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Family Doctor

A JOURNAL OF THE NEW YORK STATE ACADEMY OF FAMILY PHYSICIANS

FEATURE ARTICLES:

- Family Physicians Amidst a Health Crisis: A Call to Action
- How am I Doing with Vaccination?
- Men's Health: Closing the Health Gender-Gap to Improve Population Health
- Community Health Assessments as Public Health Learning Tools

New York State Academy of Family Physicians

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Public Health

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From the Editors: Your Partner for a Healthy Community

Unlike the present, in which public health is on nearly everyone's mind, it is usually a silent partner ensuring that we can live our lives relatively safely. Indeed, public health is responsible for much of the quality of our lives and our longevity as well.

To illustrate its role in our day to day lives let us follow a 10-year-old boy we can call John as he goes through his day. School is still in session (though not for long as the end of the year is fast approaching) and the weather is warm. He awakens in his home built back in the 1920s which his family rents. It is far enough out of town that they are on a septic system built to health department standards to protect nearby wells and ground water. Their water comes from a "package" water system, a small water system which provides water to several homes around them and is owned and run by their landlord for which they pay a fee. A month ago, the landlord's system was inspected by the local health department (LHD) and its chlorine residual was found insufficient due to a faulty chlorinator. Consequently, the landlord was required to post a "boil water" notice and notify every tenant of this fact. He is slow at getting it fixed and not so attentive about other things either. The "boil water" notice will remain in effect until the system is corrected. If the landlord delays too long, he can be cited by the health department and its board of health may fine him.

John has his breakfast with his little sister, Amy, who is 4 and his brother, Charlie, 14 months old. 4 months ago, Charlie's blood was tested for lead as mandated by public health law. It came back as 11ug / dl. A public health nurse and her environmental health (EH) colleague investigated and found the source to be a bracelet of Amy's which Charlie sometimes grabbed and put in his mouth. It came from India and when tested showed lead. Amy was, therefore, also tested but fortunately her result came back in normal range. After educating Charlie's parents, the bracelet was discarded. Other items were tested but no others were found to be positive. After waiting a few months Charlie was retested and a drop in his level confirmed the source.

John goes off to school and Amy and her mother, Rebecca, have a home visit from the public health nurse. Rebecca is 12 weeks pregnant and as part of the local health department's (LHD's) MOMS program she is having her intake evaluation. MOMS will monitor her throughout her pregnancy and help connect Rebecca to any services she and her family might need. WIC is a common one. Reports sent to Rebecca's physician will augment her prenatal visits there.

Meanwhile, at school, it is lunchtime and John and his class go to the cafeteria where just a few months ago the LHD's environmental health division had done an inspection, as they also do for commercial restaurants. The school was cited for food being out of temperature (meaning not held cold or hot enough to prevent incubation of pathogens). This is a common problem and a frequent cause of foodborne illness outbreaks. Reinspection showed that the problem had been corrected and no citations were made. Turnover in staff makes adherence to public health standards difficult for restaurants and repeat education of the staff by the health department is often a necessity. The EH staff have also inspected the pool at John's school and when he goes to camp in the summer, they will also have been there checking that a long list of safety standards are being met.

After school and walking home John passes a tobacco shop where his friend's big brother, Mike, had helped the health department recently in their role of enforcing tobacco retail regulations. Mike is 16. Looking his stated age and while an EH staffer waited outside, he had gone into the store to see if the store would sell him cigarettes. He had been carefully instructed to act his age and, if asked for ID, admit that he had none. But the cashier violating the law had not bothered to check and Mike walked out of the store with his purchase. The store was informed of the violation and at the next board of health meeting its owner was invited to make a statement prior to the board determining whether the state minimum fine should be levied. Fines escalate in amount for repeated violations and the loss of one's tobacco permit can be the final result in recalcitrant cases.

The next day it is time for Amy and her parent to go to the LHD vaccination clinic where she will get her boosters. Rebecca is particularly attentive to keeping Amy up to date ever since the pertussis outbreak that occurred last year in John's class. When the public health nurses did their case investigation it was determined that a number of his classmates needed prophylaxis. In addition, the LHD collaborated with the school to create a "letter to parents" advising them of the outbreak and advising that they watch their children especially closely for symptoms and if any appeared have their physician evaluate their child.

John's family is particularly aware of some of the roles their local health department plays in helping them maintain and improve their health. But, many of us go about our daily lives scarcely noticing that its quality is largely due to public health. The reason we can eat out and not usually worry about sickness, swim and know that the pool is properly chlorinated, drink our tap water knowing it is unlikely to cause illness is that public health has been looking out for us. Disease is reduced by the banning of trans fats, the air is freer from tobacco smoke, and community immunity is maintained by its regulations, enforcement, services and messaging.

This issue of *Family Doctor* is dedicated to public health. Much of the work in family medicine dovetails wonderfully with these efforts and we editors had decided upon this theme long before coronavirus brought public health's importance into sharp focus. The events of the past few months have revealed what is good about our public health system and what we so sorely need to improve about it. Public health seeks to maximize our quality of life, and our life span. It looks for gaps in healthcare and works with community partners to rectify them. It is one of the few messengers without a conflict of interest and it strives to preserve the credibility of its message and avoid political manipulation. Much of the work in family medicine dovetails wonderfully with public health and further underscores our selection of this topic for this issue.

For the editorial board,
William Klepack, MD
Medical Director, Tompkins County Health Department

From the Executive Vice President

By Vito Grasso, MPA, CAE

The COVID-19 crisis has underscored the importance of our public health infrastructure. The mixed experience of our response will inform our reinforcement of public health institutions and resources as we move forward.

Public health has long been a priority area of policy for the Academy. Indeed, much of our advocacy is focused on investment in public health and promotion of preventive practices which are intimately associated with sound public health principles.

As New York State contemplates reopening our health care system and applying lessons learned from COVID, there will be opportunities to redefine our public health priorities and to revisit our investment in public health institutions. In this regard the Academy has a significant responsibility to contribute to the dialogue we are already having about what our public health priorities should be and what our public health infrastructure should look like in the future.

The emergence of COVID and our response has revealed numerous deficiencies in our health care system, both in the way we provide care and in how we pay for care.

Our ability to detect the presence of the virus and to understand the potential for proliferation was insufficient and delayed our recognition of the serious threat presented. Our initial response was uninformed and inconsistent and may have exacerbated the impact of the virus particularly on vulnerable populations. Our fragmented community of health insurance plans and their different administrative practices complicated the unanticipated transitions in communicating with and caring for patients presented by social distancing and self-quarantine. Shortages of critical supplies seriously impaired the ability of providers to respond to the onslaught of patients and to provide health care workers with protection they needed to cope with a highly contagious virus. Procurement of medical equipment and supplies was left to the vagaries of an unregulated market which led to inflated prices, a flood of inferior products and hoarding. And in every respect, we were unprepared, and our response was awkward, inconsistent and slow.

Reliance upon social distancing accelerated use of telemedicine and the response of patients and providers, especially in primary care, suggests greater investment in telemedicine and related technology should be an important part of our public health infrastructure. Payment for the costs of telemedicine must be included in systemic reform. Furthermore, the rapid pace of change in technologies associated with telemedicine must be accounted for and anticipated in payment policies.

The horrific experience of patients and families served by long term care underscored the need for major change in that sector of our health care system. Nursing homes and facilities providing lower levels of skilled care to fragile patients became venues for transmission of the virus. Isolation of patients in these settings left them without the family support and intimate social contact they needed especially for those whose health ultimately deteriorated.

We will certainly contribute to the discussion regarding how to redesign our public health system and how to reform our health care delivery system generally. We have been in constant contact with the State Health Department, the Governor's Office, the State Legislature and other health care stakeholders throughout the pandemic. We have shared information and offered perspective. As we continue to do so we welcome your advice and recommendations because primary care and public health have historically been intimately associated and the future of public health will and should be defined by the investment we make in primary care.

Thank you for the work you have done to protect us all during the pandemic and for the critical role you have always played and will continue to play in the protection of the health of the public.

President's Post

By Jason Matuszak, MD, FAAFP, FMSSM

The Next Chapter

It is fitting our Congress of Delegates occurs in the spring. The sun cresting over the horizon across dew dropped grass and the birth of flower blossoms welcomes us to a new chapter in life and, each spring, Congress of Delegates turns the page on a fresh new chapter for our Academy. Delegates passionately and knowledgeably debate resolutions that determine Academy policy. Newly elected officers and directors, sworn into office, settle into their stations and our chairs and vice-chairs ready a busy slate of activity for each of their newly appointed commissions. Except this year it almost didn't happen.

Instead of rejoicing at the awakening exploding from the bosom of Mother Nature, our hearts ache from the barren wastelands that accompany the profound loss of the last year. Mentors, colleagues, team members, patients, family and friends with lives cut short; our communities suffering unimaginable injury. The devastation burst through the doors and into our practices and hospitals, sickening our stalwart members, striking fear into our resilient staff, and driving away even our most despondent patients. And you, our members, responded the only way you know how- by being family physicians; by meeting the needs of your community at the place and in the manner they needed you; by redefining your practices, repurposing your staff, relearning long forgotten skills and continuing to persevere and turning the page on the next chapter.

Still reeling from images of mass graves from one public health catastrophe, our televisions turned to a different horror of premature demise, one so stark and shocking that years, decades and centuries of maltreatment, fear and hate entered the consciousness of the country. There came a lugubrious awareness that we have not done enough to end systemic racism. And, that racism is, in and of itself, a public health issue, and a medical issue, and a learned issue and an issue that defines the actions and reactions of many. No one is born knowing how to tie a noose. But, addressing systemic racism requires much more than labeling racism and racists. It requires reframing conversations, rethinking education, redeveloping neighborhoods and communities, redesigning sports and recreation, reexamining policing, revamping medical curricula and refocusing our efforts. Maybe then, we can begin the next chapter.

Somewhere along the way, family physicians uncovered a startlingly apparent truth. A truth that has fundamentally altered our world-view of caring for our patients. It became implicit in our understanding that the health of the families we treat is intimately entwined with public health; that their medical outcomes are interwoven with what they eat, the air they breathe, where they play, whether they have access to jobs and education, whether they are exposed to trauma and in what zip code they reside. This journal issue is dedicated to public health issues and how they interface with the treatment a family physician provides. Read the articles and determine how you can impart these public health principles to begin the next chapter in improving the lives of your patients.

The work of the Academy carries forward, even with uncertainty in life and in practice- in many ways, more important than ever. Our virtual Congress of Delegates occurred on schedule, masterfully orchestrated by Speaker Dr. Andrew Symons and Vice-Speaker Dr. Rachelle Brilliant, and with careful consideration and planning by the NYSAFP staff, especially Ms. Donna Denley. Not only did we develop new Academy policy with abundant collegiality, but the need for innovation resulted in improvements in the manner members could provide testimony and discussion. And, so began our next chapter.

Our next chapter seeks to address the larger issues brought to a flashpoint over the last several months. It begins with the development of a Presidential Cross-Commission Task Force on Diversity and Inclusivity, led by Dr. Ivonne McLean, our Leadership Commission Chair, and is charged with evaluating and bettering our organization and our policies on related matters. It continues with efforts to make permanent the advances in telehealth and alternative models of care realized during this pandemic; to develop and improve supply chains and resource management that fell desperately short of expectation and need; and continuing to demonstrate the value of family medicine to our patients, our communities, and the healthcare system. COVID-19 taught us the economy of healthcare remains tenuous. Whether our members are in small independent practice or an employee of a massive system; whether we are practicing urgent care, geriatrics, sports medicine, or full spectrum family medicine; whether we practice in the city, the suburbs, or rural areas; whether we are upstate or downstate the business model of healthcare has failed us all. We must continue to support our physicians in developing and maintaining the type of practice they desire. The next chapter will also include strategic planning and examination of the infrastructure of the Academy, to ensure we have a robust organization that will hold true to our mission, to improve the health of patients, families and communities by serving members of the Academy through education and advocacy.

Challenges lay ahead. We are your partners, your peers and your friends in medicine. Together we will forge ahead and write our next chapter together.

Just Practice for the Assistant District Attorney: A Conversation on Health Harms of the Justice System

By Ivonne McLean, MD, Mara Phelan, MD and Sarah Baden, MD

Of note: *This article was submitted before the killing of George Floyd and the subsequent global protests calling for police reform and systemic change.*

Background

Despite decreasing rates of overall crimes and incarceration in the last five years,[1,2] the US still has the highest rate of known incarceration in the world. Prior to this more recent decline, there had been a steady increase in the numbers of incarcerations since the 1970s, with rates increasing by 220% between 1980 and 2014.[3] As demonstrated by countless sources, including the Justice Bureau, the rates of incarceration among individuals who identify as men are not the same across socioeconomic groups, racial, or ethnic lines.[4] More specifically, it is projected that 1 in 3 black men in the US will have been in prison at some point in their lifetime compared to 1 in 6 Latino men, and 1 in 17 white men.[5,6] The rates for women who are in the criminal justice system are also different along racial lines.[7] The trauma and harm to individuals and communities is immeasurable, and the mental, emotional and physical consequences, innumerable.

As family medicine physicians serving marginalized communities, understanding the link between incarcerated individuals, racial bias, and the justice system is essential. How incarceration affects the health of an individual and their community is no longer a matter of choice, but a key component in ensuring equitable provision of health care without stigma, while advocating for our patients. In 2017, the AAFP published a position paper with recommendations on how to improve the health of incarcerated individuals as well as encouraging policy changes to address the unmet health, social and financial needs of these communities.

A conversation regarding a jury duty experience, weeks prior to the COVID-19 pandemic, helps shed light on the sometimes haphazard way an individual can be incarcerated, from the point of view of a physician juror.

Conversation between Dr. McLean and Dr. Phelan

Mara Phelan (MP): *Dr. McLean, I heard you recently served as a juror during a three-week trial.*

Ivonne McLean (IM): Yes! Two months ago, I was selected as one of 12 jurors for a criminal case. As with many of us, the first thing I thought was, how can I get out of this? I don't have time to sit on a jury for three weeks! And I did try to get out of it. I explained I was a physician, my patients were already scheduled, and I also had some personal health problems that would make it difficult to participate. The judge heard my concerns, but stated my needs would be accommodated and my patients could be rescheduled. Fair enough. I was on.

MP: *What was the case?*

IM: The New York City Assistant District Attorney (ADA) was charging three individuals with gang assault in the first degree and assault in the second degree. Because three people were being prosecuted, this meant that EACH defendant was charged with three counts of gang assault in the first degree and three counts of assault in the second degree.

MP: *I have never served on jury duty, but I have heard terms like these before. To be honest, I do not know what they mean.*

IM: Until that experience, I didn't know the true definitions of these terms either, or the associated punishment each charge carried. It was not until AFTER the case was over that we were allowed to look more closely at the years of incarceration associated with each charge. While we are not writing a legal article, I now realize how important it is to understand the definitions:[8]

> Gang assault in the first degree (Class B felony), possible 5 to 25 years in prison: A person is guilty of gang assault in the first degree when, with intent to cause serious physical injury to another person and when aided by two or more other persons actually present, resulting in serious physical injury to such person or to a third person.
>
> Assault in the second degree (Class D felony), possible 2-7 years in prison: 1) With intent to cause serious physical injury to another person, resulting in such injury to such person or to a third person; or 2) With intent to cause physical injury to another person, resulting in such injury to such person or to a third person by means of a deadly weapon or a dangerous instrument.
>
> By comparison, an assault in the third degree (Class A misdemeanor), possible 15 days to one year in prison: 1) With intent to cause physical injury to another person, resulting in such injury to such person or to a

third person; or 2) recklessly causing physical injury to another person; or 3) With criminal negligence, causes physical injury to another person by means of a deadly weapon or a dangerous instrument.

MP: *Any other instruction you were given as a jury?*

IM: In a criminal case, the prosecution must prove its case "beyond a reasonable doubt." Jurors are told to forget their backgrounds, biases, and professional expertise. One is to focus only on the evidence presented during the trial and disregard the possible sentencing when discussing final deliberations.

MP: *You mentioned a charge that could carry up to 25 years in prison. To me it is striking to think that someone could spend much of their adult life incarcerated. Even the shorter sentences seem significant. Yet you were told to disregard possible sentencing? How did you feel about that?*

IM: I was very uncomfortable and so were several members of the jury. We thought people should be held accountable for their actions; however, it seemed irresponsible in and of itself, to determine a unanimous guilty verdict without knowing if the punishment fit the crime.

MP: *How does what we have discussed so far relate to medicine?*

IM: Everything. While doctors and lawyers have not always been readily selected as jurors, as they can bias or sway the jury, that has changed greatly in New York City in the last two decades.[9] As a physician juror, there was an unspoken understanding among the jurors and the attorneys that I could "shed light" on the injuries sustained. That I could speak in one way or another to the violent events shown on video. My expertise, both my fellow jurors and I believe, is what got me on the jury in the first place.

MP: *…Wait…didn't you say jury members are asked to forget their backgrounds, biases, and professional expertise?*

IM: Yes. The funny thing is we spent three and a half weeks listening to testimony on the events that occurred. The prosecution called numerous individuals to provide testimony, including a bank associate, but not once was a health expert placed on the stand. There was no witness who could speak to the "intent to cause serious physical injury to another person, resulting in such injury to such person or to a third person" part of the charges. The investigation of the case itself had many unanswered questions that were to be put aside or left unanswered, and replaced with video evidence only.

MP: *Hmmm. What were your thoughts as you sat in jury deliberations?*

IM: As a physician and social justice advocate, I had to question the charges brought against the defendants. If they were men of a different race or ethnicity, would the severity of the charges be the same? Could any of us, "beyond a reasonable doubt" send three men to prison for 21 years to life without probation, for a fight that occurred outside a bar while all parties were severely intoxicated?

MP: *Did you have a consensus?*

IM: We did not during the initial deliberations - but at the same time, were we at ease with having a hung jury and leaving the fate of these men in the hands of a different jury?

MP: *Anything else about the experience that stands out?*

IM: The jaw-dropping part for me was when one of the court officers who had also been intermittently with the jury said, "Don't know how this got all the way up to a three-week trial. This was essentially a 'bar fight.' But you know, we get new ADAs all the time and this sort of case is their practice run. No one is really expecting them to win, but sometimes they do..."

MP: *A practice run? It is difficult for me to imagine a conversation like that with people's futures in your hands, but perhaps that statement helps to explain, in part, the disparities we see in who is incarcerated. There are certain communities where the percentage of incarcerated individuals greatly exceeds the percentage of individuals who are free, and that often falls along racial lines.[10] According to Michelle Alexander, the author of The New Jim Crow, there are more Black men in prison and jail or on probation and parole today than were slaves before the start of the Civil War.*

IM: Right. Worthwhile reiterating, cases like the one we've been discussing have a direct impact on the freedom and health of individuals and entire communities. Hence the importance of encouraging physicians to participate in jury duty while educating each other about the process and expectations. Bringing the

continued on page 12

conversation to the exam room, do you have any patients who have been incarcerated, Dr. Phelan?

MP: *I met a new patient for the first time a few weeks ago. He shared how difficult his recent re-entry had been. I was surprised that he felt comfortable enough to mention he had served a lengthy sentence. He went on to explain, with a pained expression, that most people he met in human resources during job interviews regarded him as dangerous. Later that day, I reflected on the encounter. Caring for individuals once they are out of prison and back in the community requires a certain level of self-awareness of our own biases, and understanding about some of the differences regarding care of formerly incarcerated people.*

IM: YES! As with any clinical encounter, it is important to be aware of our own assumptions and how those may change the way we provide care.[11] The additional layer here is whatever assumption or understanding we may have regarding the US legal system. When hearing about your patient's lengthy sentence, for some of us, the initial reaction may have been *"oh he went to prison, he must have done something terrible"* when in fact, that is not always the case and the length of his incarceration may have been more a reflection of sentencing.

MP: *Also, asking about incarceration history must be trauma-informed. To patients who were formerly incarcerated, providers can appear authoritarian and therefore untrustworthy. There is an inevitable power differential. We must take a critical look at what questions we ask, how we ask them and why we ask them. Obtaining history about past incarceration helps inform practice, but it may come at the cost of losing the trust of a new patient.*

IM: This actually reminds me of Dr. Robert Fullilove's medical records example. During residency didactics, he gave a lecture on the Bard Prison Initiative.[12] He pointed out that even asking for previous medical records can be triggering, because people might not want to have to explain that the last time they saw a doctor was when they were in prison. Since 1 in 3 black men, and 1 in 6 Latino men in the US will have been in prison at some point in their lifetime, this scenario is very likely and very common in many communities we serve. In addition, as providers, we must be aware of what we bring into the exam room regardless of who we are. Implicit biases, which we all have in one way or another, can manifest in the exam room regardless of what we say. Even silence during an interaction, or our body language can communicate biases in ways we are unaware.

MP: *Yes. The trust-building is so essential. As we know, formerly incarcerated individuals report lower rates of healthcare utilization outside of emergency rooms and yet suffer from higher rates of chronic medical conditions, psychiatric conditions, and substance use disorders.[13] Asking certain questions may "scare away" a patient population that already underutilizes healthcare – this means a missed opportunity to address the disparities that are keeping whole groups of Americans sick.*

IM: Agreed. Trauma-informed care and implicit bias self-assessments are key.

