed May 5, 2021.
36. Institute of Medicine, Committee on Monitoring Access to Personal Health Care Services. Summary. In: Millman M. Access to Health Care in America. Washington, DC: National Academies Press; 1993.

37. Substance Abuse. Health People website. https://www.healthypeople.gov/2020/topics-objectives/topic/substance-abuse. Updated October 8, 2020. Accessed May 5, 2021.
38. Social Determinants of Health. World Health Organization website. https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1. Accessed May 5, 2021.
39. Injury and Violence. Illinois Department of Public Health website. https://www.dph.illinois.gov/topics-services/prevention-wellness/injury-violence-prevention. Updated 2021. Accessed May 5, 2021.
40. Oral Health Conditions. Centers for Disease Control and Prevention website. https://www.cdc.gov/oralhealth/conditions/index.html#:~:text=Related%20Pages,)%20disease%2C%20and%20oral%20cancer. Updated November 3, 2020. Accessed May 5, 2021.
41. Sexually Transmitted Diseases (STDs). Centers for Disease Control and Prevention website. https://www.cdc.gov/std/general/default.htm. Updated November 4, 2016. Accessed May 5, 2021.
42. Promoting Health for Older Adults. Centers for Disease Control and Prevention website. https://www.cdc.gov/chronicdisease/resources/publications/factsheets/promoting-health-for-older-adults.htm Updated September 21, 2020. Accessed May 5, 2021.
43. Definitions of Environmental Health. National Environmental Health Association website. https://www.neha.org/about-neha/definitions-environmental-health. Accessed May 5, 2021.
44. Health Communication and Health Information Technology. The Guide to Community Preventive Services website. https://www.thecommunityguide.org/topic/health-communication-and-health-information-technology. Accessed May 5, 2021.
45. Health Education. Rural Health Information Hub website. https://www.ruralhealthinfo.org/toolkits/health-promotion/2/strategies/health-education. Accessed May 5, 2021.
46. Issel LM, Wells R, Williams M. Health Program Planning and Evaluation: A Practical Systematic Approach to Community Health. Burlington, MA: Jones & Bartlett Publishers; 2017
47. Cook County Department of Public Health, MidAmerica Center for Public Health Practice, and Illinois Prevention Research Center, University of Illinois at Chicago. Policy, systems, environmental change. https://p3rc.uic.edu/wp-content/uploads/sites/561/2019/11/PSE_Change_508.pdf. Published November 2018. Accessed May 5, 2021.
48. Original Essential Public Health Services Framework. Centers for Disease Control and Prevention website. https://www.cdc.gov/publichealthgateway/publichealthservices/originalessentialhealthservices.html. Updated September 8, 2020. May 5, 2021.
49. Mikkelsen BE, Novotny R, Gittelsohn J. Multi-level, multi-component approaches to community based interventions for health living—a three case comparison. Int J Environ Res Public Health. 2016;13(10):1023.
50. Roussos ST, Fawcett SB. A review of collaborative partnerships as a strategy for improving community health. Annu Rev Public Health. 2000;21(1) 369–402. [PubMed: 10884958]
51. Himmelman AT. Communities working collaboratively for a change. Himmelman Consulting Group; 1991.
52. Janosky JE, Armoutliev EM, Benipal A, et al. Coalitions for impacting the health of a community: the Summit County, Ohio, experience. Popul Health Manag. 2013;16(4):246–254. [PubMed: 23537155]
53. Institute of Medicine. Who Will Keep the Public Healthy? National Academies Press. Washington, DC: 2003.
54. Brownson RC, Fielding JE, Green LW. Building capacity for evidence-based public health: Reconciling the pulls of practice and the push of research. Ann Rev Public Health. 2018;39:27–53. [PubMed: 29166243]
55. Gold RS, Miner KR; 2000 Joint Committee on Health Education and Promotion Terminology. Report of the 2000 Joint Committee on Health Education and Promotion Terminology. J Sch Health. 2002;72(1):3–7. [PubMed: 11865796]
56. Schaffer M, Strohschein S. Minnesota Department of Health. Public Health Interventions: applications for public health nursing practice. https://www.health.state.mn.us/communities/practice/research/phncouncil/docs/PHInterventions.pdf. Accessed May 5, 2021.
57. Harm reduction: An approach to reducing risky health behaviours in adolescents. Paediatr Child Health. 2008;13(1):53–60. [PubMed: 19119355]

