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Predictors of timing of pregnancy discovery

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Abstract

In the U.S., groups advocating for and against abortion rights often deploy public health arguments to advance their positions. Recently, these arguments have evolved into state laws that use the government health department infrastructure to increase law enforcement and regulatory activities around abortion. Many major medical and public health associations oppose these new laws because they are not evidence-based and do not protect women's health. Yet, state health departments have been defending these laws in court. In this commentary, we propose a 21st Century public health approach to abortion based in an accepted public health framework. Specifically, we apply the 10 Essential Public Health Services framework to abortion to describe how health departments should engage with abortion. With this public health framework as our guide, we argue that health departments should be: facilitating women's ability to obtain an abortion in the state and county where they reside; researching barriers to abortion care in their states and counties; and promoting the use of a scientific evidence base in abortion-related laws, policies, regulations, and implementation of essential services.

Government public health agencies in the United States have been involved with abortion for close to 50 years. Historically, these agencies have focused on abortion-related data collection, clinical quality improvement, and research synthesis.[1-4] More recently, public health agencies have found themselves tasked with defending, implementing, and enforcing abortion-related laws that are not consistent with public health frameworks. In one recent example, the state health department of Texas was tasked with enforcing a law – House Bill 2 (HB2)[5] – that applied stringent regulations on abortion providers. The stringency of the HB2 regulations greatly exceeded those applied to other comparable medical procedures.[6] Like other recent abortion-related bills introduced in state legislatures, HB2 was passed with the stated goal of ensuring the health and safety of abortion patients. It was passed with this stated goal despite a lack of evidence of an abortion patient safety problem[7,8] or that the new regulations would have improved patient safety. HB2 was based on model legislation published by Americans United For Life, an anti-abortion-rights group that seeks to limit women's ability to obtain abortions.[9] HB2 regulations proved so difficult to comply with that the law's enforcement led to the closure of about half of the abortion facilities in Texas and threated the closure of another dozen.[10]

Two provisions of HB2 were challenged in court,[6] and major medical and public health associations – including the *American Medical Association*, the *American Congress of Obstetricians and Gynecologists*, and the *American Public Health Association - submitted amicus briefs in opposition to the law.*[11] [12] The Supreme Court held that laws regulating the provision of abortion are unconstitutional if the burdens they impose (e.g. on women's ability to obtain abortions) are not balanced by proportional benefits (e.g. to patient safety). It also instructed future courts considering challenges to such laws to carefully assess whether the law is based on credible evidence, and to not just rely on speculation by or judgment of legislators. [6] In this ruling, the country's highest court affirmed core public health principles for evidence-based public health.[13]

A number of public health publications have discussed and evaluated HB2 and the *Whole Woman's Health* decision (e.g. [14-16]). There does not appear to have been a focus in this literature on the fact that the Commissioner of the Texas Department of State Health Services was the defendant in the court case. These publications also do not appear to have substantively discussed what it means for public health departments to serve in the role of defending,

implementing, and enforcing abortion-related policies that reduce access to health services and are inconsistent with the best available scientific evidence.

Considering the role of health departments in abortion-related laws is critical. Since 2010, there has been a dramatic increase in the number of state-level laws restricting abortion[17] and state health departments' primary abortion-related activities appear to be implementing and enforcing such laws.[18] While the *Whole Woman's Health* decision ruled that Texas's HB2 was unconstitutional and blocked its enforcement, the issue of health departments' abortion-related activities has not gone away. Laws with requirements similar to HB2 remain either in place or on-hold in multiple other states while court cases challenging them continue.[19] Other laws require health departments to implement and enforce requirements that abortion providers present inaccurate information to women seeking abortion as part of the consent process.[18,20] Model legislation proposed by Americans United For Life in 2016 continues to focus on passing laws that use the public health infrastructure – specifically, increasing abortion vital statistics and complications data gathering requirements.[21] We note that these proposed data surveillance practices may appear reasonable, but the particulars of the proposed laws in fact require that abortion data be collected in a way that is burdensome, collects more than the minimum data points necessary for the public health purpose, and risks patient privacy.[22] The proposed complications data gathering requirements also differ from adverse event data collection for other outpatient medical procedures, which is typically done by non-government bodies as part of quality improvement efforts.[23]

We certainly recognize that state health officials have obligations to enforce health-related laws developed by state legislatures. Yet, we are concerned about the role health departments have played in HB2 and similar cases.[24] While there is no evidence that laws such as HB2 improve patient safety, there is evidence that HB2 limited women's ability to obtain abortions.[10] Research consistently shows that limiting women's ability to obtain abortions has an adverse effect on women's health and well-being[25,26] and thus is counter to public health efforts to protect and improve women's health. Enforcing laws and defending regulations that have no basis in scientific evidence and which evidence indicates may worsen women's health violate the public health principles (e.g.[13]) in which we were trained a public health professionals. As an alternative to continuing to allow legislators to define the abortion-related activities in which

health departments engage, we propose what health departments might do if they used an accepted public health framework to guide their abortion-related activities.