MP: *I know you grappled with the idea of "does the punishment fit the crime." Have you thought of alternatives to incarceration? For example, the proportion of incarcerated individuals with psychiatric comorbidities is up to six times higher than the general population. Many of these individuals also have a substance use disorder. Many are incarcerated for "low-level" offenses.[14] One alternative approach could involve providing treatment and support for individuals. However, for such a strategy to succeed, more robust social supports must be established, such as housing that is private, safe, and pleasant, stable employment opportunities, and outpatient programs with adequate funding and the opportunity to have longer, more meaningful visits that strengthen the doctor patient bond. What are your thoughts?*

IM: Well, I don't think incarceration is necessarily the only answer to the societal problems we have, especially when there is a long history of inequality in the justice system. It behooves us to think outside the box for answers. The good news is that there ARE many who have been doing this work, and will continue to pursue justice reform, reduced sentencing, and rehabilitative practices. If I think about the case I participated in, instead of charging the defendants with prison-time, why couldn't the ADA require that the defendants pay all the medical bills for the victims and pay for lost wages, require the defendants attend anger management sessions, or temporarily ban the defendants from entering a bar? Why was the only answer a possible lifetime in prison? While the defendants' lawyers would have likely asked for another trial, why does the system require this in the first place? People should be accountable for their actions, and in some cases, judges might see a prison sentence as that answer, but for many of the other crimes or charges posed, rehabilitation and alternative measures would be beneficial for society and the individual.

MP: *What would you say to other physicians who open their mailbox and see that "dreaded" jury duty summons?*

IM: Do it! Even though scheduling can be challenging, we should consider DOING jury duty rather than using our privilege to avoid it. It is an important step in learning about what our patients encounter, a way to participate in our civic duties, and a different way to advocate for individuals and communities that may not have a voice. Of course, participating in jury duty is not the only step physicians can take to foster an equitable, judgement-free healthcare environment for patients, or a robust learning environment for trainees, but awareness regarding the justice system pitfalls is a critical aspect for change.[15]

In Conclusion - Closing Thoughts from Dr. Baden

With an estimated >2.3 million adults in jails and prisons in the United States,[16] it would be rare for a physician to not encounter a

patient who has been exposed to the criminal justice system on some level – if not themselves, then someone in their family. Like medicine, the law is riddled with bias – from stop and frisk to faulty eyewitness testimony, sentencing to bail requirements – disproportionately affecting males, racial and ethnic groups as well as lower socioeconomic group; and, as discussed in this article, bias easily makes its way into jury selection and the deliberation room. Thus, one could argue, the jury system itself has the potential to contribute to the health outcomes and disparities encountered in the clinical exam room. As Dr. McLean reveals, jurors are often not fully aware of the implications of their vote – but as physicians, we cannot ignore the potential far-reaching health consequences for individuals, families and communities. To better serve our patients and in an effort to do no harm, physicians must be aware of not only our own biases in medicine, but also the biases that play out all around us. In the law – from policing to the jury room- these biases may ultimately lead to incarceration that directly affects well-being. This one jury duty experience highlights that much work is still needed across disciplines to dismantle systems built on racist foundations – so to pave a more just and healthy path forward.

As psychology scholars have dissected, bias and prejudice are natural survival mechanisms of the human brain to process, categorize and respond to information quickly, particularly when in danger. Rapid recognition is something we rely on in medicine to diagnose. However, history has repeatedly shown that this ability to prejudge can be faulty, triggering under inappropriate circumstances, leading to tragic consequences and outcomes. My work at the Innocence Project prior to medical school revealed to me the layers of bias in the legal system – from arrest to conviction – that cause decades of lives across this country to languish in prisons wrongfully for crimes they never committed. I had naively thought that by going to medical school, I could obtain the tools to assist in alleviating the pain of such experiences; but now as a doctor, I witness these same biases control the delivery of medical care, affecting how patients are treated – potentially exacerbating trauma as Drs. McLean and Phelan mention above. It takes conscious and deliberate effort as well as ***time*** to unravel and stop this biological response of bias from manifesting erroneously. As physicians, we need to fight for policies that push back on models resulting in the perpetuation of the very harms we are trying to prevent. Not only do clinicians need to slow down to ensure bias is not leading an encounter, but as Dr. Phelan states we need ***"longer, more meaningful visits which strengthen the doctor patient bond"*** to create space for trust to grow and proper support to flourish.

Endnotes

1 Incarceration. Available from https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/incarceration

2 Incarceration Rates By Country 2020. World Population Review. Available from https://worldpopulationreview.com/countries/incarceration-rates-by-country/

3 Incarceration. Available from https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/incarceration

4 Technical report: Tribal Crime Data-Collection Activities, 2019. U.S. Department of Justice. Office of Justice Programs. Bureau of Justice Statistics. July 2019, NCJ 252983. Available from https://www.bjs.gov/content/pub/pdf/tcdca19.pdf

5 Mass Incarceration: An Animated Series. Available from https://www.aclu.org/issues/smart-justice/mass-incarceration/mass-incarceration-animated-series

6 Bonzcar, T. (2003) "Prevalence of Imprisonment in The US Population, 1974-2001." *Bureau of Justice Statistics Special Report*. Available from https://www.bjs.gov/content/pub/pdf/piusp01.pdf

7 Incarceration. Available from https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/incarceration

8 Consolidated Laws of New York's Penal code. New York State Law. Available from http://ypdcrime.com/penal.law/article120.htm

9 D. Rohde. *Do Diplomas Make Jurors Any Better? Maybe Not*. The New York Times. April 10, 2000. Available from https://www.nytimes.com/2000/04/10/nyregion/do-diplomas-make-jurors-any-better-maybe-not.html

10 Mass Incarceration: An Animated Series. Available from https://www.aclu.org/issues/smart-justice/mass-incarceration/mass-incarceration-animated-series

11 Maina IW, Belton TD, Ginzberg S, Singh A, Johnson TJ. A decade of studying implicit racial/ethnic bias in healthcare providers using the implicit association test. *Soc Sci Med*. 2018;199:219-229.

12 Robert E. Fullilove, Anibal Cortes, Richard Gamarra, Hancy Maxis, "The Bard Prison Initiative: Education, Incarceration, and Public Health", *American Journal of Public Health* 110, no. S1 (January 1, 2020): pp. S33-S34. https://doi.org/10.2105/AJPH.2019.305457

13 https://www-ncbi-nlm-nih-gov.eresources.mssm.edu/pmc/articles/PMC3482056/#bib8

14 Alternatives to Incarceration. American Civil Liberties Union. Available from https://www.aclu.org/issues/smart-justice/sentencing-reform/alternatives-incarceration

15 J. Giftos, A. Mitchell, et. al. Medicine and Mass Incarceration: Education and Advocacy in the New York City Jail System. AMA J Ethics. 2017; 19(9):913-921. doi: 10.1001/journalofethics.2017.19.9.medu1-1709.

16 Rich JD, Wakeman SE, Dickman SL. Medicine and the epidemic of incarceration in the United States. *N Engl J Med*. 2011;364(22):2081-2083; also found in Mass Incarceration: The Whole Pie 2020, data compiled by the Prison Policy Initiative from 2016 and 2017 Bureau of Justice Statistics data. Available from: https://www.prisonpolicy.org/reports/pie2020.html.

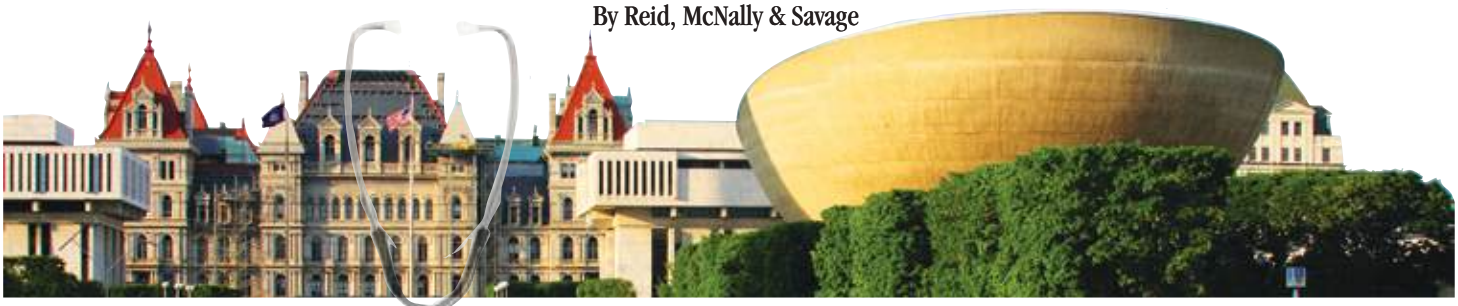
Ivonne McLean, MD *is faculty at the Institute for Family Health Harlem Residency in Family Medicine and an Assistant Professor in the Department of Family and Community Medicine at Mount Sinai Hospital. She has conducted implicit bias workshops and curricula development for residents and faculty at the local, state, and national level. She is currently on the Board of Directors of the NYSAFP and the Chair of the Leadership Commission. Dr. McLean completed the Reproductive Health Care and Advocacy Fellowship at the Institute for Family Health in 2018 and is currently pursuing a research fellowship through the Empire Clinical Research Investigator Program (ECRIP). She is a graduate of the University of Massachusetts Family Medicine Residency in Worcester, Massachusetts.*

Mara Phelan, MD *is a first year resident at the Harlem Residency in Family Medicine and a graduate of the Albert Einstein College of Medicine in Bronx, New York. She is a member of the Social Justice Committee at The Institute for Family Health.*

Sarah Baden, MD *is a family physician in New York City and a recent graduate of the Harlem Residency in Family Medicine where she is proud to have developed and implemented along with her co-residents, a social justice curriculum. Her interests lie at the intersection of justice and health. From 2001-2004, in conjunction with the Innocence Project, she researched and produced the book "The Innocents" and coordinated the subsequent "Life After Exoneration" weekend. As an undergraduate at Brown University, she majored in psychology and focused much of her studies on prejudice and bias. Dr. Baden holds a Master of Arts in Humanitarian Assistance from Tufts University and is a graduate of Howard University College of Medicine in Washington DC.*

Albany Report

By Reid, McNally & Savage



Please note – this report was written in early June. In light of our current climate, changes/updates are happening on a frequent basis.

NYSAFP Calls for End to Institutional Racism

As we write our summer journal article, Governor Andrew Cuomo announced that today is the 100th day since New York State's shutdown due to the COVID-19 pandemic. Thankfully, infection and death rates have dropped dramatically, and as of today all regions of the state have started re-opening using a phased-in approach.

While the 2020 legislative session officially ended June 2nd, it has been anything but a typical session. In fact, state lawmakers returned to Albany from their districts to take action on a series of police and criminal justice system reforms in honor of George Floyd, among the latest victims of police brutality.

Today, Governor Cuomo announced that the State is going to act on the *"Say Their Name"* agenda addressing the following:

- Transparency of police disciplinary records—repeal of 50-a
- Banning chokeholds
- Utilizing the Attorney General as special prosecutor in these cases
- Banning false race-based 911 reports

The Assembly Majority also held a press conference today related to the reform package that they intend to pass this week (as outlined below and which we expect the Senate Majority to also act on). Majority Leader Crystal Peoples-Stokes from the Buffalo area remarked, "we are not anti-police, we are anti-bad police" and said that it is long overdue that we end the secrecy around the history behind law enforcement records.

- Repeal of 50-a of the Civil Rights Law to deliver transparency in law enforcement conduct
- Police Statistic and Transparency (STAT) Act which would require policing data from across the state to be collected and publicly reported to promote transparency and evaluate the effectiveness of existing criminal justice policies
- Create an Office of Special Investigation within the NYS AG Office to independently investigate, and if needed, prosecute incidents involving the death of a person caused by a police officer
- Require state and local police officers to report to a supervisor within six hours of the discharge of a service revolver under circumstances where a person could have been struck
- Legislation that would clarify that a person not under arrest or in custody has the right to record police activity and to maintain custody and control of the recording and any property or instruments used to record police activities
- Legislation that would establish the Law Enforcement Misconduct Investigative Office to investigate complaints/ concerns about law enforcement agencies
- The "Eric Garner Anti-Chokehold Act" to ban the use of chokeholds by law enforcement and establish the crime of aggravated strangulation, a Class C felony
- Legislation that would establish the right of action when a person without reason and motivated by bias, calls 911 or other emergency responders to request assistance
- Legislation to affirm the right of anyone in custody to prompt and reasonable medical and mental health assistance
- Legislation that would require all NYS police to wear and use body cameras to be worn anytime an officer is on patrol
- Ban the practice of racial profiling and allow victims of racial profiling to bring action for damages or injunctive relief

On June 5th, NYSAFP released a statement calling for action to end institutional racism and ensure equal access to high quality health care. (See on page 17). In the statement, NYSAFP called for public hearings to identify initiatives the State should take to end institutional racism generally, and in health care, and to also end police violence against people of color. President Dr. Barbara Keber said, *"This is a systemic problem which requires fundamental change… NYSAFP will not stop our advocacy until we see real change enacted in both our criminal justice system and our healthcare system."*

2020 Session

The 2020 session began in January but took an unprecedented turn when the state shutdown was declared in mid-March and legislators left Albany, only to return twice before this week (to pass a final budget in early April and to advance a COVID-19 response package in late May). Provided below is an update on NYSAFP's March Lobby

Day, the final state budget as it relates to the Academy's priorities and the Academy's efforts to advocate for its members and their patients during the pandemic. **All of us at Reid, McNally & Savage hope that this finds you and your families safe and healthy. We would like to applaud your tireless efforts as frontline, essential providers, who as the rest of the State was sheltering at home, went into the eye of the storm to save lives and help the sick get well. You are heroes and we commend you for your work now and always.**

NYSAFP Lobby Day, Monday March 16, 2020

Over the course of a weekend, the world changed as we knew it. This happened to be the same weekend that the NYSAFP Board was holding its winter meeting with the annual lobby day scheduled in Albany for March 16th. Only a few days prior to both events, NYSAFP decided it had to make both its Board meeting and Lobby Day virtual. As a result, the more than 60 in-person lobbying visits had to be cancelled and we altered the format to a "Day of Action" asking members to instead call their Senate and Assembly representatives to discuss NYSAFP's 2020 priorities and follow up the calls with an email.

We would like to thank all who participated for your flexibility and your commitment to advocacy. We received positive feedback from many members who reached their representatives or top staff and had very high-quality discussions highlighting the topics important to family physicians and patient care.

The day prior to our lobby day, the Board resolved to make the priority topic a discussion about ensuring the health and safety of, and access to care for patients during this evolving pandemic. Members advocated for the following:

- For patients who can be managed at home to remain home and be managed remotely by visits over telephone or online messaging services and that physicians be reimbursed for providing such remote services at rates equal to in-person visits during the timeframe of the COVID-19 crisis as determined by state officials;
- For test sites to initially be independent of physician practices; and
- For COVID-19 testing capacity to be increased so that all who have symptoms can be tested regardless of travel or exposure to confirmed cases

Lobby Day participants also discussed NYSAFP's budget and legislative priorities including:

- Continuation of $9 million in funding for Doctors Across NY loan forgiveness and practice support programs
- Support for banning hydraulic fracturing
- Opposition to any Medicaid provider cuts or cuts to the State's Patient-Centered Medical Home or Excess Malpractice program
- Opposition to the Governor's proposed changes under the OPMC (office of professional medical conduct) to remove physician due process protections
- Support for New York Health Act bill to establish a single payer health system
- Support for legislation providing a series of reforms to Health Insurance Prior Authorization
- Support for tobacco control proposals including those ending the sale of all flavored tobacco and prohibiting the sale of any tobacco in pharmacies
- Support for legislation to establish a robust immunization registry with all adult vaccinations reported

2020-21 Final State Budget

In early April, Governor Cuomo and NYS legislators reached agreement and passed a final State Budget. The final deal was very positive for NYSAFP and its priorities. Outlined below are some of the highlights that we thought would be of particular interest.

The Final Budget includes:

- Rejection of MRT II proposal to cut Excess Medical Liability Program, and instead continues the program through 6/30/21 – **Advocacy Priority of NYSAFP**
- Rejection of Governor's proposal to significantly extend reach of Commissioner's authority under OPMC and remove physician due process – **Advocacy Priority of NYSAFP**
- A Permanent ban on hydraulic fracturing- **Advocacy Priority of NYSAFP**
- Continued funding for Doctors Across NY – **Advocacy Priority of NYSAFP**
- A ban on the sale of all flavored E-cigarettes and a ban on tobacco sales in pharmacy – **Advocacy Priority of NYSAFP**
- Rejection of MRT II proposal to remove "prescriber prevails" in Medicaid – **Advocacy Priority of NYSAFP**
- An Increase in the across the board Medicaid provider cut to 1.5% effective 4/1/20 – **NYSAFP Opposed**
- The elimination of state funding for Area Health Education Centers (AHECs) – **NYSAFP Opposed**
- Inclusion of extension liability protection for healthcare providers providing treatment/services related to COVID-19 state of emergency
- Insurance changes including the creation of a workgroup to study ways to reduce administrative costs/streamlining; require insurers to allow for provisional credentialing at hospitals, D&TCs and OMH facilities; and improved prompt payment and notifications
- Planned shift of pharmacy benefit under Medicaid back to fee for service
- Creation of a statewide formulary under Medicaid for opioid dependence agents
- Inclusion of pilot programs and related funding focused on maternal health; diabetes/chronic disease self-management; and alternatives to opioids for chronic back pain

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NYSAFP COVID-19 Response

In early March, the New York State Legislature passed a law to grant Governor Cuomo very broad emergency powers during the COVID-19 crisis. Since then, the Governor declared a State of Emergency and he and his agencies have put forth numerous emergency Executive Orders, regulations and guidance around the pandemic response. These Executive Orders will remain in effect until the Governor declares that the COVID-19 State of Emergency period has expired. The State of Emergency is currently set to run through September 7, 2020.

Since the start of the shutdown, NYSAFP and our firm have been working closely with (then) NYSAFP President Dr. Keber, President-elect Dr. Matuszak, Advocacy Chair Dr. Doucet and other leaders and members to help practices respond and address issues and concerns. These efforts include:

- Connecting physicians, residents and students from across the State and out of state interested in volunteering their services in high-need areas with government officials to do so;
- Seeking support and funding to bring broadband Internet coverage to underserved areas of the State to enable them to serve patients using telehealth and other types of virtual care;
- Joining with AAFP in lobbying state and federal officials to equalize coverage and reimbursement for telehealth, including telephonic care at the same levels as in-person care for the same services; and urging that telehealth and telephonic services to be covered on a permanent basis with parity in reimbursement, after pandemic period has ended;
- Advocating for state purchase and distribution of COVID-19 vaccine once available to ensure physicians are able to easily provide this essential preventative care to patients;
- Promoting the need for greater investment in primary care services and public health preparedness, equating it to the Marshall Plan after WWII. An op-ed by NYSAFP President Dr. Keber was published April 30th in the Albany Times Union;
- Advocating with the Governor, Insurance Superintendent and Health Commissioner for public and private health insurer coverage of forms of birth control administered at home to ensure patients have access to birth control that best serves their needs (*Note, Medicaid and Medicaid Managed Care is now covering the subcutaneous form of Depo-Provera given at home*);
- Being the first major health organization to publically call out the link between tobacco use and COVID-19 progression calling for action on tobacco control and prevention policies; and
- Weighing in regularly with staff in the Governor's office and Health Department on day-to-day practice issues and concerns and the need to assist practices with access to personal protective equipment

Post-Session Outlook

Status of New York State's Fiscal Condition

On May 15, State Comptroller Tom DiNapoli released the monthly cash report. The report found that the State's all government funds tax receipts in April totaled $3.7 billion, falling $7.9 billion or 68.4 percent from April of last year. Both Comptroller DiNapoli and Governor Cuomo are calling on the federal government to deliver substantial relief to states and localities, and New York in particular, the hardest hit State so far by COVID-19.

Under the State Budget passed on April 3, the State Division of the Budget was given unprecedented authority to adjust or reduce funds as necessary to ensure a balanced budget during the course of the year. Adjustments must be done uniformly, across the board, or by specific appropriations, as needed. DOB is required to notify the Legislature 10 days prior to any reduction or adjustment. The Legislature may, by concurrent resolution, reject the proposed action(s) and present an alternative plan, However, failure to present an alternative within 10 days will result in the implementation of DOB's plan.

The Governor stated that absent federal relief funds he would be looking at an up to 20% cut to education, aid to localities, health care and other areas of the budget. Today, Assembly Speaker Heastie said, *"We'll know soon if the federal government is going to bring us some help… we have a menu of things that we'll probably look at. Twenty percent cuts to health care and local governments and schools is something that in my wildest imagination I could never see the Assembly accepting"*

Post-Session Activity

As mentioned earlier, lawmakers returned to Albany in late May to act on a COVID-19 response package of bills. One of the bills passed by both the Senate and Assembly would make audio-only and video-only telehealth and telemedicine services eligible for permanent reimbursement under Medicaid. The bill (S.8416, sponsored by Senator Metzger) was sent to the Governor for consideration on June 5th.