58. Persaud N, Steiner L, Woods H. Health outcomes related to the provision of free, tangible goods: a systematic review. PLoS One. 2019;14(3).
59. O'Connor C, Joffe H. Intercoder reliability in qualitative research: debates and practical guidelines. Int J Qual Methods. 2020;19:2–13.
60. Self-Management Education Workshops. Centers for Disease Control and Prevention website. https://www.cdc.gov/arthritis/interventions/self_manage.htm. Updated June 2020. Accessed May 5, 2021.
61. Illinois General Assembly. Smoke Free Illinois Act. 2008. (410 ILCS 82/1) https://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=2893&ChapterID=35. Accessed May 5, 2021.
62. Best Practices for Comprehensive Tobacco Control Programs. Centers for Disease Control and Prevention website. https://www.cdc.gov/tobacco/stateandcommunity/best_practices/index.htm. Updated December 2019. Accessed May 5, 2021.
63. CATCH-Coordinated Approach to Child Health; Curriculum & Training. Centers for Disease Control and Prevention website. https://www.cdc.gov/prc/resources/tools/catch.html. Updated March 2018. Accessed May 5, 2021.
64. Welter C, Jarpe-Ratner E, Bonney TC, Pinsker E, Fisher E, Yankelev A, Zanoni J. Development of the healthy work collaborative: findings from an action research study to inform a policy, systems, and environmental change capacity-building initiative addressing precarious employment. Health Promot Pract. 2021;22(1):41–51. [PubMed: 32875915]
65. Freudenberg N, Franzosa E, Chisholm J, Libman K. New approaches for moving upstream: how state and local health departments can transform practice to reduce health inequalities. Health Educ Behav. 2015;42(suppl 1):S46–S56.
66. Cook County Public Health. Healthy Corner Stores Toolkit. https://www.cookcountypublichealth.org/healthyhotspot-new/wp-content/uploads/sites/4/2018/11/corner-store-toolkit-body-6F.pdf. Published April 2017. Accessed May 5, 2021.
67. Furtado KS, Brownson C, Fershteyn Z, Macchi M, Eyler A, Valko C, Brownson RC. Health departments with a commitment to health equity: a more skilled workforce and higher-quality collaborations. Health Aff. 2018;37(1):38–46.
68. Brownson RC, Reis RS, Allen P, et al. Understanding administrative evidence-based practices: findings from a survey of local health department leaders. Am J Prev Med. 2014;46(1):49–57. [PubMed: 24355671]
69. Harris JR, Cheadle A, Hannon PA, et al. A framework for disseminating evidence-based health promotion practices. Prev Chronic Dis. 2011;9:E22. [PubMed: 22172189]

IMPLICATIONS FOR POLICY AND PRACTICE

- Illinois LHDs are required to produce a CHIP based on Illinois public health code for IDPH certification. However, funding for certification is currently designated for only communicable disease and environmental health activities. Policy makers in Illinois and elsewhere should fund SDOH to increase access to local actionable data and help build capacity of LHDs to implement PSE strategies. Other states might consider adoption of a CHIP requirement for LHDs similar to Illinois.
- Illinois Certified Local Health Department Code should be amended to require key elements of Public Health 3.0 in CHIP development.
- Workforce development strategies focus on individual competencies rather than building collaborative leadership capacity for agencies to support long-term, partner, and community engaged processes, like developing and implementing a Public Health 3.0 CHIP. More robust approaches to capacity building that promote learning as opposed to just training should be considered and developed.
- More funding should be designated to help support governmental and other partner agency efforts toward a Public Health 3.0 CHIP with an equity-focused, cross-sectoral process resulting in increased PSE and multi-level approaches.
- Public Health 3.0 as a framework should expand to include historical and structural racism as root causes of SDOH and disparities.
- More work is needed to provide an operational definition of Public Health 3.0 for researchers and practitioners to help understand, assess, measure, and evaluate the model, and increase its adoption in practice.

Table 1.

Proposed Public Health 3.0 Attributes[4] Expected in a Community Health Improvement Plan

Priority focus on Social Determinants of Health[4]
Variety of interventions across the Health Impact Pyramid[14] with an emphasis on interventions that focus on upstream factors such as policy, systems, and environmental and socioeconomic changes.
Variety of interventions across the Socioecological Model[15] levels, including multi-level interventions, moving beyond a dominance in individual behavior change toward systems change.
Presence of policy, systems, and environmental approaches focused beyond health content.[15,16]
Workforce development and training that aligns with Public Health 3.0 skills, eg, strategic and systems thinking.[5]
Presence of cross-sectoral partnerships/diverse partnerships focused on Social Determinants of Health.[17]
Use of evidence-based interventions or presence of evidence-based models in proposed interventions.[4,18]