A 21st Century Public Health Approach to Abortion

Drawing on our collective experience in public health research and practice, we propose a 21st Century public health approach to abortion that is based in an accepted public health framework and thus, considers the role of public health agencies beyond vital statistics data collection and enforcement of anti-abortion legislation. Specifically, we apply the 10 Essential Public Health Services to abortion to propose how health departments should engage with abortion. Our proposed approach describes what health department activities related to abortion might look like if health departments were to use an accepted public health framework to guide their abortion-related activities rather than focus primarily on enforcing abortion-related laws. We offer this description to current and new public health professionals, who may be asked to or have the opportunity to use the health department infrastructure to engage in public health services related to abortion.

We base this analysis on a widely accepted public health framework – the 10 Essential Public Health Services.[27] Briefly, in 1994, the Public Health Functions Steering Committee of the Public Health Service published a framework outlining the core services of public health[28] with the aim of measuring and improving the performance of public health core functions. Multiple federal, state, and local governments have used these essential services to guide, categorize, and assess their public health activities and identify gaps in what they should be doing.[28,29]

In Table 1, we apply the framework to abortion and offer examples of what each essential service could look like for abortion. Health department activities based in the framework would include: facilitating women's ability to obtain an abortion in the state and county where she resides, researching barriers to abortion care in their states and counties, and promoting the use of a scientific evidence base in abortion-related laws, policies, regulations, and implementation of essential services.

Making the 21st Century approach a reality

Some of the abortion-related Essential Public Health Services we have outlined and summarized are well-within current health department practices, e.g. collecting vital statistics data according to accepted public health standards.[18,30] Reaching a point where all health

departments provide all of the abortion-related Essential Public Health Services outlined is not a realistic short-term expectation. However, there are short-term opportunities for health departments to improve the quality of their abortion-related work and begin to expand their abortion-related essential public health services. They can do this by looking to other health departments and drawing on experiences from services already provided in related areas. We describe a few examples below.

Services such as developing or enforcing facility standards and conducting quality assurance and improvement work (a value-neutral description version of what HB2 required the Texas Department of State Health Services to do, if that work was based in evidence) are within the domain of health departments. Some health departments – such as Maryland and North Carolina – have developed abortion facility standards in a way that incorporates the best available scientific evidence and conforms to standards for evidence-based public health.[13,31,32] There is also historical precedent. Local health departments set facility standards for abortion in the 1970s and both local health departments and the federal government engaged in clinical quality improvement for abortion in the 1970s through 1990s.[2,4] When doing these abortion-related activities, these local and federal health departments relied heavily on the data and evidence they gathered to inform their abortion facility-standards and to improve the quality of abortion care.

Other services – such as facilitating women's ability to obtain abortions through activities such as transportation support, ensuring local availability of abortion services, and directly providing abortion services when no other provider exists – go against the tide of how many state health departments currently engage with abortion. Yet, these services are not unusual services for health departments to engage in; many health departments provide transportation support and ensure local availability of prenatal care providers and some directly provide health care services for pregnant women planning to give birth.[33] Some of these are also abortion-related activities that local health departments provided soon after abortion became legal.[4] A few local health departments currently facilitate women's ability to obtain abortions through listing information about abortion among other local reproductive health and social services.[18] Facilitation activities by state health departments would dramatically extend abortion-related essential public health services.

To begin moving towards aligning health departments' abortion-related activities with an accepted public health framework, public health professionals in health departments could choose one essential service that meets the needs of their community. On a longer time frame, public health professionals can take steps to achieve the long-term vision of having all health departments' abortion-related activities aligned with an accepted public health framework. Public health professionals in a variety of settings should consider and engage with this list of essential abortion-related services to improve it. Public health professionals should consider not just what is feasible, but what health departments should be doing if politics and resources were not barriers. Public health professionals should then revise and enhance descriptions of abortion-related Essential Public Health Services. Research will be needed to understand barriers to carrying out this work in health departments. Public health professionals will need to map the abortion-related Essential Public Health Services in which other non-governmental organizations already engage. Public health professionals will then have to consider which services should reside within health departments versus which should be carried out by other organizations.

There is no question that this process will be challenging. However, the alternative is to have legislators define how the public health infrastructure is employed in relation to abortion. The consequences of allowing legislators to decide has already been documented in states where health departments have enforced restrictive abortion laws, resulting in women who seek abortions obtaining abortions later in pregnancy or being unable to obtain an abortion altogether.[10,34]

Moving forward

This is a key moment in the history of public health and abortion in the U.S. It is essential to open the conversation about government public health's role in abortion so current and future generations of public health professionals have guidance when they are asked to perform new abortion-related services. We see this Commentary as a first step to inspire a crucial conversation about how health departments should engage with abortion. Our list is by no means exhaustive, and we welcome feedback and thoughts about how to continue this conversation. This conversation needs to occur throughout the U.S.; in Schools of Public Health and in health departments; at the federal, state and local level; and across our professional discipline. Public

health professionals should define the abortion-related services in which health departments should engage. The time to start doing so is now.