Additionally, legislation has been introduced to require insurance coverage parity for primary care services delivered via telehealth, which NYSAFP is supporting. The bill is sponsored by Assembly member Woerner (A.9667) and we are advocating for its advancement.

While the official Legislative Session adjourned on June 2, special sessions may be called (as is the case this week) and lawmakers have the ability to pass legislation remotely. Discussions are fluid and there is a possibility that the Legislature will conduct further business this year on Budget and non-fiscal issues.

NY Family Physicians: Calls for Action to End Institutional Racism & Ensure Equal Access to High Quality Health Care

Albany, NY, June 5, 2020: The New York State Academy of Family Physicians (NYSAFP), citing its history of advocacy, is calling for the Governor and State Legislature to conduct public hearings to identify initiatives the State should take to end institutional racism generally and in health care, and to also end police violence against Black, Indigenous, and People of Color (BIPOC). NYSAFP represents over 7,000 physicians, residents and students in family medicine across the State. For many years, NYSAFP has led a national effort among physicians to acknowledge institutional racism and to end it in their practices, in their hospitals, and in their cities and states.

"The murder of George Floyd is a horrible reminder of how pervasive racism is in this country and how much we have yet to do to eradicate it," said Barbara Keber, MD, President of NYSAFP.

"NYSAFP and its physician leaders in New York have been tireless advocates against segregation and discrimination in health insurance and within healthcare institutions by race, gender, sexual orientation, income and insurance status," explained Dr. Keber. "We succeeded in getting the American Academy of Family Physicians (AAFP) to recognize this critical issue nationally and to develop policies, materials and educational programs to address structural racism and discrimination in physician practices, our health care system and our communities."

NYSAFP denounces police violence against BIPOC communities. In 2015, NYSAFP passed a Resolution stating, "Police brutality against minority communities is a severe public health issue" and calling for the abolition of discriminatory policing such as racial profiling. The resolution also advocated implementation of community policing. "Five years later," Dr. Keber said, "these reforms are needed more than ever."

"It is not enough to just call for change," Dr. Keber explained, "We have taken steps internally to address institutional racism by training our entire leadership in implicit bias because the subtle and pervasive presence of racist sentiments can emerge at any time and in various forms."

In addition, NYSAFP continues to call for an end to institutional racism within the healthcare system and believes adoption of a single payer health care system is a critical step towards ending health inequities by race, income and zip code. "A single payer system, with its public benefit focus, would provide a better model to address other social determinants that impact health such as housing, education and the environment if we want to eliminate health inequities," Dr. Keber explained.

"This is a systemic problem which requires fundamental change," said Dr. Keber. "NYSAFP will not stop our advocacy until we see real change enacted in both our criminal justice system and our healthcare system."

VIEW ONE

WHEN PANDEMIC AND INFODEMIC* COLLIDE
THE ROLE OF FAMILY PHYSICIANS IN PANDEMIC PREPAREDNESS

By Utsav Hanspal, MD, MPH and Aishwarya Hanspal

Recent decades have witnessed multiple outbreaks of infectious diseases. New diseases such as Zika and COVID-19 have arisen and resurgences of previously controlled diseases such as measles have occurred. Ebola spread from a little village in Guinea to cross the borders of Liberia, Sierra Leone and other West African countries and eventually into Europe and the United States. It infected over 28,000 people and killed more than 11,000 and served as a solemn reminder of the threat posed by infectious diseases to humanity.[1] Prior to COVID-19, HIV and SARS reinforced the perception that pandemics are an ever-present risk.

The management and control of virulent infectious diseases, particularly when they reach pandemic proportions, necessitate the participation of the general population. The efficacy of this response, in turn, demands a fundamental level of health literacy in the population. Rapid spread of COVID-19 has compelled the general population to acquire and apply health advice to adapt and modify their behaviors swiftly. To be effective, public health information must be easy-to-understand; it should offer simple, pragmatic solutions, such as hand-washing, social distancing, and wearing facemasks in public when social distancing norms cannot be maintained.[2] It is also important that sources of that information be trustworthy and reliable in uncertain times.

Unfortunately, an abundance of complex, contradictory, and false information also exists.[2] Theoretically, a health literate population would be immune to much of this misinformation and disinformation. Reality however, points in a different direction. When health experts, physicians, the CDC as well as the World Health Organization have to clarify that drinking warm water, vinegar, lemon juice or hot tea does not prevent COVID-19, that 5G cellular networks do not transmit it or that ingesting/injecting bleach does not cure it, an inadequate level of health literacy in the population is revealed. The COVID-19 'infodemic' has highlighted, yet again, the fact that the level of health literacy is an underestimated public health problem.[2]

Health literacy as a term was introduced in the 1970s. Since then its definition has evolved. Initially, it was the ability to read and write health information.[3] More recently, the definition incorporates concepts of comprehension, application, and communication.[3] According to Sorensen et. al. a comprehensive definition of health literacy is as follows:

continued on next page

One

Two

VIEW TWO

CONNECTING WITH OUR PATIENTS: THE INTERSECTION OF HEALTH LITERACY, PRIMARY CARE, AND PUBLIC HEALTH

By Patrick D.L. Glasgow, MD; Diane R. Johnson, MPH and Laurene Tumiel-Berhalter, PhD

BACKGROUND

Health literacy is a relatively new concept[1] that has over time permeated health care conversations and gained traction as a significant cause of overall health outcomes. The National Academy of Medicine (formerly the Institute of Medicine) in its report, "Health Literacy: A Prescription to End Confusion" offers up a definition of health literacy as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions."[2,3] Diminished health literacy has been linked to decreased preventative care, increased hospitalizations, worse health outcomes and increased mortality.[4,5] Every day, around the world, new health information is uncovered for patients. Providers attempt to distill the wealth of knowledge available on each topic in the hopes of engaging their patients in meaningful discussions. The doctor-patient relationship enabled through clear health communication and other mediators, provides the bedrock for which improved health outcomes are founded. These mediators can impact the health literacy of patients, and include but are not limited to age, language fluency, cultural beliefs, socio-economic status, and racial/ethnic minority groups.[6] Included in this proposed definition of health literacy are the basic skills of reading and numeracy, while also suggesting the higher level skills of interpretation and decision-making ability. This concept is further broken down into three main subtypes: functional health literacy, interactive health literacy, and critical health literacy.[7,8] Functional health literacy is referred to as basic reading and numeracy skills. Interactive health literacy assumes a functional health literacy base, with the additional pairing of active engagement in health care interactions to obtain information and affix meaning to this information. Finally, critical health literacy builds on the prior two definitions to include critical analysis and the application of information to health care decision-making. These elements are captured within a conceptual framework in Figure 1, linking health literacy to health outcomes.

Not surprisingly, health literacy has been identified as a key measure of population health, by reducing health inequities.[9] However, there is evidence to suggest that health literacy screening does not directly improve individual clinical outcomes.[10] The link to improved health outcomes then, is that health literacy appears to be positively associated with access to care. Higher health literacy results in more expedient health care assessment, and conversely, diminished health literacy appears to engender increased time to health care contact as well as finding a health care provider.[11] This delayed access to health care in the context of other personal, socio-cultural determinants appears to impact health outcomes overall as illustrated by the framework in figure 1.[12] An investigation of barriers to health literacy evaluation and attainment may allow for greater understanding of public health and clinical measurements.

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"Health literacy entails people's knowledge, motivation and competences to access, understand, appraise, and apply health information in order to make judgments and take decisions in everyday life concerning healthcare, disease prevention and health promotion to maintain or improve quality of life during the life course."

There is a wealth of published research linking low health literacy not only to decreased medical compliance, poor understanding of disease, and poor treatment outcomes, but also to lower rates of participation in health promoting behaviors, screening, or using preventive services.[4] Thus, health literacy serves as a marker for population health and consequently public health. Current evidence suggests that health *illiteracy* is more prevalent than is often assumed.[4] According to the Institute of Medicine, almost 50% of the American population have difficulties in acting on health information.[5] According to research of Castro-Sanches et al, "Limited or insufficient health literacy was associated with reduced adoption of protective behaviours such as immunization."[6]

At the time of this writing, as COVID-19 cases and deaths soar in the United States, thousands of Americans across multiple states ranging from Oregon to New York and Michigan to Texas are protesting the public health measures that are necessary for everyone's safety – this while US public health experts continue to stress the importance of not violating social distancing and other mitigation measures. In a pandemic, personal and social responsibility for health become paramount. While the ideology that "if people know they are taking risks but accept them as the price of pursuing goals to which they assign higher priority, then it is not the business of public health to insist that health be valued above all" may apply to cases where personal choices only affect individual health, it does not apply to pandemics where the actions or inactions of one individual can adversely affect others.[7] Such thinking in a pandemic facilitates the so-called free-rider problem in which persons "enjoy the benefits themselves of others complying with the given policies." Deliberately neglecting precautions and protective behaviors puts other individuals who abide by the recommendations at risk.[2] Such protests are yet another manifestation of a severe deficiency of basic health literacy. In addition, such protests to revive the economy, ironically, risk injuring the very people that comprise that economy.

Previously, developing countries were believed to be predisposed to and suffer greatly from rapidly spreading infectious diseases. This was attributed to inadequate healthcare systems and social determinants of health.[8,9] It was recognized that populations living under developed healthcare systems fared better when adequate care and prevention strategies are brought to bear.[8] New York being the global epicenter for the COVID pandemic in the spring begs the question – If what we know about developed healthcare systems and social determinants of health is true, then what does the current pandemic say about our country?

Pertinent for our profession, what does the pandemic say about the role of the already overburdened family physician in pandemic preparedness and response? Family doctors have provided extensive leadership in the current pandemic from both a public health and systems-based approach. We are at the center of leading COVID-19 response efforts. Not only have we been instrumental in designing and implementing innovative new strategies for overseeing ambulatory clinics, triaging protocols, testing criteria and logistics, and healthcare worker protection, we have also innovated, rather extemporaneously, to keep healthy patients away from health care facilities. Telemedicine has allowed us to realize and maximize social distancing while maintaining close contact with our patients.[10] Our role as gatekeepers has been essential to control the spread of COVID-19 by redirecting and preventing many people from going to the emergency rooms and hospitals.[11] This has not been without its challenges. Determining whether a patient's shortness of breath is related to COVID-19, or is heart failure versus an acute exacerbation of underlying pulmonary disease via a telephone or webcam is not light work. But despite these challenges we have prevailed. It is also true that the impact of our travail is diminished by the general level of public health literacy. The pandemic therefore raises the question whether what family doctors have already done is enough? Is it fair to add the additional burden of improving health literacy to overburdened family physicians? The answer to that question, for me, is "Yes." Our efforts no matter how valiant, may be an exercise in futility without improving health literacy.

Improving health literacy, while simple theoretically, is a complicated task. Based on the ecological model of health, a myriad of factors influence it. Broadly, these include the social determinants of health, the parenting and education a person received, their social norms, and policy and public discourse surrounding health. Targeting all components of this ecological model of health is beyond the scope of this article. However, there are many ways family physicians can address multiple levels of that model. These include:

On the Individual Practitioners/Patient Level

- *Capitalize on our strengths*. Patients count on their family doctor for guidance based on the best scientific evidence. Family physicians are in the perfect position for this role both from the technical aspect of possessing the scientific knowledge and having established trust with patients. Trust is an important determinant of whether information is assimilated.[11] Moreover, many family physicians are cognizant of cultural and socioeconomic factors that may influence how a patient understands concepts of health and disease.[8] Lessons from historical and recent public health crises indicate ineffectual communication can greatly compromise the individual/societal response and diminish overall risk reduction.[12] Elements that can pose challenges to effective communication include:

1. Environmental factors (biology, age, immune status, comorbidities).
2. Social and cultural differences (gender roles, generational gaps, religious beliefs, education levels, poverty).

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3. Language preferences and proficiency. On average, adults in the US read at an eighth-grade level but much of the patient education materials are written at a high-school or college level. A meager 12% of the US population is classified as 'proficient' in health literacy.[13]
4. Attitudes towards public health interventions including vaccination, social distancing, varying concepts of hygiene across cultures, and accessibility, affordability and stances towards personal protective equipment.

- *Assess your patient's health literacy overtly and factor it into your care.* The practice of health literacy assessments may become necessary going forward. These may be integrated into health maintenance appointments or be scheduled separately as health literacy evaluation visits. Several tools have been designed to assess health literacy. One such tool is the 'Newest Vital Sign'. Developed by Pfizer, this is a free but validated tool that consists of 6 questions. It tests multiple domains of health literacy. It can be administered by a nurse or any other trained healthcare professional and takes 3 minutes on average to perform.
- *Ensure patients understand*. A useful strategy is the *Ask me 3 Technique*. Created by the Partnership for Clear Health Communication (National Patient Safety Foundation, North Adams, MA), this tool specifies three essential questions patients should know the answer to which after every health care encounter:

1. What is my main problem? (What is COVID-19?)
2. What do I need to do?
3. Why is it important for me to do this?

This should then be followed by a *teach-back*[14] in which the patient is asked to provide the answers to the questions before the visit is ended.

On the Community Level

- Family doctors are leaders in the social fabric of their community. They are often medical directors of public schools, sports team doctors and fulfill other professional roles. Being a part of extensive social networks facilitates the dissemination of information to many more people than those in their practice. When doing so the principles of effective communication remain largely identical to speaking with individuals as described above.

Advocacy

- Advocacy is a crucial skill for family physicians. Described by Dr. Herbert as the 'fifth principle' of family medicine (along with being a skilled clinician, fostering healthy doctor-patient relationships, caring for a defined population, and being community-based),[15] she goes on to say, "Family physicians must judge whether information is knowledge; must decide whether that knowledge trumps other knowledge; must judge how various pieces of knowledge apply to a particular patient in all his or her complexity in a particular family in a particular community in a particular country; and must ensure patients' access to that knowledge so that they can make informed choices." This knowledge can thus allow us to advocate for health literacy. Moreover, by providing accurate information to the media, patients, and the general public, family physicians can destigmatize disease to make it a human problem as opposed to an American or Chinese problem.[8]

Public Policy

- Family physicians are unique because they focus not only on the microscopic details of the genetics, molecular biology and pathophysiology of disease but also intertwining that scientific knowledge to the macroscopic concept of the human condition. We must act as mentors for our patients, communities and population by being more involved with local and national politics. We have to view "health" from a broader perspective to include questions of impact, access, and fairness.[15]

In the rapidly bursting stream of COVID-19 facts and fiction, patients can have difficulty distinguishing between information and disinformation. While the best scientific knowledge on COVID-19 needs time to evolve, family physicians play a vital role in advocating for their patients by filtering out the noise from the signal.[16] Perhaps more importantly, reinforcing known principles of infectious disease prevention, based in the germ theory of disease and effective public health practices becomes paramount. The COVID-19 pandemic has shown us the necessity of achieving a higher level of health literacy in our population. Without it we cannot expect future pandemics to be met with a more effective response and better outcomes. This cannot be accomplished by family physicians alone. Parents, teachers, policy makers, public health agencies and others must grasp the importance of health literacy and engage with the task of improving it while, simultaneously, thwarting an "infodemic." For an individual to understand essential health messages and adopt needed lifestyle changes, health literacy is key. Family physicians play an essential and unique role. Although seemingly daunting, we can manage the multiple roles of being good teachers, educators for communities, shapers of public messaging and advocates for appropriate policies.

**It is a portmanteau that originated in the 21st century from the two words "information" and "epidemic". It means an excess of information about a problem that is detriment to its solution.*

Endnotes

1 World Health Organization. (2020, May 05). *Ebola outbreak in West Africa and the risk to Europe*. Retrieved from World Health Organization: Regional Office for Europe: http://www.euro.who.int/en/health-topics/health-emergencies/ebola-outbreak-2014/ebola-outbreak-in-west-africa-and-the-risk-to-europe

2 Paakkari, L., & Okan, O. (2020). COVID-19: Health literacy is an underestimated problem. *Lancet Public Health*, 1-4.

3 Sørensen, K., Broucke, S. V., Fullam, J., Doyle, G., Slonska, Z., & Brand, H. (2012). Health literacy and public health: A systematic review and integration of definitions and models. *BMC Public Health*, 1-13.

4 Broucke, S. V. (2014). Health literacy: a critical concept for public health. *Archives of Public Health*, 1-2.

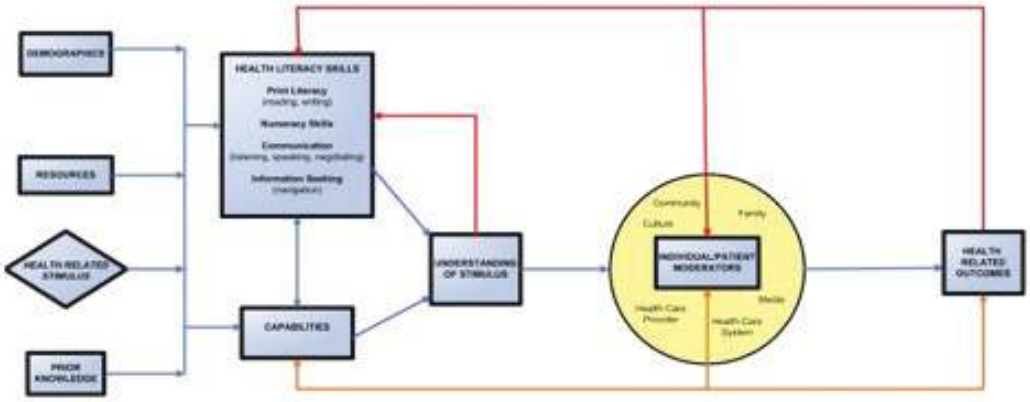

Figure 1: Health Literacy Conceptual Framework
Reproduced from source: Institute of Medicine (US) Roundtable on Health Literacy. Measures of Health Literacy: Workshop Summary. Washington (DC): National Academies Press (US) (2009) 3, Approaches to Assessing Health Literacy. Available from: https://www.ncbi.nlm.nih.gov/books/NBK45378/

HEALTH LITERACY MEASUREMENT TOOLS

The ability to consistently recognize health literacy problems through objective screening tools can push forward targeted solutions. The Agency for Healthcare Research and Quality (AHRQ) has listed a selection of researched measurement tools to ascertain levels of health literacy. This includes the Short Assessment of Health Literacy – Spanish and English (SAHL-S&E), the Rapid Estimate of Adult Literacy in Medicine – Short Form (REALM-SF), and Short Assessment of Health Literacy for Spanish Adults (SAHLSA-50). These tools notably include measurements of Spanish speaking patients as Spanish represents one of the most frequently spoken languages in the United States.[13] These assessments ultimately look to assess a patient's recognition and pronunciation of medical jargon via oral interview. The SAHL S&E further evaluates patient comprehension with the addition of distractor terms, as a quick measure of interpretation.[14] Other commonly referenced screening tools include the Single Item Literacy Screener, the Newest Vital Sign, and the Short Test of Functional Health Literacy in Adults.[15] See Table 1.

TABLE 1: HEALTH LITERACY SCREENING TOOLS[16,17]

Health literacy screening tool	Description
SAHL-S&E (Short Assessment of Health Literacy – Spanish and English)	Health literacy tool geared towards English and Spanish speaking patients via assessment of word recognition
REALM-SF (Rapid Estimate of Adult Literacy in Medicine – Short Form)	Health literacy tool based on word recognition of medical jargon, but does not necessarily include comprehension
SAHLSA-50 (Short Assessment of Health Literacy for Spanish Adults)	Health literacy for Spanish speaking patients based on word recognition and comprehension
NVS (Newest Vital Sign)	Health literacy tool to assess reading, comprehension and abstract reasoning
SILS (Single Item Literacy Screener)	Single question aimed at identifying patients requiring assistance with understanding health information
TOFHLA (Test of Functional Health Literacy in Adults)	Health literacy assessment of reading and numeracy.

Another resource for these screening inventories has been compiled in an online database called the Health Literacy Tool Shed.[16] This database is intended to both inform its users on the merits of health literacy tools as well as to expose them to a variety of methods that may be particularly matched to a proposed intervention.[17] While several of these assessments exist, many of them appear to target singular aspects of health literacy, and more emerging tools are being geared towards a more multi-faceted approach.[18] See Table 2 for links to online resources.

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view one Endnotes, continued

5 Institute of Medicine. (2004). *Health Literacy: A Prescription to end Confusion*. Washington DC: The National Academies.

6 Castro-Sanchez, E., Chang, P., Vila-Candel, R., Escobedo, A. A., & Holmes, A. H. (2016). Health literacy and infectious diseases: why does it matter? *International Journal of Infectious Diseases*, 103-110.

7 Wikler, D. (2002). Personal and social responsibility for health. *Ethics & International Affairs*, 47-55.

8 Germa, F. (2016). Pandemics, Ebola, and the family doctor. *Canadian Family Physician*, 203-205.

9 Stevens, P. (2004). *Diseases of poverty and the 10/90 gap*. London, UK: International Policy Network.

10 Chen, F. M. (2020). COVID-19 and Family Doctors. *Family Medicine*, 306-307.

11 Sutter, A. d., Llor, C., Maier, M., Mallen, C., Tatsioni, A., Weert, H. v., . . . Stoffers, J. (2020). Family medicine in times of 'COVID-19': A generalists' voice. *European Journal of General Practice*, 58-60.

12 Vaughan, E., & Tinker, T. (2009). Effective Health Risk Communication About Pandemic Influenza for Vulnerable Populations. *American Journal of Public Health*, S324 - S332.

13 Hersh, L., Salzman, B., & Snyderman, D. (2015). Health Literacy in Primary Care Practice. *American Family Physician*, 118-124.

14 Graham, S., & Brookey, J. (2008). Do Patients Understand? *The Permanente Journal*, 67-69.

15 Herbert, C. P. (2001). The Fifth Principle: Family physicians as advocates. *Canadian Family Physician*, 2441-2443.

16 McQueen, Thomas Abel & David (2020). Critical Health Literacy and the COVID-19 Crisis. s.l.: *Health Promotion International*, 2020.

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TABLE 2- HEALTH LITERACY RESOURCES

Source	Website link
Agency for Healthcare Research and Quality (AHRQ)	https://www.ahrq.gov/health-literacy/quality-resources/tools/literacy/index.html#rapid
Boston University: Health Literacy Tool Shed	https://healthliteracy.bu.edu/
Centers for Disease Control and Prevention (CDC)	https://www.cdc.gov/healthliteracy/index.html
Health Services Advisory Group	https://www.hsag.com/globalassets/care-coordination/healthliteracytoolkit2018508.pdf
Provincial Health Services Authority (PHSA)	https://www.culturallyconnected.ca/
The University of North Carolina at Chapel Hill	https://hsl.lib.unc.edu/health-literacy

BARRIERS TO HEALTH LITERACY

Many documented barriers to attaining health literacy include racial/ethnic status, fewer years of formal education, increased time since formal education, cognitive decline, and to a certain extent gender.[19] Cultural differences can also create barriers relating to health literacy.[20] The ability for providers and patients alike to display heightened cultural sensitivity can facilitate more meaningful and engaging dialogue. Cultural sensitivity is also likely intertwined with a greater emotional intelligence.[21,22] These individual factors when layered upon one another widen the divide of health literacy. Given the prevalence of diminished health literacy, particularly in medically underserved areas, it has almost become perfunctory to encounter these challenges in the health care setting. In fact, this is somewhat of a vicious cycle as diminished health literacy in itself is linked to decreased access to care.[21] One study has shown a positive correlation between health literacy and quality of life, particularly within the studied group of minority men, which included African Americans, Latinos, Asians, and Native Americans.[22] This might be possible to extrapolate across gender and race to generally reflect a link between quality of life and health literacy.

Another documented barrier to health literacy, is the overestimation of health literacy by physicians. One study appears to link this phenomenon more closely with minority patients, and can contribute to overall health inequity.[23] Interestingly, while an awareness of the concept and the importance of health literacy was widely recognized by physicians in one report, most methods used to measure health literacy were adaptations or improvisations rather than formal tools.[24]

Improved doctor-patient communication can be enhanced by validated tools such as Ask Me Three® which focuses on patient understanding of the main problem, the importance of the issue, and the care plan to address the problem. Another communication tool is the teach back method whereby patients are able to reiterate the salient points of an encounter in their own words.[25, 26] While increasing an individual's personal decision-making capacity, a goal of Healthy People 2020 campaign is to increase shared-decision making. This is perhaps an extension of the health literacy goal, but requires a strong underpinning of health literacy to move forward with this link to improved health outcomes.[27]

A WAY FORWARD/NEXT STEPS

Inter-professional collaborations within the context of the patient centered medical home (PCMH) model may be a way forward. Improved health literacy has been linked with decreased emergency room visits, and hospitalizations while increasing quality of care and health equity.[28] Primary care is the cornerstone of the PCMH, with additional collaborations from allied groups including social work, nurse case management, pharmacists, patient advocates, and counselors all having a role in enhancing health literacy. The use of evidence-based health literacy assessment tools can help identify at risk patients,[29] and the familiarity of patients within their medical home can further facilitate easier conversations surrounding health literacy and system navigation. Another solution could include more widespread adoption of a formal orientation for patients entering a new practice. This could entail a staff introduction and general clinical resources available such as on-call service, home visits, social workers, pharmacists, etc., that enhance a patient's clinical experience. These services could be delivered through a face-to-face presentation, a virtual presentation or both. See Table 3 below for health literacy strategies.

TABLE 3: STRATEGIES FOR HEALTH LITERACY INTEGRATION TO PRIMARY CARE

Strategy	Description
Team effort	From the front desk, to the nursing staff, pharmacists, social workers, all play a role in promoting a friendly, inviting, and safe place to learn and grow.
Use of evidence-based health communication tools	Among others Ask Me 3 and Teach Back are proven tools that have helped boost comprehension amongst patients
Patient friendly medical literature	Use of literature that includes pictures, simple diagrams, infographics, comic books, or graphic novels
Cultural competence and humility	An understanding and sensitivity to the sociocultural needs of the community and patient roster through social determinants of health screen
Providing opportunities for patient engagement	Patient engagement has the ability to go beyond the traditional clinical encounter. It can include the formation of advisory groups or coalitions dedicated to community health promotion
Non-medical support	Encouraging discussions with caregivers, social workers, case managers to envelop the patient with community resources

Family medicine physicians are among those health professionals at the vanguard of primary care. Essential to this function is the ability to clearly communicate with our patients. Familiarity with health literacy and the use of evidence-based tools to systematically identify gaps in knowledge can improve health equity by eliminating barriers of access to care, and leveling the playing field for our patients.

Endnotes

1 Hernandez, LM (2013) Health Literacy: Improving Health, Health Systems and Health Policy Around the World: Workshop Summary. National Academy of Sciences.

2 National Network of Libraries of Medicine. Health Literacy. Retrieved from URL: <https://nnlm.gov/initiatives/topics/health-literacy>

3 Institute of Medicine and Nielsen-Bohlman, L, Panzer, AM, and Kindig, DA (2004) Health Literacy: A Prescription to End Confusion. National Academy of Sciences.

4 Institute of Medicine (US) Roundtable on Health Literacy (2009). Measures of Health Literacy: Workshop Summary, 3. Approaches to Assessing Health Literacy. *National Academies Press*, URL: <https://www.ncbi.nlm.nih.gov/books/NBK45378/>

5 University of North Carolina at Chapel Hill (2018) What is Health Literacy? URL: <https://hsl.lib.unc.edu/health-literacy/what-is-health-literacy/>

6 County Health Rankings and Roadmaps (2019) Health Literacy Interventions. URL: < https://www.countyhealthrankings.org/take-action-to-improve-health/what-works-for-health/strategies/health-literacy-interventions>

7 Nutbeam, D (2000) Health Literacy as a Public Goal: A challenge for contemporary health education and communication strategies in the 21st century. *Health Promot Int*, 15(3):259-267.

8 Sorensen, K, Van den Broucke, S, & Fullam, J (2012) Health Literacy and Public Health: A systematic review and integration of definitions and models, *BMC Public Health*, 12:80

9 Liu, H, Zeng, H, & Shen, Y (2018) Assessment Tools for Health Literacy among the General Population: A systematic review. *Int. J Environ Res. Public Health*, 15:1711.

10 Hersh, L, Salzman, B & Snyderman, D (2015) Health Literacy in Primary Care Practice. *Am Fam Physician*, 92(2):118-124.

11 Levy, H & Janke, A (2016) Health Literacy and Access to Care. *J Health Commun*, 21(Suppl): 43-50.

12 Institute of Medicine (US) Roundtable on Health Literacy (2009). Measures of Health Literacy: Workshop Summary, 3. Approaches to Assessing Health Literacy. *National Academies Press*, URL: <https://www.ncbi.nlm.nih.gov/books/NBK45378/>

13 Agency for Healthcare Research and Quality (2016) Health Literacy Measurement Tools (Revised). URL: < https://www.ahrq.gov/health-literacy/quality-resources/tools/literacy/index.html#rapid>

14 Agency for Healthcare Research and Quality (2016) Health Literacy Measurement Tools (Revised). URL: < https://www.ahrq.gov/health-literacy/quality-resources/tools/literacy/index.html#rapid>

15 Hersh, L, Salzman, B & Snyderman, D (2015) Health Literacy in Primary Care Practice. *Am Fam Physician*, 92(2):118-124.

16 Boston University (2020) Health Literacy Tool Shed: A database of health literacy measures. URL: < https://healthliteracy.bu.edu/>

17 Boston University (2020) Health Literacy Tool Shed: A database of health literacy measures. URL: < https://healthliteracy.bu.edu/>

18 Altin, SV, Finke, I, & Kautz-Freimuth, S et al. (2014) The Evolution of Health Literacy Assessment Tools: A systematic review. *BMC Public Health*, 14:1207.

19 Shah, LC, West, P, & Bremmeyr, K et al. (2010) Health Literacy Instrument in Family Medicine: The "Newest Vital Sign" Ease of Use and Correlates. *J Am Board Fam Med*, 23:195-203.

20 Mancuso, L (2011) Overcoming Health Literacy Barriers: A Model for Action. *Journal of Cultural Diversity*, 18:2:60-67.

21 Levy, H & Janke, A (2016) Health Literacy and Access to Care. *Journal of Health Communication*, 21:43-50.

22 Miller, DB, Cage, JL, & Nowacki, AS et al. (2018) Health Literacy (HL) & Health-Related Quality of Life (HRQL) Among Minority Men.

23 Kelly, PA & Haidet, P (2007) Physician Overestimation of Patient Literacy: A potential source of health care disparities. *Patient Education and Counseling*, 66:119-122.

24 Barrett, SE, Puryear, JS & Westpheling, K (2008) Health Literacy Practices in Primary Care Settings: Examples from the field. *The Commonwealth Fund*, URL: <https://www.commonwealthfund.org/sites/default/files/documents/___media_files_publications_fund_report_2008_jan_health_literacy_practices_in_primary_care_settings__examples_from_the_field_barrett_hltliteracypracticesprimarycaresettingsexamplesfield_1093_pdf.pdf>

25 Health Services Advisory Group (n.d.) Health Literacy Toolkit, Retrieved June 19, 2020 from URL: < https://www.hsag.com/globalassets/care-coordination/healthliteracytoolkit2018508.pdf>

26 Ohio KePRO (n.d.) Patient-Centered Care: Focus on Health Literacy, Retrieved June 20, 2020 from URL: < http://www.arha.org/Portals/1/Documents/Continuum%20of%20Care/Clinical%20Care%20Highlights/Literacy/Health%20Literacy%20Flyer.pdf>

27 Wigfall, LT & Tanner, AH (2018) Health Literacy and Health Engagement as Predictors of Shared Decision Making among adult information seekers in the United States: A secondary data analysis of the Health Information National Trends Survey. *J Cancer Educ*, 33(1):67-73.

28 Ridpath, JR, Larson, EB, & Greene, SM (2011) Can Integrating Health Literacy into the Patient-centered Medical Home Help us Weather the Perfect Storm? *J Gen Intern Med*, 27(5):588-594.

29 Lausen, LH, Smith, SK & Cai, A et al. (2018) How is Health Literacy Addressed in Primary Care? Strategies that general practitioners use to support patients. *Journal of Communication in Healthcare*, 11(4):278-287.

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TUBERCULOSIS RESISTANCE AROUND THE WORLD

By Luis Caceres, MD, and Ani A. Bodoutchian, MD, MBA, FAAFP, CPE

INTRODUCTION

Tuberculosis (TB) is an infectious disease associated with the highest mortality rates in the world. It exceeds the mortality rates for both the Human Immunodeficiency Virus and Autoimmune Deficiency Syndrome (HIV/AIDS) and malaria.[1]

In 2017, The World Health Organization (WHO) estimated that 4,000 people die of TB every day.[1-3] Despite TB being a treatable disease, the new development of drug resistance TB has become a global public health issue.

The major challenge for treatment and eradication is the mutation of TB into a multidrug resistant infection. According to the WHO, the number of cases is increasing worldwide. In 2014 approximately 480,000 TB cases were reported. By 2016, cases had increased to 600,000.[1,4,5]

An estimated 558,000 new cases of rifampicin resistant TB (RR-TB) was reported by the WHO in 2017.[5] Almost half were in three countries: India (24%), China (13%) and the Russian Federation (10%).[6-8] Among the RR-TB cases, an estimated 82% had multidrug-resistant TB (MDR-TB).[6,7] Globally, 3.5% of new TB cases and 18% of previously treated cases had MDR/RR-TB, with the highest proportions (>50% in previously treated cases) in the countries of the former Soviet Union.[1,5,7]

Though the Soviet Union would be considered an unlikely region for TB, the spread is multifactorial. Unemployment and poverty resulted in an increase in crime which encouraged the spread of TB in communities and especially in the prison population. There was also a high influx of migrants into the Soviet Union which contributed to the spread of TB.[14] Another contributing factor was the collapse of the Soviet health care system which ignited a previous stringent system to lose its control.[9]

TB resistance is widespread with some "hot spots," which are areas with high incidence and high rates of drug resistance. Those "hot spots" have been identified as the former Soviet Union, China and India. As travel has become more accessible, those countries with low TB rates are seeing an increase in TB due to an influx of migration.[10]

METHODS

A literature review was done which included: The World Health Organization, the United States National Institute of Health the Centers for Disease Control and Prevention (CDC), and the United States National Library of Medicine (PubMed).

According to the WHO reports, the following geographical distribution areas were used: The Americas, Africa, Europe, Eastern Mediterranean, South-East Asia and Western Pacific.

RESULTS

Globally 3.9% of new and 21% of re-treatment TB cases is MDR/RR, which is often interpreted as evidence that drug resistance results mainly from poor treatment adherence.[1,5,17,18]

Region of the Americas

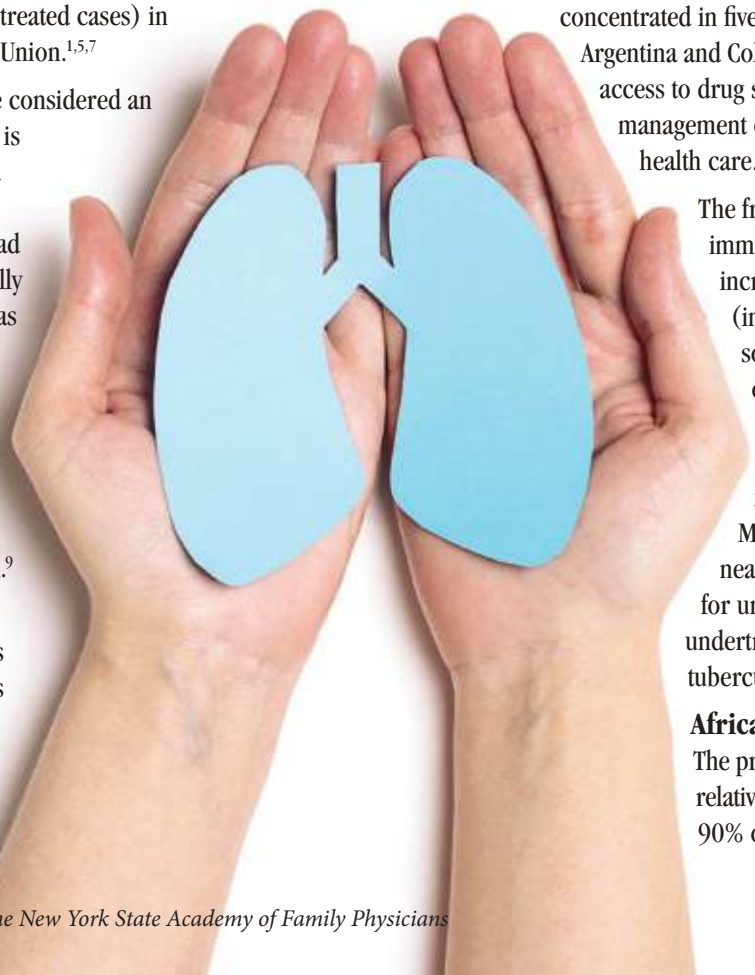
The Pan-American Health Organization estimated that 4% of TB cases were resistant to rifampin or rifampin and isoniazid. However, they also found many cases remained undiagnosed and consequently untreated.[11]

Seventy percent of the estimated number of RR/MDR-TB is concentrated in five countries: Brazil, Peru, Ecuador, Argentina and Colombia. This is due to lack of access to drug susceptibility testing, poor management of TB cases or a lack of access to health care.[1,11]

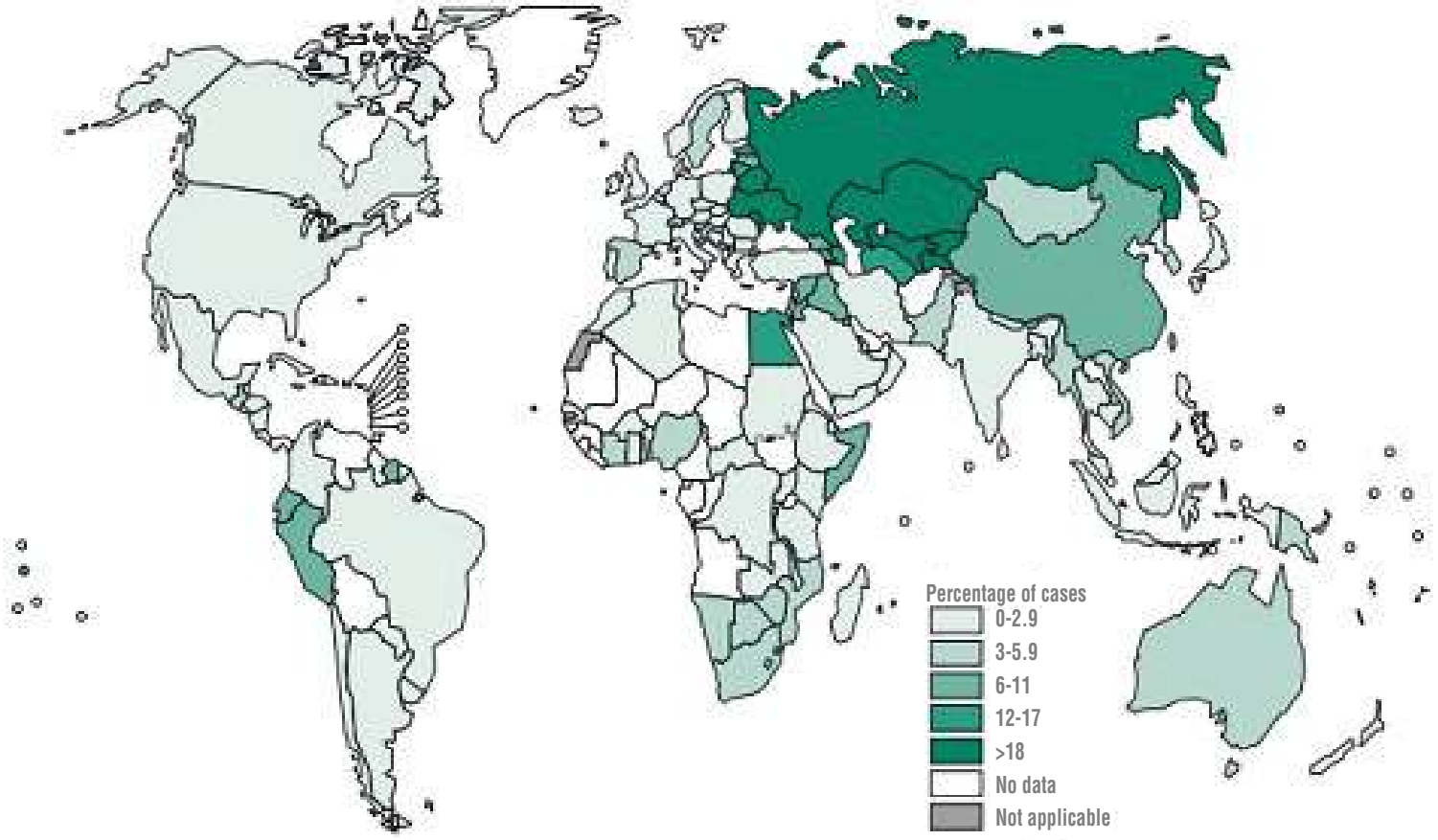
The frequent northward passage of immigrants from Mexico has increased the rates of tuberculosis (including MDR-TB) in the southwestern United States.[31] Rates of latent tuberculosis were found to be 21.8% in Latino versus 5.6% for non-Latino individuals in one study from San Diego.[32] Moreover, young Latinos living near the border are at higher risk for undiagnosed infection and undertreatment of latent tuberculosis.[31,32]

African Region

The proportion of cases of MDR-TB is relatively low at 2.2%.[12] In this region, 90% of the TB cases are associated in



Percentage of new TB cases with MDR/RR-TB[3]



Figures are based on the most recent year for which data have been reported, which varies among countries. Data cover the period 2002-2018

areas where HIV is widespread.[1,12] The most critical factor in addressing drug resistance in African countries is the lack of laboratory infrastructure and transport networks that can provide rapid diagnosis and correct reporting.[12]

European Region

The proportion of cases of tuberculosis that are multidrug-resistant varies widely between Western Europe, Eastern Europe and Central Europe. The incidence of MDR-TB in Western and Central Europe is only 1.5%. Comparatively, in Eastern Europe and Central Asia as a group, the incidence of MDR-TB is as high as 22.6%.[1,5,6,13]

One of the primary contributing factors is the economic crisis that followed the disintegration of Soviet Union in 1991.[14] Other significant factors include the failure of many countries to follow standard procedures to deal with tuberculosis and the spread of drug-resistant tuberculosis in prisons.[9]

In the 1990s, the financial support of the Russian Federation TB control program decreased significantly. The low compensation of TB practitioners led to a mass exodus of specialists from medical and research facilities.[29] Moreover, the rate of hospitalization increased, and malnutrition again became a significant problem.