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Contributor statement

SR led the development of the concept, led the literature review, led the development of the content, drafted the manuscript and incorporated co-author feedback. LF contributed to the concept, participated in the literature review, contributed to the content, and provided feedback on the manuscript. NB contributed to the concept and provided feedback on the manuscript. AD contributed to the concept, participated in the literature review, contributed to the content, and provided feedback on the manuscript. All authors approved the final version of the manuscript.

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Table 1. 10 Essential Public Health Services applied to abortion	
Essential Public Health	**Abortion-specific example**
1. Monitor health status to identify community health problems	• Gather and share vital statistics data about number of abortions and demographics of women having abortions and improve vital statistics data gathering systems • Collect data to track mortality risk associated with abortion, especially unsafe abortion • Apply principles for data collection for other vital statistics data collection to abortion data. For example, all data collected should serve a public health purpose, protect patient and provider privacy, and minimize compliance burden on providers
2. Diagnose and investigate health problems and health hazards in the community	• Investigate reports of abortion-related morbidity and of abortion-related mortality • Investigate reports of increases in unsafe abortion and evaluate whether they are increasing, and, if so, identify factors that have contributed to this increase.
3. Inform, educate, and empower people about health issues	• Offer agenda-free options counseling about abortion, adoption, and birth at health department clinics and by health department staff caring for pregnant women • Develop health education strategies to inform women about state-abortion laws, including how they might affect their experiences with obtaining or ability to obtain an abortion and steps they can take to overcome these obstacles • Inform the public, providers, and policy makers about the evidence regarding the safety of abortion, including the effects of having an abortion vs. giving birth on mental and physical health • Develop and implement harm reduction health education strategies for women who have decided to attempt to self-induce an abortion
4. Mobilize community partnerships to identify and solve health problems	• Engage stakeholders to successfully implement new abortion services, including medication abortion, 2nd trimester, and later services when those services are otherwise unavailable • Gather and engage stakeholder perspectives on policies to reduce morbidity and mortality from abortion • Engage stakeholders to develop systems and programs to support women unable to obtain abortions due to state laws and other barriers to abortion care
5. Develop policies and plans that support individual and community health efforts	• Develop policies and plans to reduce and eliminate challenges women and providers have in enrolling in pregnancy-specific Medicaid and getting it to pay for abortion • Promote the use of a scientific knowledge base in policy and decision-making about abortion, including (but not limited to) policies related to safety of abortion and health outcomes from abortion • Evaluate the effects of policy changes that may affect need for or ability to obtain abortions • License and inspect facilities in which abortions are performed using similar approaches to other non-hospital based outpatient procedures, • Develop and implement evidence-based policies and plans to reduce abortion-related morbidity and mortality, including from unsafe abortion

6. Enforce laws and regulations that protect health and ensure safety	• Enforce laws against abortion providers who have had their medical licenses revoked
	• Enforce laws and regulations that
	  o the evidence from research and evaluations indicate protect health and ensure safety
	  o are based in systems thinking, i.e. take into account both patient safety and consequences of decreasing availability of abortion services (http:www.hhs.gov/ash/initiatives/quality/quality/)
	• Ensure that the best available scientific evidence is considered in the process of developing regulations, standards, recommendations, and guidelines that apply to abortion provision

7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable	• Create resources and trainings to facilitate referrals to abortion care • Provide transportation and other enabling services to help women get to and from their abortion appointments • Provide incentives to health care providers to offer abortions when abortion services are otherwise unavailable and, in the cases where incentives are insufficient, the health department should offer abortions directly • Identify unmet abortion care needs of women and barriers to care, in particular 2nd trimester and later abortion care where there is already documented unmet need • Develop and implement programs and reduce barriers to abortion care • Explore, develop, implement, and evaluate efforts to centralize entry to abortion care delivery system • Conduct needs assessments about state and local health care systems' capacity to provide abortion care to all women who seek to obtain one
8. Assure a competent public health and personal health care workforce	• Plan and implement trainings for public health department health inspectors who inspect abortion facilities • Plan and implement trainings for public health department staff and other local service providers who may be in contact with women who may be considering abortion • Collaborate with abortion providers to conduct quality improvement activities when data indicate a need. • Require abortion training in ob/gyn and family medicine residency programs in public sector hospitals
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services	• Evaluate barriers to abortion care in state/county, including how policy changes affect women's ability to obtain abortion care and delays in obtaining abortion care • Evaluate efforts to reduce barriers to abortion care in state/county • Provide guidance for and, when evidence indicates a need, conduct clinical quality assurance and improvement programs • Evaluate efforts to improve the effectiveness, accessibility, and quality of abortion care in the abortion care delivery system
10. Conduct research to attain new insights and innovative solutions to health problems	• Conduct research or collaborate with external researchers to understand how state laws regulating abortion affect women and providers • Conduct research or collaborate with external researchers to document disparate impact of state laws regulating abortion on different groups of women • Conduct research to identify strategies to mitigate harms due to state laws regulating abortion