Cessation of TB screening actions, irregular and insufficient drug supplies led to an almost threefold increase in TB incidence and mortality over the course of a decade. This also resulted in the emergence of drug-resistant strains of Mycobacterium tuberculosis.[30] A lack of adequate infection control practices increased nosocomial infection.[32]

Currently in the Russian Federation, the proportion of people who become ill with tuberculosis is relatively stable and decreasing in some areas. However, the number of MDR-TB cases is increasing despite TB control programs, with the reasons for this being unclear.[9,14,23]

Eastern Mediterranean Region

This particular region of the world brings challenges in gathering information as many countries are involved in war and cannot provide even very basic health care to their populations. Poor or in some cases, nonexistent infrastructure exacerbates the situation.[15,16]

Approximately 5.4% of all cases of tuberculosis in this region are multidrug-resistant and more than half of these are in Pakistan.[1,17,25]

South-East Asia Region

This region is home to a number of countries that have a high burden of tuberculosis, with India alone accounting for two million cases.[8,21]

Even today in India, two deaths occur every three minutes from TB.[25,26] Surprisingly, people are still under the impression that TB is a disease of poor people and mostly those living in slums. More affluent people believe that they are immune but in reality, everybody exposed can potentially be infected with TB.[26] The consumption of unpasteurized milk or dairy products made from raw milk is another potential

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source of TB for humans. There is ample evidence that bovine TB (*Mycobacterium bovis*) gets transmitted to humans.[27,28]

In 2017, the WHO reported that the proportion of cases of MDR-TB among new TB cases in the region is modest, with 3% of total cases.[1,5,6] However, the overall number of cases of MDR-TB is considerably higher with almost 3,000,000 of cases that year.[1,5,18,19]

Unlike the other countries in the region, Thailand has an extensive and well-developed network of laboratories. Some laboratories are capable of performing tests for resistance to second-line drugs. All MDR-TB patients are managed in the public sector but international guidelines are not often followed.[20]

Western Pacific Region

In 2017, there were over 192,000 new cases of MDR-TB in the Western Pacific region. This represents 5% of all cases of TB in the region.[1,8,21]

Almost 85% of MDR-TB cases emerged in China which is the second highest level of resistance in the world.[8,22] China is the only country in the Western Pacific with a significant number of laboratories able to test samples for drug resistance. However, the laboratories do not have an infrastructure capable to serve such a large population, and in order to cope with the demand it may be crucial to forge links with the private sector.

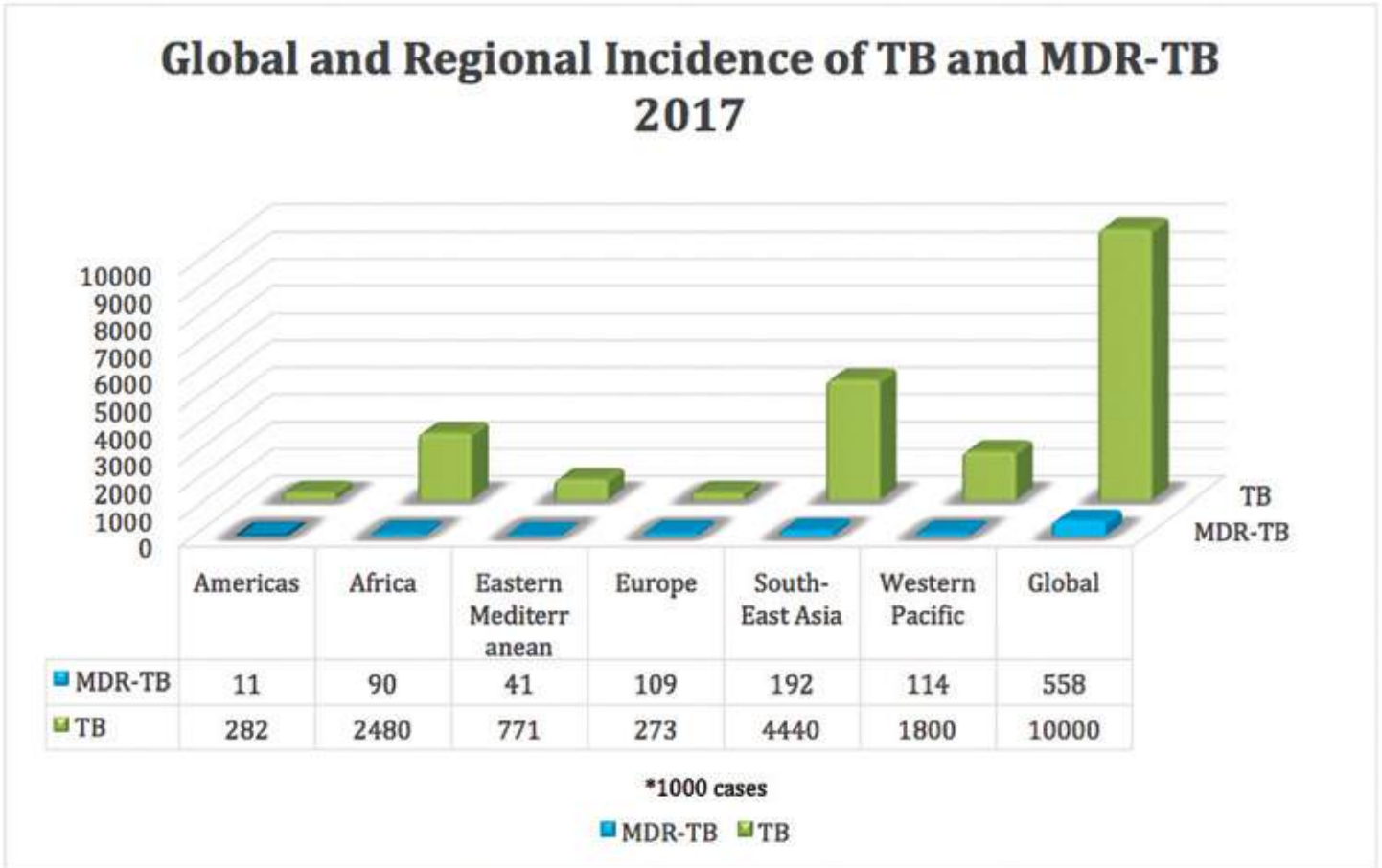
New York State

There has been a significant peak in the number of new TB cases.[33,34] This peak began in the mid 1980s and persisted until mid-1990s. This rise was attributed to two specific factors; the HIV/AIDS epidemic and the influx of new migrants to New York City. Additionally, the increase in the homeless population also played an important role in the spread of TB.[33]

In 2017, New York State reported 806 new cases of TB which represented an increased rate of 4.9% from 2016. 76% of these were concentrated in New York City with Nassau, Suffolk and Westchester counties reporting 54.4% of the TB cases in New York State.[33,34] Most of the cases continued to be Asian or Hispanic (79% and 54% respectively) followed by African American with 34% and White with 26%.[33,34]

The majority of TB cases (85.9%) reported in New York State in 2017 were in foreign born individuals. China and India (14.4% and 6.8% respectively) were the biggest importers of TB cases which correlates with the worldwide picture.[33]

As of 2017, the incidence of drug resistance is at an overall low in New York State. 2.2% were attributed to RR and only 0.2% to MDR TB with the majority of these cases documented in New York City.[33,34]



Infectious Disease Reports. 2016.

DISCUSSION

Drug resistance tuberculosis is a multifactorial public health crisis. Lack of access to health care, obsolete infrastructure, and poor management of the disease are the most common causes of drug resistant tuberculosis worldwide.[23]

The main priority for all countries is to prevent the development of drug resistant tuberculosis. However, it is also important to properly treat all cases that emerge.

Some countries need to develop ways of detecting and treating drug-resistant cases expeditiously. This is particularly important in countries with high proportions of tuberculosis drug resistance, countries with high absolute numbers of MDR-TB, and countries with a TB population heavily co-infected with HIV.[24]

Three crucial measures include improvements in infection control methods to prevent transmission; expansion of testing services to detect cases quickly; and community involvement to ensure patients get tested and take all their drugs regularly.

The New York State Department of Health, in its efforts to mitigate and eradicate TB and MDR-TB, has created multiple programs and developed strategies such as providing financial support to local health departments. Public Health Law Article 6 (NY State Aid for General Public Health Work Reimbursement) ensures that uninsured patients in both outpatient and inpatient care receive screening and treatment for the disease.

Although the strategies implemented have facilitated the decrease in TB rates, further strategies and measures are required to completely eradicate the disease. Beneficial measures include the implementation of directly observed therapy and case management strategies to address barriers that prevent adherence to therapy.

Directly observed therapy (DOT), a Medicaid funded strategy, has proven successful in controlling the spread of TB by assuring treatment completion. Case management strategies, including the review of patients' progress, the removal of barriers that prevent adherence to therapy and the resolution of improper follow up would assist in reducing the TB rates. Tuberculosis is a disease that travels with people. If left untreated, migration results in increased infection rates for those individuals with whom they come into contact.[22,25]

There is a significant association between HIV and MDR-TB. A major reason for this association is environmental circumstances. People become infected with both HIV and MDR-TB in places where patients are in close contact with each other such as in health care facilities and prisons.[22,24]

Many of the top source countries for international migrants are also countries with a high burden of TB. In the last five years, India was the top source country for international migrants as it had the highest burden of TB.[1] Other top countries for both international migration and tuberculosis cases include the Russian Federation, China, Bangladesh, Pakistan, the Philippines, Afghanistan, and Indonesia.

CONCLUSIONS

This review demonstrates an evident increment of both RR-TB and MDR-TB in the last decade, despite most of the countries around the world following WHO recommendations.[1]

There needs to be more attention focused on infrastructure, education and access to medical services as well as research in drug development to help control the epidemic of RR-TB and MDR-TB.[22]

It is crucial for healthcare providers to screen recent travelers from high incidence countries, gather a focused history and offer resources to prevent, control and avoid new cases of TB and drug resistance TB. Additionally, there must be policies to decrease poverty, increase food safety, improve living conditions, increase cessation of tobacco and alcohol use, and prevent the development of chronic conditions such diabetes mellitus.

Endnotes

1 World Health Organization. "Global Tuberculosis Report 2018", WHO, Geneva, 2018.

2 Raviglione, M., & Sulis, G. (2016). Tuberculosis 2015: Burden, Challenges and Strategy for Control and Elimination. Infectious disease reports, 8(2), 6570. doi:10.4081/idr.2016.6570.

3 Mekonnen, B., Mihret, A., Getahun, M., Hailu, T., Sidiki, S., V Kelley, H., … Abebe, T. (2019). Evaluation of the tuberculosis culture color plate test for rapid detection of drug susceptible and drug-resistant Mycobacterium tuberculosis in a resource-limited setting, Addis Ababa, Ethiopia. PloS one, 14(5), e0215679. doi: 10.1371/journal.pone.0215679.

4 Nguyen, Van Anh & Anton-Le Berre, Véronique & Bañuls, Anne-Laure & Nguyen, Thi Van Anh. (2019). Molecular Diagnosis of Drug-Resistant Tuberculosis; A Literature Review. Frontiers in Microbiology. 10. 10.3389/fmicb.2019.00794.

5 World Health Organization: Global Tuberculosis Report 2017.

6 WHO/IUATLD Global Project on Anti-Tuberculosis Drug Resistance Surveillance Anti tuberculosis drug resistance in the world report no. 4.

7 Zignol, M., van Gemert, W., Falzon, D., Sismanidis, C., Glaziou, P., Floyd, K., & Raviglione, M. (2012). Surveillance of anti-tuberculosis drug resistance in the world: an updated analysis, 2007-2010. Bulletin of the World Health Organization, 90(2), 111–119D. doi:10.2471/BLT.11.092585.

8 Poudel, A., Nakajima, C., Fukushima, Y., Suzuki, H., Pandey, B. D., Maharjan, B., & Suzuki, Y. (2012). Molecular characterization of multidrug-resistant Mycobacterium tuberculosis isolated in Nepal. Antimicrobial agents and chemotherapy, 56(6), 2831–2836. doi:10.1128/AAC.06418-11.

9 Institute of Medicine (US) Forum on Drug Discovery, Development, and Translation; Russian Academy of Medical Science. The New Profile of Drug-Resistant Tuberculosis in Russia: A Global and Local Perspective: Summary of a Joint Workshop. Washington (DC): National Academies Press (US); 2011. 3, Drug-Resistant Tuberculosis in the Russian Federation.

10 Caminero JA, ed. Guidelines for Clinical and Operational Management of Drug-Resistant Tuberculosis. Paris, France: International Union Against Tuberculosis and Lung Disease, 2013.

11 Pan American Health Organization: Tuberculosis in the Americas 2018, Washington, DC, PAHO, 2018.

12 Ismail, Nazir Ahmed et al. Prevalence of drug-resistant tuberculosis and imputed burden in South Africa: a national and sub-national cross-sectional survey. The Lancet Infectious Diseases, Volume 18, Issue 7, 779 – 787.

13 Hargreaves, S. et al. Multidrug-resistant tuberculosis and migration to Europe. Clinical Microbiology and Infection, Volume 23, Issue 3, 141 – 146.

14 Yablonskii PK, Vizel AA, Galkin VB, Shulgina MV. Tuberculosis in Russia. Its history and its status today. Am J Respir Crit Care Med. 2015 Feb 15;191(4):372-6. doi: 10.1164/rccm.201305-0926OE. PubMed PMID: 25679104.

continued on page 28

15 Sargazi A, Sepehri Z, Sagazi A, Nadakkavukaran PK, Kiani Z. Eastern Mediterranean region tuberculosis economic burden in 2014. Antimicrobial Resistance and Infection Control volume 4, Article number: P102 (2015).

16 Mansoori N, Douraghi M, Rajabloo AA, Taziki M, Yaseri M, Vaziri F. Mycobacterium tuberculosis Complex Drug Resistance in a High Tuberculosis Incidence Area from the WHO Eastern Mediterranean Region. J Pharm Pharm Sci. 2017;20(1):428-434. doi: 10.18433/J3J64H. PubMed PMID: 29197427.

17 Ragonnet R, Trauer JM, Denholm JT, Marais BJ, McBryde ES. High rates of multidrug-resistant and rifampicin-resistant tuberculosis among re-treatment cases: where do they come from?. BMC Infect Dis. 2017 Jan 6;17(1):36. doi: 10.1186/s12879-016-2171-1. PubMed PMID: 28061832; PubMed Central PMCID: PMC5217596.

18 MacNeil A, Glaziou P, Sismanidis C, Maloney S, Floyd K. Global Epidemiology of Tuberculosis and Progress Toward Achieving Global Targets - 2017. MMWR Morb Mortal Wkly Rep. 2019 Mar 22;68(11):263-266. doi: 10.15585/mmwr.mm6811a3. PubMed PMID: 30897077; PubMed Central PMCID: PMC6478060.

19 World Health Organization. Global health observatory data repository. Population data by WHO region. 2015.

20 Panda S, Swaminathan S, Hyder KA, Christophel EM, Pendse RN, Sreenivas AN, Laksono SJ, Srivastava R, Nair GB, Aditama TY, Singhasivanon P, Thapa AB, Sarkar SK.Drug resistance in malaria, tuberculosis, and HIV in South East Asia: biology, programme, and policy considerations. BMJ. 2017 Sep 5;358:j3545. doi: 10.1136/bmj.j3545. Review. PubMed PMID: 28874362; PubMed Central PMCID: PMC5582343.

21 Islam, T., Hiatt, T., Hennig, C., & Nishikiori, N. (2014). Drug-resistant tuberculosis in the WHO Western Pacific Region. Western Pacific surveillance and response journal: WPSAR, 5(4), 34–46. doi:10.5365/WPSAR.2014.5.4.007.

22 Sulis, G., Roggi, A., Matteelli, A., & Raviglione, M. C. (2014). Tuberculosis: epidemiology and control. Mediterranean journal of hematology and infectious diseases, 6(1), e2014070. doi:10.4084/MJHID.2014.070.

23 Wright A, Zignol M, Van Deun A, Falzon D, Gerdes SR, Feldman K, Hoffner S, Drobniewski F, Barrera L, van Soolingen D, Boulabhal F, Paramasivan CN, Kam KM, Mitarai S, Nunn P, Raviglione M. Epidemiology of antituberculosis drug resistance 2002-07: an updated analysis of the Global Project on Anti-Tuberculosis Drug Resistance Surveillance. Lancet. 2009 May 30;373(9678):1861-73. doi: 10.1016/S0140-6736(09)60331-7. Epub 2009 Apr 15. Review. PubMed PMID: 19375159.

24 Dye C, Lönnroth K, Jaramillo E, Williams BG, Raviglione M. Trends in tuberculosis incidence and their determinants in 134 countries. Bull World Health Organ. 2009 Sep;87(9):683-91. doi: 10.2471/blt.08.058453. PubMed PMID: 19784448; PubMed Central PMCID: PMC2739916.

25 Pourostadi M, Rashedi J, Mahdavi Poor B, Samadi Kafil H, Kazemi A, Ahmadpour E, Asgharzadeh M. Role of Molecular Epidemiology on Tuberculosis Control in the Middle East Countries: a Systematic Review and Meta-Analysis. Tanaffos. 2018 Oct;17(4):223-232. PubMed PMID: 31143212; PubMed Central PMCID: PMC6534806.

26 Sandhu G. K. (2011). Tuberculosis: current situation, challenges and overview of its control programs in India. *Journal of global infectious diseases, 3*(2), 143–150. doi:10.4103/0974- 777X.81691

27 Prasad H, Singhal A, Mishra A, Shah N, Katoch V, Thakral S, et al. Bovine tuberculosis in India: Potential basis for zoonosis. Tuberculosis. 2005; 85:421–8.

28 Srivastava K, Chauhan DS, Gupta P, Singh HB, Sharma VD, Yadav VS, et al. Isolation of *Mycobacterium bovis* and *M. tuberculosis* from cattle of some farms in north India-Possible relevance in human health. Indian J Med Res. 2008; 128:26–31.

29 Yablonskii PK, Vizel AA, Galkin VB, Shulgina MV. Tuberculosis in Russia. Its history and its status today. Am J Respir Crit Care Med. 2015 Feb 15;191(4):372-6. doi: 10.1164/rccm.201305-0926OE. PubMed PMID: 25679104.

30 Tuberculosis In The Russian Federation, 2009. An analytical review of the TB statistical indicators used in the Russian Federation. – Moscow, 2011. – 208 p.

31 Granich RM, Moore M, Binkin NJ, McRay E. Drug-resistant tuberculosis in foreign-born persons from Mexico, the Philippines, and Vietnam-United States, 1993–1997. Int J Tuberc Lung Dis. 2001; 5:53–58. [PubMed: 11263517].

32 Sipan C, Blumberg E, Hovell M, et al. Screening Latino adolescents for latent tuberculosis infection (LTBI). Public Health Rep. 2003; 118:425–433. [PubMed: 12941855]

33 Tuberculosis in New York State, 2017. Annual statistical report, Bureau of tuberculosis control.

34 New York City Health Department, Annual Tuberculosis Summary, 2019.

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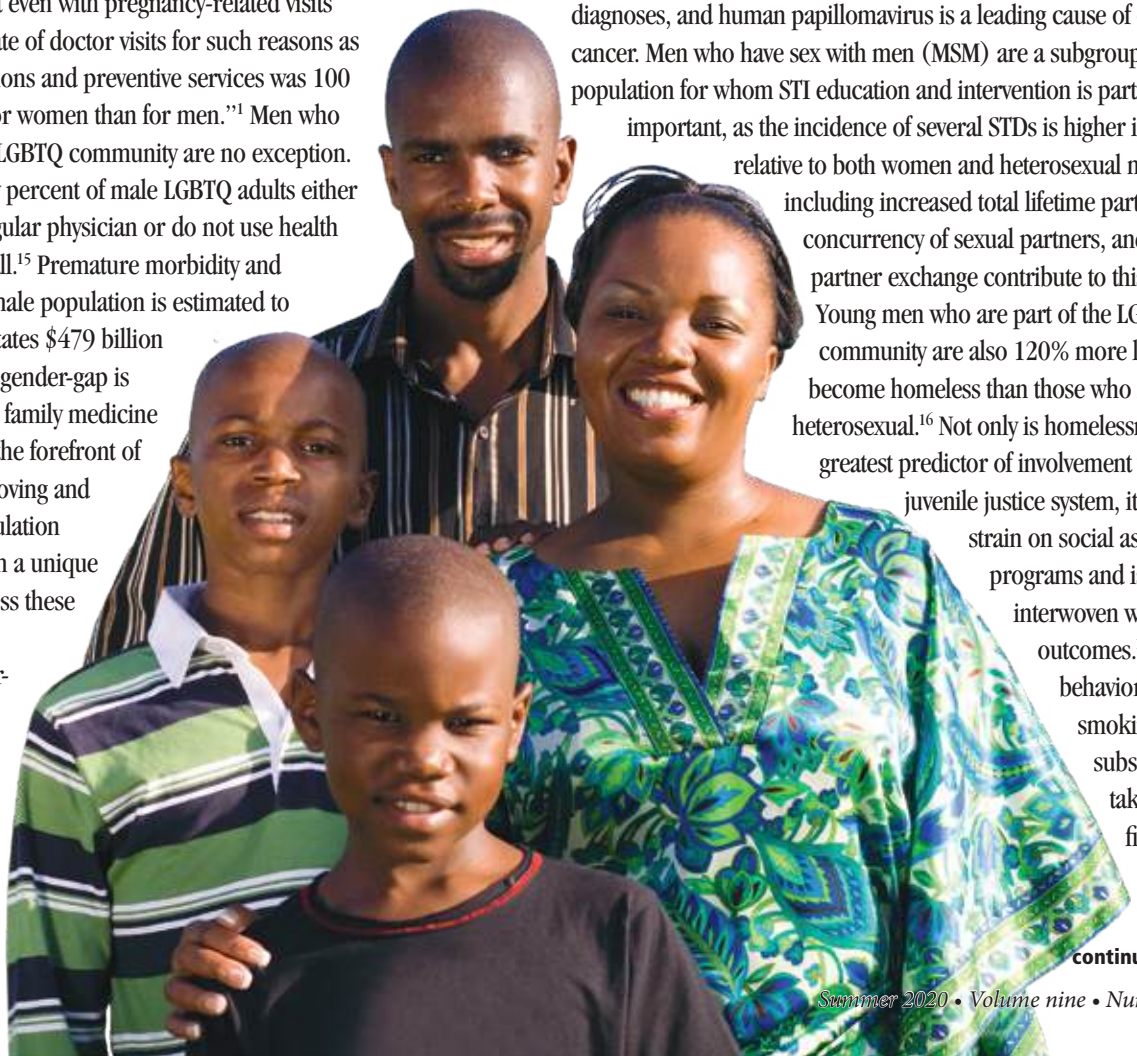
Men's Health:
Closing the Health Gender-Gap to Improve Population Health

By Jason Raymond* and Adam Raymond, DO*

There is a growing body of evidence that the impact of men's health on the health status of women and children can be profound. Men's health can affect family health, finances, and relationship stability among other things, yet it receives little attention from health policy makers or health care providers.[4] This contributes to the significant health gender-gap in the United States with men dying younger, typically being diagnosed with chronic diseases at an earlier age, and underutilizing the healthcare system as compared to women.[2] A 2019 report by the United Nations Development Programme found that at birth, women in the U.S. are expected to live 5.1 years longer than their male counterparts. Another report by the New York State Department of Health in 2018 showed similar findings for New York State, with women living 4.8 years longer than men.[3,6] From aortic aneurysms to kidney stones and emphysema, men tend to fall ill at a younger age and have a higher incidence of chronic disease than women.[13] Compounding the issue is men's underuse of primary care services which ultimately results in the use of more expensive hospital services. Thirty-three percent of men (as opposed to only nineteen percent of women) report having no regular physician, and a study by the Centers for Disease Control and Prevention (CDC) found that even with pregnancy-related visits excluded, "the rate of doctor visits for such reasons as annual examinations and preventive services was 100 percent higher for women than for men."[1] Men who are a part of the LGBTQ community are no exception. As much as thirty percent of male LGBTQ adults either do not have a regular physician or do not use health care services at all.[15] Premature morbidity and mortality in the male population is estimated to cost the United States $479 billion annually and the gender-gap is widening.[5] As the family medicine community is at the forefront of promoting, improving and maintaining population health, they are in a unique position to address these issues by closing the health gender-gap. Increasing family physician awareness that closing the health gender-gap can be profoundly beneficial to the entire patient population is necessary to help make informed decisions about where to focus efforts to have the greatest impact.



Many family physicians are aware that men are a challenging and underserved patient population but the links between male, female, and pediatric health are less widely known. Female partners' psychological health, for example, can be negatively affected when their male partners become ill.[4] This is compounded by the financial losses that households often incur when men become physically ill or pass away. Over 50% of widows living in poverty were not living in poverty prior to their husbands' deaths. Financial difficulty and even increased mortality is common among widows after the death of a male partner. In one study, all-cause mortality nearly doubled for women in their first month of widowhood.[1] While early mortality is particularly traumatic for survivors, male behavior and overall health during life, too, affects the health of women and children. For example, control of chronic infections like tuberculosis and STIs in men is critical to the well-being of the population. Herpes simplex virus causes obstetrical complications. Chlamydia trachomatis leads to pelvic inflammatory disease among other diagnoses, and human papillomavirus is a leading cause of cervical cancer. Men who have sex with men (MSM) are a subgroup of the male population for whom STI education and intervention is particularly important, as the incidence of several STDs is higher in this group relative to both women and heterosexual men. Factors including increased total lifetime partners, concurrency of sexual partners, and rate of partner exchange contribute to this trend.[15] Young men who are part of the LGBTQ community are also 120% more likely to become homeless than those who identify as heterosexual.[16] Not only is homelessness the greatest predictor of involvement with the juvenile justice system, it increases the strain on social assistance programs and is intimately interwoven with health outcomes.[14,16] Men's behavioral issues like smoking and substance use can take a physical, financial, and emotional toll on families.

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Secondhand smoke, in particular, poses a serious threat to the health of those living with a tobacco smoker. Worldwide, women constitute 64% of deaths from second-hand smoke.[10] It has been repeatedly established that paternal smoking and secondhand smoke threaten the health of both non-pregnant and pregnant women and heighten the risk of birth defects in newborns.[1] Even paternal dietary habits can impact the health of children. Men who are obese, have type 2 diabetes, or have insufficient protein intake have been shown to have a decline in sperm quality.[9] Not all of the influence men have on their children's health is addition by subtraction, however. It has been demonstrated that the mere involvement of a father (as opposed to a mother alone) in decision making about a child's preventive care improves childhood immunization rates.[5] In myriad ways, men's health powerfully affects the overall health of the population. Thus, when family physicians promote the health of their male patients they are promoting the health of all of their patients.

Understanding the biological, social, and behavioral barriers to health care that men face is an important first step in identifying ways to address the health gender-gap. Biologically, males have lower levels of HDL cholesterol and more abdominal obesity than women which puts them at higher risk for heart disease and stroke. Socially, women generally form more fruitful interpersonal bonds and enjoy stronger social support than men do. The result is a reduction in female depression, myocardial infarctions, and cerebrovascular accidents. Behaviorally, males take more risks than females and consequently sustain more injuries. Other risks include harmful behaviors like smoking and excessive alcohol consumption which are both more prevalent in the male population. In the United States, approximately 2.5 times more men than women die from alcohol-related causes, which are the third leading cause of all preventable deaths annually.[7,8] Male patients' behavior is heavily influenced by gender and sexual norms.[5] Men who hold more traditional views of masculinity are less likely to seek out medical care. "According to the WHO European Region's review of the social determinants of health…[men's lagging health outcomes are tied to] 'behaviour paradigms related to masculinity and the fact that men are less likely to visit a doctor when they are ill and, when they see a doctor, are less likely to report on the symptoms of disease or illness.'"[4] Partially as a consequence of this, there are more men without health insurance than women and men are three times more likely to have not seen a physician in the previous year.[4] This trend is notable among the men who have sex with men (MSM) population, as well. Men who have sex with men frequently avoid healthcare providers due to fear of stigmatization or lack of provider knowledge (either perceived or actual), which contributes to a set of circumstances under which substandard care is a concern to the patient.[15] While the concept of masculinity is fluid, generally, men with illnesses are considered by many cultures to be weak. Primary care providers should be conscious of societal influences such as these and how they relate to men's health-seeking behaviors. Providers may also inadvertently contribute to the problem in various ways. For instance, male-specific issues like erectile dysfunction are underdiagnosed because they are often considered less consequential or important than diagnoses like ischemic heart disease and hypertension.[4] To the contrary, not only can these male-specific diagnoses in and of themselves be detrimental to quality of life and mental health but they may also aid in the diagnosis of other more insidious diseases. Erectile dysfunction, for instance, can be used as a screening tool for early detection of cardiovascular disease.[11,12] Overcoming these barriers by implementing practice changes that help close the health gender-gap may improve population health in New York State and throughout the country.

A successful attempt to close the health gender-gap will require a paradigm change in the mindset and behaviors of both male patients and their providers. There are several potential points of intervention including increasing efforts to engage men in the healthcare system. Men are already less inclined to disclose health issues to their physicians so an emphasis should be placed on helping them feel comfortable having candid conversations about health topics. Active listening and direct, non-judgmental language encourages men to express themselves. Family physicians can also help male patients redefine how they view health care. Since many men aspire to be healthier physically, mentally, and sexually, presenting health care "as a vital component of optimal performance" can be an effective way to persuade male patients to be more proactive in seeking out consistent health care.[1] Scheduling regular health maintenance visits, calling a primary care provider when feeling unwell, limiting alcohol and tobacco use, being educated about safe sex and sexual dysfunction, and adhering to a healthy diet all play a part in maximizing vitality and virility. While these principles apply to men of any sexual orientation, gay men face unique challenges in accessing medical care and trusting their providers that call for special consideration. One such challenge is inconsistency in providers' knowledge of the LGBTQ community.[15] Since family physicians are a common entry point for patients into the healthcare system, more consistent awareness of LGBTQ issues among primary care providers can help eliminate this barrier rather than serve as a deterrent to the MSM population.

Dietary habits even have a direct effect on sperm quality and the rates of chronic illnesses in children. Research in mice has shown that paternal diet at the time of conception "influences the long-term growth and metabolic health of his offspring."[9] There is much information available for expectant mothers about the effect of diet on the development and health of their children. The same information is seldom available to fathers.[9]

Fathers should also be actively encouraged to participate in the health care of their children. As mentioned previously, paternal involvement in collaborative decision making with a child's mother can increase immunization rates. Similarly, several studies have established the population health benefits of involving male partners in decisions about reproductive health and family planning.[5] When possible, practices should have flexible hours of operation to accommodate men's working hours, provide general men's health information, devise methods of community outreach, and stress strict

confidentiality.[4] Men's health and population health are one and the same and family doctors are well positioned to help close the health gender-gap to the benefit of the entire population.

At the population level, men's health is inextricably linked to children's, women's, and minority health. Of these groups, men consistently receive the least health care attention.[5] The effects of men's health on the health of the population at large should be more widely recognized as a potential tool with which to improve the health of entire communities, "[and] it should be welcomed as a logical complement to women's health and children's health..."[1] Men's health should be regarded as equally important as women's and children's health and receive the same individual attention that these other patient populations more commonly enjoy. This is not only a matter of doing justice to men in our society, but a matter of doing justice to the whole population. If this new mentality and its corresponding practice changes can be adopted by family physicians in New York State, an example of how to use men's health to improve population health can be set for the entire nation, and perhaps, the world.

Endnotes

1 Bonhomme, Jean J. "Men's Health: Impact on Women, Children and Society." *The Journal of Men's Health & Gender*, vol. 4, no. 2, 2007, pp. 124–130., doi:10.1016/j.jmhg.2007.01.011.

2 Westergaard, David, et al. "Population-Wide Analysis of Differences in Disease Progression Patterns in Men and Women." *Nature Communications*, vol. 10, no. 1, 2019, doi:10.1038/s41467-019-08475-9.

3 UNDP. 2019. Human Development Report 2019. Beyond income, beyond averages, beyond today: Inequalities in human development in the 21st century. New York. http://hdr.undp.org/en/content/human-development-report-2019

4 Moon, Du Geon. "Changing Men's Health: Leading the Future." *The World Journal of Men's Health*, vol. 36, no. 1, Jan. 2018, p. 1., doi:10.5534/wjmh.18101.

5 Baker, Peter, et al. "The Men's Health Gap: Men Must Be Included in the Global Health Equity Agenda." *Bulletin of the World Health Organization*, vol. 92, no. 8, 2014, pp. 618–620., doi:10.2471/blt.13.132795.

6 United States, Congress, "2018 Life Expectancy Table", New York State Department of Health, 2019. https://www.health.ny.gov/health_care/medicaid/publications/docs/gis/18ma008_attachment_1.pdf

7 Centers for Disease Control and Prevention (CDC). Alcohol and Public Health: Alcohol-Related Disease Impact (ARDI). Average for United States 2006–2010 Alcohol- Attributable Deaths Due to Excessive Alcohol Use.

8 Mokdad, A.H.; Marks, J.S.; Stroup, D.F.; and Gerberding, J.L. Actual causes of death in the United States 2000. [Published erratum in: JAMA 293(3):293–294, 298] JAMA: Journal of the American Medical Association 291(10):1238–1245, 2004. PMID: 15010446

9 Adam J. Watkins, Irundika Dias, Heather Tsuro, Danielle Allen, Richard D. Emes, Joanna Moreton, Ray Wilson, Richard J. M. Ingram, Kevin D. Sinclair. Paternal diet programs offspring health through sperm- and seminal plasma-specific pathways in mice. *Proceedings of the National Academy of Sciences*, 2018; 201806333 DOI: 10.1073/pnas.1806333115

10 World Health Organization. (2010). *10 facts on gender and tobacco* [PDF file]. Retrieved from https://www.who.int/gender/documents/10facts_gender_tobacco_en.pdf

11 Chukwuemeka U Osondu, Bryan Vo, Ebenezer T Oni, Michael J Blaha, Emir Veledar, Theodore Feldman, Arthur S Agatston, Khurram Nasir, Ehimen C Aneni. The relationship of erectile dysfunction and subclinical cardiovascular disease: A systematic review and meta-analysis. Vascular Medicine, 2017; DOI: 10.1177/1358863X17725809

12 Matthew A Kluge, Naomi M Hamburg. Erectile dysfunction in the trajectory of cardiovascular disease. Vascular Medicine, 2017; DOI: 10.1177/1358863X17744038

13 Ryan Ng, Rinku Sutradhar, Zhan Yao, Walter P Wodchis, Laura C Rosella, Smoking, drinking, diet and physical activity—modifiable lifestyle risk factors and their associations with age to first chronic disease, International Journal of Epidemiology, Volume 49, Issue 1, February 2020, Pages 113–130, DOI: 10.1093/ije/dyz078

14 Rhoades, H., Rusow, J.A., Bond, D. et al. Homelessness, Mental Health and Suicidality Among LGBTQ Youth Accessing Crisis Services. Child Psychiatry Hum Dev 49, 643–651 (2018). DOI: 10.1007/s10578-018-0780-1

15 Hepp, Rebecca Doctors Self-Report Gaps in LGBTQ Awareness, Oncology Times: March 20, 2019 - Volume 41 - Issue 6 - p 3,7 doi: 10.1097/01.COT.0000554497.22795.ef

16 Morton, M.H., Dworsky, A., & Samuels, G.M. (2017). Missed opportunities: Youth homelessness in America. National estimates. Chicago, IL: Chapin Hall at the University of Chicago.

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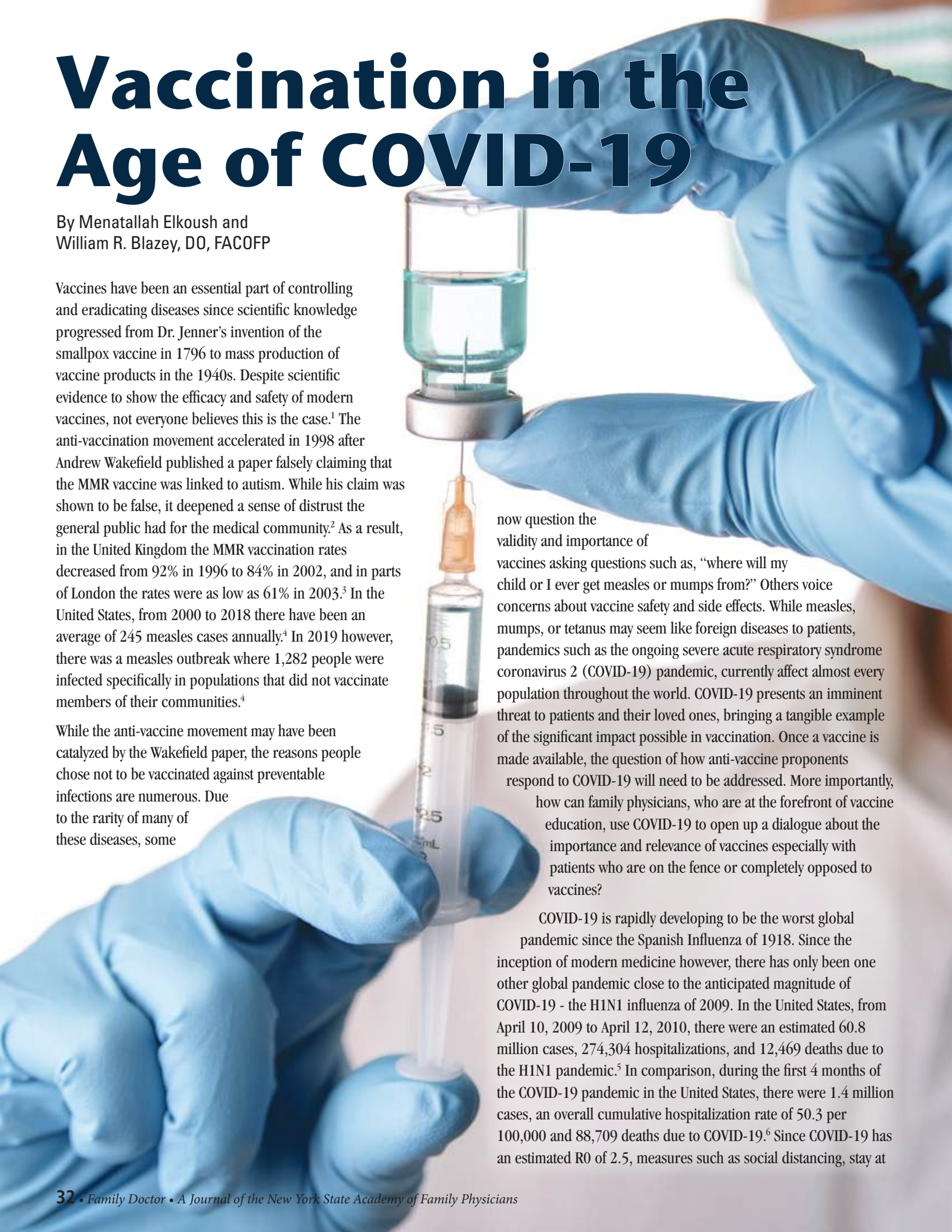
Vaccination in the Age of COVID-19

By Menatallah Elkoush and
William R. Blazey, DO, FACOFP



Vaccines have been an essential part of controlling and eradicating diseases since scientific knowledge progressed from Dr. Jenner's invention of the smallpox vaccine in 1796 to mass production of vaccine products in the 1940s. Despite scientific evidence to show the efficacy and safety of modern vaccines, not everyone believes this is the case.[1] The anti-vaccination movement accelerated in 1998 after Andrew Wakefield published a paper falsely claiming that the MMR vaccine was linked to autism. While his claim was shown to be false, it deepened a sense of distrust the general public had for the medical community.[2] As a result, in the United Kingdom the MMR vaccination rates decreased from 92% in 1996 to 84% in 2002, and in parts of London the rates were as low as 61% in 2003.[3] In the United States, from 2000 to 2018 there have been an average of 245 measles cases annually.[4] In 2019 however, there was a measles outbreak where 1,282 people were infected specifically in populations that did not vaccinate members of their communities.[4]

While the anti-vaccine movement may have been catalyzed by the Wakefield paper, the reasons people chose not to be vaccinated against preventable infections are numerous. Due to the rarity of many of these diseases, some now question the validity and importance of vaccines asking questions such as, "where will my child or I ever get measles or mumps from?" Others voice concerns about vaccine safety and side effects. While measles, mumps, or tetanus may seem like foreign diseases to patients, pandemics such as the ongoing severe acute respiratory syndrome coronavirus 2 (COVID-19) pandemic, currently affect almost every population throughout the world. COVID-19 presents an imminent threat to patients and their loved ones, bringing a tangible example of the significant impact possible in vaccination. Once a vaccine is made available, the question of how anti-vaccine proponents respond to COVID-19 will need to be addressed. More importantly, how can family physicians, who are at the forefront of vaccine education, use COVID-19 to open up a dialogue about the importance and relevance of vaccines especially with patients who are on the fence or completely opposed to vaccines?

COVID-19 is rapidly developing to be the worst global pandemic since the Spanish Influenza of 1918. Since the inception of modern medicine however, there has only been one other global pandemic close to the anticipated magnitude of COVID-19 - the H1N1 influenza of 2009. In the United States, from April 10, 2009 to April 12, 2010, there were an estimated 60.8 million cases, 274,304 hospitalizations, and 12,469 deaths due to the H1N1 pandemic.[5] In comparison, during the first 4 months of the COVID-19 pandemic in the United States, there were 1.4 million cases, an overall cumulative hospitalization rate of 50.3 per 100,000 and 88,709 deaths due to COVID-19.[6] Since COVID-19 has an estimated R0 of 2.5, measures such as social distancing, stay at

home orders, and educating patients about hand hygiene have helped flatten the curve. With the imminent threat of a second peak however, the best option to control this pandemic may be with a vaccine.[7]

Since the H1N1 virus is a variant of influenza, vaccine production and approval by the FDA was able to be completed rapidly. In only three months since the first case of H1N1, clinical trials for vaccines began, and two months later, the FDA approved four H1N1 vaccines. Even with this rapid timeframe, mass production and availability of the vaccine were not completed until after the peak of cases in the US.[8] According to one survey that assessed the public's willingness to receive the H1N1 vaccine, about 79% of responders replied that they would not receive the vaccine because they were concerned about vaccine side effects and vaccine safety, especially in light of how quickly it was approved by the FDA.[9] The path for a COVID-19 vaccine is different as there is limited prior research in the development of coronavirus vaccines in humans.[10] At the time of writing this paper, there are about 183 vaccine candidates with only a dozen in Phase I or Phase II trials with Phase 3 trials being proposed to start in the summer of 2020.[11] Projected times to obtain and mass produce an effective vaccine against COVID-19 is in 12-18 months.[12] During that time, the scientific and medical community will need to provide significant education to improve vaccination adherence if we are to achieve improved outcomes from those we experienced with H1N1.

Due to the impact the COVID-19 pandemic has had all over the world and especially in the New York State, the desire to end this pandemic has already impacted people's desire for a vaccine. According to a recent survey, an average of 64% of survey takers would receive a COVID-19 vaccine if currently available.[13] Moreover, some articles suggest that some members of the anti-vaccine community are now reconsidering their positions.[14] To fully recover from this pandemic, without an available treatment, we must vaccinate the population achieving a vaccination rate of 70%-80%.[15] While 14% of people from the previously mentioned survey stated they would not receive a COVID-19 vaccine, 22% are undecided and should be the focus of our efforts.

One problem we are facing is not the lack of information but the abundance of false information. With the accessibility of online platforms where misinformation can be distributed quickly, it does not seem far-fetched that many people who are deciding against vaccinating or are undecided, are not obtaining information only from reliable sources or their primary care physicians. They can read blog posts, engage with the anti-vaccine community, and more importantly share misinformation easily.[16] While this poses a threat to the push to vaccinate, using this information to try to better connect with patients and communicate in a way that makes sense to them in light of their understanding of vaccines, may help influence their decision making. For example, if a patient is refusing vaccines because he or she believes that it triggers an unnatural response in the body and therefore is a risk to their health, the physician can use language that reinforces that it is a "natural" response and is therefore safe.[17] This is a task that cannot be single handedly done by family physicians. Studies have suggested that having patients who work as vaccine ambassadors may help vaccination rates.[18] Moreover, the CDC, WHO, local and state officials, social media platforms, family physicians, etc. all have to be on the same page and be well versed in the reasons people may oppose vaccines. There is much more research to be done on what methods can improve vaccine rates, however, COVID-19 offers an opportunity to show that vaccines are truly effective and to regain some of the trust that was lost back in 1998.

Recommended Practices to Improve Vaccine Compliance:

- Utilize motivational interviewing techniques during your patient encounter.[19]
  - Allow patients a safe space where they can express their concerns without judgement.
  - Establish that the purpose of the meeting is to understand the patient's concerns and open a line of communication rather than just trying to convince them.
  - Listen to the patient's concerns and echo the concerns before addressing them.
  - Tailor your responses based on your experience with your patient and their specific concerns.
  - If you sense that the meeting is becoming confrontational, try to end the meeting on a positive note and suggest readdressing the topic at a later date. Do not be discouraged if the patient is not open to the idea during the initial discussion.
  - Avoid blaming the patient, minimizing their concerns, or interrupting the patient.
  - Remind your patient that they will always make the final decision. This allows for patient autonomy and respect, which is often reciprocated.
- Assign patients as vaccine ambassadors in your office, especially if you have a community based practice.[20]
  - Patients who advocate for vaccines as peers may help undecided patients reach a decision to vaccinate.
  - Vaccine ambassadors require training. This can be offset by the time they will spend educating other patients.
- Advocate for laws that make it more difficult to be exempt from vaccines and improve access to vaccines.
  - States who have more challenging exemptions have fewer patients opting out of vaccines than states that do not.[21]
  - In Canada, parents who request to opt-out of vaccines for their children are required to attend mandatory vaccine educational courses. This has resulted in fewer than 2% of parents requesting to opt out in Ontario province.[22]

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- After California enacted stricter opt-out policies, the number of children entering kindergarten not up-to-date on vaccines decreased to 4.9%.[23]

- Encouraging a unified message within the medical profession about vaccine efficacy and safety can encourage patients to be more accepting of vaccinations.[24]

Endnotes

1 Plotkin, Stanley. "History of Vaccination." *Proceedings of the National Academy of Sciences of the United States of America*, National Academy of Sciences, 26 Aug. 2014,

2 Rao, T S Sathyanarayana, and Chittaranjan Andrade. "The MMR Vaccine and Autism: Sensation, Refutation, Retraction, and Fraud." *Indian Journal of Psychiatry*, Medknow Publications, Apr. 2011, www.ncbi.nlm.nih.gov/pmc/articles/PMC3136032/.

3 Hussain, Azhar, et al. "The Anti-Vaccination Movement: A Regression in Modern Medicine." *Cureus*, Cureus, 3 July 2018, www.ncbi.nlm.nih.gov/pmc/articles/PMC6122668/.

4 Measles Cases and Outbreaks." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 7 May 2020, www.cdc.gov/measles/cases-outbreaks.html.

5 "2009 H1N1 Pandemic (H1N1pdm09 Virus)." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 11 June 2019, www.cdc.gov/flu/pandemic-resources/2009-h1n1-pandemic.html.

6 "Cases in the U.S." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 7 May 2020, www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html.

7 Fisher, Max. "R0, The Messy Metric That May Soon Shape Our Lives, Explained." *The New York Times*, The New York Times, 23 Apr. 2020, www.nytimes.com/2020/04/23/world/europe/coronavirus-R0-explainer.html.

8 "2009 H1N1 Pandemic Timeline." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 8 May 2019, www.cdc.gov/flu/pandemic-resources/2009-pandemic-timeline.html.

9 Blasi, F., et al. "Compliance with Anti-H1N1 Vaccine among Healthcare Workers and General Population." *Clinical Microbiology and Infection*, Elsevier, 13 Dec. 2014, www.sciencedirect.com/science/article/pii/S1198743X14613598.

10 Modjarrad, Kayvon, and Jerome H Kim. "Two Middle East Respiratory Syndrome Vaccines: First Step for Other Coronavirus Vaccines?" *The Lancet. Infectious Diseases*, The Author(s). Published by Elsevier Ltd., 20 Apr. 2020, www.ncbi.nlm.nih.gov/pmc/articles/PMC7172833/.

11 COVID-19, vac-lshtm.shinyapps.io/ncov_vaccine_landscape/.

12 Coronavirus (COVID-19) Vaccine: Development, Timeline, and More." *Medical News Today*, MediLexicon International, www.medicalnewstoday.com/articles/coronavirus-vaccine#when-will-it-be-ready

13 "How the Coronavirus Outbreak Is Impacting Public Opinion." *Morning Consult*, 15 May 2020, morningconsult.com/form/coronavirus-outbreak-tracker/#section-99

14 Waldersee, Victoria. "Could the New Coronavirus Weaken 'Anti-Vaxxers'?" *Reuters*, Thomson Reuters, 11 Apr. 2020, www.reuters.com/article/us-health-coronavirus-antivax/could-the-new-coronavirus-weaken-anti-vaxxers-idUSKCN21T089.

15 Lindsay Smith Rogers, and JH Bloomberg School of Public Health. "What Is Herd Immunity and How Can We Achieve It With COVID-19?" J*ohns Hopkins Bloomberg School of Public Health*, 22 Apr. 2020, www.jhsph.edu/covid-19/articles/achieving-herd-immunity-with-covid19.html.

16 Kata A. Anti-vaccine activists, Web 2.0, and the postmodern paradigm--an overview of tactics and tropes used online by the anti-vaccination movement. *Vaccine*. 2012;30(25):3778-3789. doi:10.1016/j.vaccine.2011.11.112

17 Reich, Jennifer A. "Of Natural Bodies and Antibodies: Parents' Vaccine Refusal and the Dichotomies of Natural and Artificial." *Social Science & Medicine*, Pergamon, 4 Apr. 2016, www.sciencedirect.com/science/article/abs/pii/S0277953616301472?via=ihub.

18 Smith, Tara C. "Vaccine Rejection and Hesitancy: A Review and Call to Action." *Open Forum Infectious Diseases*, Oxford University Press, 18 July 2017, www.ncbi.nlm.nih.gov/pmc/articles/PMC5597904/#!po=8.33333.

19 Treatment, Center for Substance Abuse. "Chapter 3-Motivational Interviewing as a Counseling Style." *Enhancing Motivation for Change in Substance Abuse Treatment*., U.S. National Library of Medicine, 1 Jan. 1999, www.ncbi.nlm.nih.gov/books/NBK64964/.

20 Shelby A, Ernst K. Story and science: how providers and parents can utilize storytelling to combat anti-vaccine misinformation. Hum Vaccin Immunother 2013; 9:1795–801.

21 Klompas, M., et al. "Vaccination Policies and Rates of Exemption from Immunization, 2005–2011: NEJM." *New England Journal of Medicine*, 21 May 2020, www.nejm.org/doi/full/10.1056/NEJMc1209037#t=article.

22 "Ontario Parents Opposed to Vaccines for Kids May Be Forced to Take an Educational Class | CBC News." *CBCnews*, CBC/Radio Canada, 13 May 2016, www.cbc.ca/news/canada/toronto/vaccination-legislation-1.3580593.

23 Drew L. The case for mandatory vaccination. Nature. 2019;575(7784):S58 S60.

24 van der Linden SL;Clarke CE;Maibach EW; "Highlighting Consensus Among Medical Scientists Increases Public Support for Vaccines: Evidence From a Randomized Experiment." *BMC Public Health*, U.S. National Library of Medicine, pubmed.ncbi.nlm.nih.gov/26635296/.

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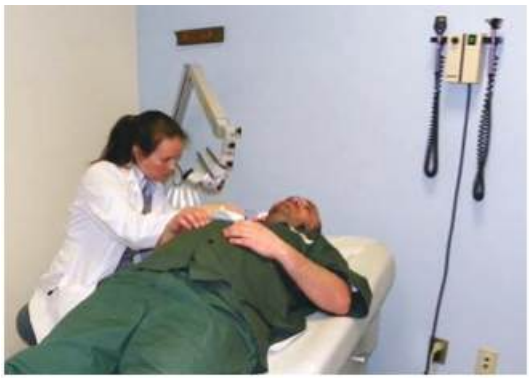

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Academy Student Member Produces Award-Winning Documentary

With an enduring passion for videography and the human story, first-generation Polish-American medical student, Brian Kaszuba, sets out to explore the American healthcare system.

Healthcare America: Uniting our Voices captures Brian's adventure through the United States - from sea to shining sea - and across the border to Canada. The beautiful landscapes and cultures delicately open the doors to solving the riveting riddle of how we must address medicine in 2020.

Brian interviews over a hundred people about how the American healthcare system affects their daily lives, and draws comparisons to the kind of medicine his grandmother practiced back in Poland. This film serves as a catalyst toward a healthier nation by exposing the plethora of health disparities encountered in this country. It serves to represent all voices from all backgrounds with Brian as the messenger. The goal of this film is to not only show the reality of suffering in the United States, but to instill hope for the future. Together, we will create better, more affordable, more accessible, healthcare for all. We just have to listen.

Brian' film received a standing ovation at last year's FMEC and was named a semi-finalist by the European Cinematography Awards (ECA).

Healthcare America: Uniting Our Voices can be accessed via the following link: https://www.youtube.com/watch?v=ISQP7NgU7Sk

COVID-19 and Undocumented Immigrants

By Jessica R. Calderone, BA; Allyssa M. Abel, MPH and Elena Rosenbaum, MD

Introduction

COVID-19 has uncovered health disparities across the United States. Health disparities are defined by the Centers for Disease Control and Prevention (CDC) as *"preventable differences in the burden of disease, injury, violence, or in opportunities to achieve optimal health experienced by socially disadvantaged racial, ethnic, and other population groups, and communities."*[1]

Reasons for health disparities across race are discussed broadly in the literature.[2] So far, we have seen increased rates of COVID-19-related death among Black/African Americans (92.3 per 100,000) and Hispanic/Latino Americans (74.3 per 100,000) compared with White Americans (45.2 per 100,000). This is explained by disparate living conditions, work environments, underlying health conditions, and lower access to health care among the disproportionately affected.[3]

In addition to addressing health disparities across race in the face of the COVID-19 pandemic, doctors are turning their attention to another group of people largely neglected by national and statewide response efforts – immigrants without documents.

The United States is a melting pot, with over 40 million foreign-born individuals calling America their home. A staggering one-fifth of New York State (NYS), or 4.5 million people, are immigrants.[4] It is estimated that 725,000 of these immigrants are undocumented.[5] Although NYS and the CDC are gathering race and Hispanic origin information on individuals who have COVID-19, immigration status is not included. Yet, undocumented immigrants are, more than others, encountering challenges that increase their risk of being affected by, and blamed for, the pandemic.[6]

The COVID-19 virus does not pick and choose who to infect based on immigration status, race, or socioeconomic status. Undocumented immigrants make up a large part of our population, invisible to many and often ignored. Ignoring them, however, is not conducive to protecting against the spread of COVID-19. The only way to control the current public health crisis is to prevent COVID-19 exposure, identify, and treat everyone living in every community. Understanding the unique challenges undocumented immigrants face in getting health care is necessary to help meet the needs of this hard to reach population.

Systemic Distrust

For undocumented immigrants, the threat of prosecution or deportation exists in all settings, even when seeking medical treatment. In August 2019, the US Department of Homeland Security (DHS) established the *Inadmissibility on Public Charge Grounds* final rule, which states "[noncitizens] are inadmissible to the United States if they are unable to care for themselves without becoming public charges."[7] Many undocumented families have since dis-enrolled from public assistance programs, fearing denial of a green card or possible deportation if they show any reliance on government aid.[8]

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As cases of COVID-19 were rising in mid-March, the U.S. Citizen and Immigrant Services encouraged "all those, including aliens, with symptoms that resemble COVID-19 to seek necessary medical treatment or preventive services… [and that] such treatment or preventive services will not negatively affect any alien as part of a future Public Charge analysis."[9] Even after this statement, many undocumented families have remained unwilling to trust the DHS and have continued to avoid hospitals due to fear of Immigration and Customs Enforcement (ICE) apprehension.[10]

Threats of deportation, separations of families at the border, and changes to programs like Deferred Action for Childhood Arrivals (DACA) have become a regular occurrence.[11] While the Supreme Court has temporarily relieved some threats for some undocumented immigrants by rejecting attempts to end DACA, challenges still remain.[12]

Exposure on the Job

The hard work of undocumented immigrants often goes unseen, but without them, the gears of US industries from agriculture to construction would grind to a halt. These workers often fulfill farm, factory, restaurant, childcare and hospitality jobs – roles which require interacting with large numbers of people. In NYS, immigrants make up more than a quarter of the labor force and are integral to a variety of industries.[13] In 2014, undocumented immigrants comprised about 6% of the state's entire workforce.[14] Despite being crucial to our economy, people who are undocumented often work in low paying jobs which do not provide access to healthcare. These workplaces also cannot accommodate work-from-home flexibility, a luxury afforded to some higher paying professions.

For instance, it is estimated that 35% of meat processing workers are immigrants.[15] Without the space to safely physically distance from one another, outbreaks of COVID-19 in meat and poultry processing facilities can run rampant. The CDC estimates that among 130,000 workers at 115 meat and poultry processing plants in 19 states, close to 5,000 cases and more than 20 deaths have occurred.[16]

Furthermore, those who are engaged in under-the-table work are at the mercy of their employer. These employers have no legal obligation to provide their workers, undocumented or otherwise, with unemployment benefits. In this pandemic, as jobs are cut and businesses are crumbling, undocumented immigrants are often the first to lose their jobs, putting them at an elevated risk of suffering.

Medical Care Inaccessibility

The number of uninsured Americans in 2018 was 27.9 million.[17] While most of the uninsured are US citizens, 24% are non-citizens. The Henry F Kaiser Family Foundation estimates that more than four in ten (45%) undocumented immigrants lack insurance.[17]

Since the Affordable Care Act excludes undocumented individuals from coverage, many become reliant on emergency departments for regular medical care. Primary care services are only accessible if families can afford private health insurance or can pay out of pocket for health care costs. Today, many are forced to decide between the economic burden of medical attention and resultant hospital bills, and the risk of their condition worsening.

Due to the viral pandemic, many Americans now turn to telemedicine and virtual appointments to seek medical advice from their primary care physicians. Congress has allowed health providers to bill for telemedicine through the Coronavirus Preparedness and Supplemental Appropriations Act.[18] Additionally, federally qualified health centers and rural health clinics, through which many undocumented immigrants receive care, are eligible providers for telehealth, based on guidelines recently established by the Coronavirus Aid, Relief and Economic Security (CARES) Act.[19,20]

The absence of technology, digital literacy, and reliable internet coverage contribute to health disparities in telemedicine,[21] and are specifically a concern for those of low socioeconomic status.[22] While some undocumented immigrants lack access to a smart-phone, computer, or internet services to participate in virtual doctors' visits, others suffer from language barriers. These barriers put the undocumented population at greater risk for delayed care and missed opportunities for PCP-guided COVID-19 education. If every person in our community is not informed or acting in coherence with public health measures, we are all at risk.

Detention Centers

As COVID-19 plagues nursing homes and prisons, the same holds true for immigrant detention centers. Across the nation, there are 250 local detention facilities and over 24,000 immigrants in civil detention.[23] Seven of these centers are within the state of New York.[23] As of June 19th, 2020, there were 8,858 confirmed cases of COVID-19 within detention centers nationwide.[24]

Immigrants who are undocumented and detained are among the most vulnerable to COVID-19 infection. Within facility walls, there is inadequate space to stay six feet apart. The centers are crowded, with poor sanitation and inadequate hygiene. Compounding the problem is the flow of people in and out of these spaces. Transport of people between facilities, release and intake of detainees, coming and going of staff, visitors, and vendors continue, despite the threat of severe illness.

As the numbers of COVID-19 cases continues to rise, so do concerns regarding adequate care of undocumented immigrants. The harsh reality is that ICE lacks the facilities staff to sufficiently screen, quarantine, and deliver medical care in detention centers – settings with such a high infection burden.[25]

Attorneys are currently fighting for the release of detainees, preferentially the elderly and terminally ill who are most susceptible to infection. Organizations such as Amnesty International and the United Nations, on the other hand, are advocating for the release of all detainees regardless of age or underlying health conditions.[26]

Deportation Continues

While a few undocumented immigrants are lucky to be released to their families and loved ones, many others face deportation, even with a COVID-19 diagnosis. The US is knowingly deporting infected migrants back to unprepared countries.[27]

In Guatemala, at least 50 deportees from the US tested positive for COVID-19 in late April. This made up 17% of the country's confirmed

cases.[28] In Mexico, state officials in Tamaulipas receive 100 deportees per day, some of whom are visibly sick. In Haiti, a country with only 62 ventilators, three deportees have tested positive.[29]

In March, our country closed the southwestern border to prevent migrants from carrying the virus into the US. The reality is that migrants are not bringing the virus to the US, but are carrying it back to their homes and creating public health crises in their countries.[27]

A Call to Action

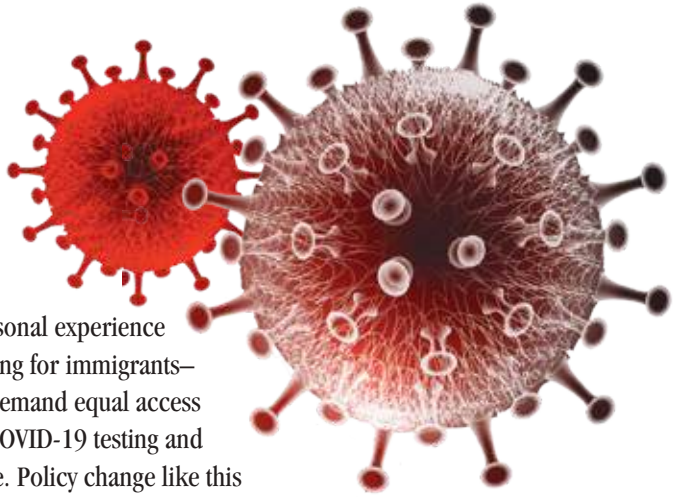
Physicians, other health providers, and medical students have a critical role right now, not only in treating patients with COVID-19, but also in prevention. This work involves educating our patients about how to get appropriate care for COVID-19 and other health conditions. Providers can also participate in shared decision-making about when to stay home and seek virtual medical advice, versus when to go to the hospital. Providing testing and encouraging physical distancing are other areas where family physicians can be impactful as well. Providers play an important part in advocating for health equity in communities, and as such, it is important to understand how this pandemic is affecting people who are undocumented.

We can support policies that improve immigrants' access to health care, welcome undocumented immigrants into our practices, and use linguistically and culturally appropriate interventions to improve communication. Dr. Renee Rodriguez and Dr. Alexander Cardiel of Saratoga Community Health Center provide us with an exceptional model. They have kept undocumented immigrant families well-informed by relaying critical and time-sensitive health information in multiple languages. Staffed by volunteers and employees passionate about serving families who are have been systemically marginalized, their clinic and outreach program provide services ranging from free COVID-19 screening to multilingual COVID-19 hotlines. Volunteering for a clinic like this, or implementing some of their best practices, will help improve the care and health outcomes of undocumented immigrants.

We can also look beyond our clinic walls and aid in other ways. For example, support the community-based organizations that already have relationships with undocumented immigrants to help reach individuals that do not typically seek medical care. In addition, addressing social determinants of health is crucial to achieving optimal health, and this work can be done outside of institutional medical settings.

As family doctors transition to telemedicine, there are plenty of ways to ensure telehealth does not exacerbate health disparities. Traditionally, many immigrants without legal status have felt disempowered to present in person to a primary care clinic. Telemedicine is useful because it sidesteps this problem; however, we need interpreters on these call lines to make sure services are accessible to all. We also need to know which patients have access to internet, computers, and phones. For those who do not, in-person appointments with adequate PPE should continue to be available.

At the community level, we can engage in advocacy. We can stand up and vocally support public health policies which address the needs of undocumented immigrants. Physicians have a platform - rooted in



personal experience caring for immigrants– to demand equal access to COVID-19 testing and care. Policy change like this would help ensure that cost or fear of public charge is not a deterrent from seeking medical help, creating better health outcomes for all during a contagious outbreak.

Specifically, health providers can call on Governor Cuomo to provide assistance to NYS immigrants.[30] Physicians and medical students who are interested may write a letter to their local assembly person asking for three things: the implementation of a statewide wage replacement program for undocumented workers; the allocation of funds to community-based practices who are providing health care to these families; and the provision of emergency funding for immigrants, analogous to the stimulus funding provided to the broader community.

Doctors can also assist lawyers representing immigrant children or at-risk adults. They can advocate for the release of persons with medical conditions that make them vulnerable to infection. Recommendations by the American Bar Association for lawyers representing immigrant children are to advocate for release based on safety, especially with the occurrence of the mysterious pediatric manifestations of COVID-19. We can utilize our connections to get organizations like the American Medical Association and American Academy of Family Physicians on board with these recommendations, too.

COVID-19 is unfairly impacting undocumented immigrants and their families, and the only way to stop transmission it is to reach all members of our communities. From a public health perspective, if COVID-19 continues to persist among any group of individuals, it will not be possible to eradicate. People who are not born in the United States, regardless of their document status, are very much a part of our communities- they are our family members, friends, and neighbors. Immigrant health is public health, and family doctors are perfectly situated to help address these health inequities.

Endnotes

1 Center for Disease Control and Prevention. COVID-19 in Racial and Ethnic Minority Groups. https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/racial-ethnic-minorities.html. Updated April 22, 2020. Accessed May 17, 2020.

2 CDC. COVID-19 in Racial and Ethnic Minority Groups. 2020.

3 CDC. COVID-19 in Racial and Ethnic Minority Groups. 2020.

continued on page 40

4 Migration Policy Institute, ed. U.S. Immigrant Population by State and County. Migration Policy Institute Data Hub. https://www.migrationpolicy.org/programs/data-hub/charts/us-immigrant-population-state-and-county.

5 Pew Research Center, "U.S. unauthorized immigration population estimates," November 3, 2016, www.pewhispanic.org/interactives/unauthorized-immigrants/. Accessed May 31, 2020.

6 Bhopal RS. COVID-19: Immense necessity and challenges in meeting the needs of minorities, especially asylum seekers and undocumented migrants [published online ahead of print, 2020 Apr 15]. *Public Health*. 2020;182:161-162. doi:10.1016/j.puhe.2020.04.010

7 Bhopal RS. COVID-19: Immense necessity and challenges in meeting the needs of minorities, especially asylum seekers and undocumented migrants [published online ahead of print, 2020 Apr 15]. *Public Health*. 2020;182:161-162. doi:10.1016/j.puhe.2020.04.010

8 Page KR, Venkataramani M, Beyrer C, Polk S. Undocumented U.S. Immigrants and COVID-19 [published online ahead of print, 2020 Mar 27]. *NEngl J Med*. 2020;10.1056/NEJMp2005953. doi:10.1056/NEJMp2005953

9 Page KR, Polk S. Chilling Effect? Post-Election Health Care Use by Undocumented and Mixed-Status Families. *N Engl J Med*. 2017;376(12):e20. doi:10.1056/NEJMp1700829

10 Helmerich, S. Letters to the Editor: It's obscene for ICE to arrest immigrants during the coronavirus pandemic. https://www.latimes.com/opinion/story/2020-03-19/ice-arrest-immigrants-during-coronavirus-pandemic. Los Angeles Times. Published March 19, 2020. Accessed June 3, 2020.

11 McFarling UL. Fearing deportation, many immigrants at higher risk of COVID-19 are afraid to seek testing or care. *STAT News*. https://www.statnews.com/2020/04/15/fearing-deportation-many-immigrants-at-higher-risk-of-COVID-19-are-afraid-to-seek-testing-or-care/.Published April 15, 2020. Accessed April 25, 2020.

12 DACA Supreme Court Ruling: https://www.supremecourt.gov/opinions/19pdf/18-587_5ifl.pdf. 18 Jun 2020.

13 American Immigration Council. Immigrants in New York.https://www.americanimmigrationcouncil.org/sites/default/files/research/immigrants_in_new_york.pdf. Updated 2017. Accessed May 31, 2020.

14 Pew Research Center, "U.S. unauthorized immigration population estimates," 2016.

15 New American Economy Research Fund, ed. Working Immigrants at Risk of COVID-19. Immigration in America, explained through data visualization. https://data.newamericaneconomy.org/en/immigrant-workers-at-risk-coronavirus/. Updated April 3, 2020. Accessed April 30, 2020.

16 DyalJW, Grant MP, Broadwater K, et al. COVID-19 Among Workers in Meat and Poultry Processing Facilities — 19 States, April 2020. MMWRMorb Mortal Wkly Rep 2020;69:557–561. DOI: http://dx.doi.org/10.15585/mmwr.mm6918e3external icon.

17 Henry F Kaiser Family Foundation. Disparities Policy; Health Coverage of Immigrants. https://www.kff.org/disparities-policy/fact-sheet/health-coverage-of-immigrants/ Published March 18, 2020. Accessed May 15, 2020.

18 H.R.6074 - Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020. https://www.congress.gov/bill/116th-congress/house-bill/6074?q=%7B%22search%22%3A%5B%22Telehealth+Services+During+Certain+Emergency+Periods+Act+of+2020%22%5D%7D&s=1&r=1March 2020. Accessed May 4, 2020.

19 S. 3548- To provide emergency assistance and health care response for individuals, families, and businesses affected by the 2020 coronavirus pandemic. https://www.congress.gov/116/bills/s3548/BILLS-116s3548is.pdf. March 19, 2020. Accessed May 8, 2020.

20 Solis, E. (2020) 'CMS waives telehealth restrictions for FQHC and RHC physicians.' *American Academy of Family Physicians: Getting Paid Blog*, April 20. https://www.aafp.org/journals/fpm/blogs/gettingpaid/entry/FQHC_COVID_telehealth.html. Accessed 12 May 2020.

21 Yoon, H., Jang, Y., Vaughan, P. W., & Garcia, M. (2020). Older Adults' Internet Use for Health Information: Digital Divide by Race/Ethnicity and Socioeconomic Status. *Journal of Applied Gerontology, 39*(1), 105–110. https://doi.org/10.1177/0733464818770772

22 Velasquez, D., Mehrotra, A. (2020) 'Ensuring The Growth Of Telehealth During COVID-19 Does Not Exacerbate Disparities In Care.' *Health Affairs Blog.*, May 8. DOI:10.1377/hblog20200505.591306. Accessed 12 May 2020.

23 US Immigration and Customs Enforcement. Detention Management. https://www.ice.gov/detention-facilities. Updated May 14, 2020. Accessed April 20, 2020

24 US Immigration and Customs Enforcement. ICE Guidance on COVID-19. Confirmed Cases. https://www.ice.gov/coronavirus. Updated May 23, 2020. Accessed May 31, 2020.

25 Office of Inspector General. Concerns about ICE detainee treatment and care at four detention facilities. https://www.oig.dhs.gov/sites/default/files/assets/2019-06/OIG-19-47-Jun19.pdf. Published June 3, 2019. Accessed April 20, 2020.

26 Keller, I. Wagner, B. COVID-19 and immigration detention in the USA: time to act. *The Lancet Public Health*. 2020; 5(5): e245-e246, ISSN 2468-2667, https://doi.org/10.1016/S2468-2667(20)30081-5.

27 Dickerson, C. Semple, K. US Deported Thousands Amid COVID-19 Outbreak. Some Proven to Be Sick. *The New York Times*. April 18, 2020. www.nytimes.com. Accessed April 27, 2020.

28 We're deporting people to vulnerable countries — and sending the virus with them. *Washington Post*. April 26, 2020. https://www.washingtonpost.com. Accessed April 27, 2020.

29 Sieff, K. Miroff, N. US is deporting infected migrants back to vulnerable countries. *Washington Post*. April 21, 2020. Accessed April 28, 2020.

30 New York Civil Liberties Union. Letter to Gov. Cuomo: Funds for undocumented immigrants. April 20, 2020. https://www.nyclu.org/en/publications/letter-gov-cuomo-funds-undocumented-workers. Accessed May 20, 2020.

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How am I Doing with Vaccination?

By Philip Kaplan, MD, FAAFP

We recall the collective groan when the mandated childhood vaccine registry (NYSIIS – NYS Immunization Information System) became active on 7/1/08. From that date forward we were required to submit to the registry vaccines administered to patients under age 19, and upon entering such a dose, to upload all historic vaccines on file for such patients. The unfunded burden was considerable. Most of us had paper records; a few had some prior vaccination data digitally stored in regional registries.

The value for individual children became clear. Prior to the registry, paper vaccine records were maintained on cards carried by parents, on paper records from prior physicians, and in school records. Discrepancies were difficult to resolve. Further, violations of dose intervals or minimum/maximum ages, and differences between ACIP recommendations and actual administration, were often not discernable when the paper record was viewed by knowledgeable health professionals. The registry has the ACIP schedule embedded. NYSIIS recognizes when the third Hep B vaccine is given prior to age 6 months, when two live vaccines are given with an interval less than four weeks, when MMR is given more than four days prior to the first birthday, when the final IPV dose is given prior to the fourth birthday, and labels as "invalid" a dose that violates the ACIP schedule. Such errors abound in records I have received from family physicians, pediatricians and public health clinics. Within NYS the registry is durable, and does not require the continued availability of the historic vaccinator.

The value for public health outreach is equally clear. Louisiana had a registry in place since 2001[1], so when Hurricane Katrina inundated paper records, Louisiana's immunization information system, LINKS, was able to reconstitute those records. The NYS DOH is able to focus efforts to improve measles vaccination rates, as DOH has knowledge of cohorts of under immunized children.

Adults can benefit as well, but under current law reporting their vaccine doses is optional and requires their permission. Universal reporting of adult vaccine doses would confer the same benefit to adults as it does for children. We have a cohort of former children whose registry data could be squandered if universal reporting of adult doses is not the standard. Very few adults carry a durable record of their vaccines and adults are immunized in many venues: primary care offices, specialist offices, hospitals, emergency rooms and urgent care centers, ad hoc sites, and pharmacies. This frequently results in excess doses. My elder patient is not eligible for his Prevnar because he must wait a year after the hospital just gave him his third Pneumovax. The patient being sutured in the ER has no recollection of his last toxoid. When COVID-19 vaccine becomes available it will likely be a dear commodity requiring stewardship for its ethical and effective dispersal. Entering both doses and titers in a registry could optimize the use of this vaccine.

In response to advocacy efforts by NYSAFP, pharmacies became mandated reporters of adult vaccine doses in 2014[3] but enforcement has been lax. The law as written requires pharmacists to report "with patient permission" but does not mandate the requesting of permission. An adult registry with voluntary reporting does not result in a complete record.

Only universal reporting of adults' doses would make the adult registry effective. NYSAFP[2] adopted this as advocacy policy at the Congress of Delegates in 2016, and MSSNY agreed at the House of Delegates in 2019. Bills to accomplish this exist in the NYS Assembly and

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Senate at this writing. Opposition from an antivaccination cohort of the public has intensified due to our success in removing the religious exemption from school vaccination law in 2019. We may derive some traction for passage as a logical benefit of tracking use of a COVID vaccine.

NYSIIS has clear benefit for the individual patient, whether child or adult. NYSIIS has clear benefit for population health. Between individual and statewide assessment, one untapped benefit of the registry is to assess how we, individual physicians, are performing. If our performance is not excellent, where should we focus efforts to improve? The report section of NYSIIS had been rarely used, for good reason. The reports were cumbersome and imprecise. The "Reminder-Recall" report provided a list of patients needing vaccines, but did not distinguish between those that were due next month and those due in three years. The "Benchmark" report listed as deficient those patients who did not receive their vaccines on the ACIP due date, but did not remove from the list of deficiencies those who had made up the missing dose after the missed opportunity. Either report required considerable manual sorting to be useful for outreach.

Two years ago NYSIIS rolled out AFIX reports, which format cured the ills of prior reports. "**A**ssessment, **F**eedback, **I**ncentives and e**X**change" is a proprietary software package discontinued by CDC and dispersed to state health departments for maintenance. These reports are used by state and county health departments for administrative purposes and public health oversight. When VFC comes to visit you they bring such a report. This report has the ACIP schedule embedded and will assess your performance on a predetermined cohort or an ad hoc cohort selected by the physician. The output of the report has two formats: a bar graph of your data with "healthy people 2020" goals indicated, and a report of individuals missing or compliant with the vaccines selected. Getting accurate scores and lists requires maintenance of patient attribution. When a patient leaves your practice they should be inactivated in NYSIIS so their data and vaccine needs or compliance do not pollute your data.

To access the AFIX report: Log on to the HPN (Health Practitioner Network) – where you go to order paper prescriptions, sign death certificates or visit the PMP. Then click "NYSIIS Production." On the left margin of the page is a table of contents, with categories of "Patients", "Immunizations", "Reports." At the bottom of the list of reports, just above "Inventory" is "afix product." Double click.

Welcome to wonderland. Four functions are found on the left upper page corner: 'AFIX Cohort' contains two options: 24-35 months all ACIP recommended vaccines and 13-17 years, all vaccines. Next is 'Flexible Cohort', allowing selection of age range and vaccines of interest. Below these is the option for 'List of Scheduled Jobs' for later use. Two examples follow.

In the first, 'Adolescent Cohort' was selected. Prefilled ages, as of 'today', and the opportunity to select which outputs are desired – bar graph and/or patient listing. When all items are selected, click 'submit'. It may take up to 15 minutes for the report to generate. The report is listed by a serial number. The completed report can be found on the home page under "List of Scheduled Jobs."

In the second example, "Flexible Cohort" was selected. This gave an opportunity to select HPV vaccination for study. How many doses? Select '1', click the + sign, then click 'UTD' followed by + sign to also represent how many eligible patients are up to date. In addition to the bar graphs, one can select 'patient listing' to obtain a report of patients having or not having the vaccine, not shown here to protect privacy.

I can rely on these reports for outreach, self-assessment, comparison over time, and to support my self- directed performance improvement project for part IV Board credit. We often think we are doing better than we actually are. One result of such assessment is humility. Join me in this healthy perspective.

Note: NYC is served by the CIR rather than NYSIIS. Format may be different, but guiding principles are the same

Endnotes

1 http://ldh.la.gov/index.cfm/page/3641

2 Resolution '16 – 16 NSYAFP COD, June 2016

3 NYS PBH law §2168 as amended 2014

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Community Health Assessments as Public Health Learning Tools

By Annie Rutter, MD, MS and Kate Wagner, MD

Family medicine and public health have always been intertwined. The core of both disciplines is to maintain and improve the health of patients in the context of their own communities. Both disciplines overlap in many facets, all of which family physicians would identify as essential in the care of their patients. These include a commitment to health promotion and disease prevention, population-based medical informatics, an ecological approach to understanding healthcare and community-based participatory research.[1] Day to day in our practices we see the intersection of individual health and the social determinants of health. It is from a public health lens that we may be able to intervene and make changes on a population level to see improvements in health in the individuals in our exam rooms. Family physicians value community participation,[2] and we play an integral role in the well-being of our communities with perhaps our biggest impact occurring when we collaborate with public health efforts and initiatives. In New York State, family physicians have a unique opportunity for engagement directly with their local health departments (LHDs) as part of New York State's Health Improvement Plan.

In 2008, the New York State Department of Health (NYS DOH) began its statewide initiative to "improve the health and well-being of all New Yorkers." Known as the Prevention Agenda, it is currently in its third cycle.[3] When the initiative first began, it provided a framework for local health departments and hospitals to work together to accomplish their goals of conducting community health assessments and developing community health improvement plans, something these groups had previously been tasked with doing individually.[4] Prior to the initiative, these groups did not always work together and often provided retrospective data. Under this new framework, they would need to collaborate to provide prospective data with evidence-based interventions that would be reviewed on an annual basis. These groups were to focus on five priority areas:[4]

1) Preventing chronic diseases
2) Promoting healthy and safe environments
3) Promoting healthy women, infants and children
4) Promoting mental health and preventing substance abuse
5) Preventing HIV, sexually transmitted diseases, vaccine-preventable diseases and healthcare-associated infections.

As the Preventive Agenda moved forward, it was noted that during the first iteration, the LHDs and hospitals were working together for the community health assessments, but made little progress on local implementation. However, with more NYS DOH support in subsequent phases of the Agenda, it was apparent that the collaboration between LHDs and hospitals had strengthened. During a 2013 review, the two entities showed concordance when identifiying their priority areas within the Prevention Agenda in counties across New York State. Most counties planned to focus on "preventing chronic disease" and "promoting mental health and preventing substance abuse" as their top priorities.[4]

The Prevention Agenda continues to move forward, and in the most recent phase, 2019-2024, there has been a distinct emphasis on social determinents and modifiable determinents of health.[5] There is a call for cross- sectional partnerships (e.g., public health, health care, housing, education and social services).

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The priority areas from the 2008 version have evolved:

1) Prevent chronic diseases
2) Promote a healthy and safe environment
3) Promote healthy women, infants and children
4) Promote well-being and prevent mental and substance use disorders
5) Prevent communicable diseases

> "Each priority-specific action plan includes focus areas, goals, objectives, and measures for evidence-based interventions to track their impacts – including reductions in health disparities among racial, ethnic, and socioeconomic groups, age groups, and persons with disabilities."[5]

The ongoing work can be tracked on the NYS DOH website on the Prevention Agenda Dashboard (https://webbi1.health.ny.gov/SASStoredProcess/guest?_program=/EBI/PHIG/apps/dashboard/pa_dashboard&p=sh). The data can be viewed at the state, county and sub-county level.

It is extremely important for individual family physicians to be aware of the regional planning activies that impact their patients at the local level. To get more involved in the Prevention Agenda, physicians can contact their local partners in this endeavor, including LHDs, local hospitals and others. A comprehensive list of liaisons can be found on the NYS DOH website: https://www.health.ny.gov/prevention/prevention_agenda/2019-2024/contacts.htm.

The priority areas identified by the Prevention Agenda are all paramount to the primary care of patients. It is by working together as physicians and public health officials that we can realize the potential impact of a combined and collaborative approach to provide the best care for patients in the context of their communities.

As we call on family physicians to collaborate with local health departments and become an integral part of the public health team, it is paramount that we provide the training for them to do so in an effective and efficient way.[6] In 2003 and again in 2007, the Institute of Medicine called for public health education training among medical students.[7] The specialty of family medicine has made education in public health a priorty for residency graduates, with the ACGME and ABFM Family Medicine Milestones Project highlighting public health knowledge and participation as a component of individual resident evaluation.[8] Family medicine residency programs have engaged in this education in a variety of ways, some asking residents to perform community health needs assessments and others developing sustained logitudinal curricular enhancements.[9,10]

At the medical school level, family medicine clerkships are well-positioned to assist with the public health education of our students, although there is a wide range among schools as to how often this is actually accomplished.[11] Students are frequently placed in a variety of community-based settings with the opportunity to see the interplay of health at the individual and community level. At Albany Medical College, the family medicine clerkship is one of very few experiences students have outside the academic medical center and therefore participate in care provided in a different setting. This exposure to a community-approach to care opens their eyes to the issues faced by patients in different settings – rural, urban and everything in between. It also allows students to learn about the impact of community characteristics and resources on the health of individual patients.

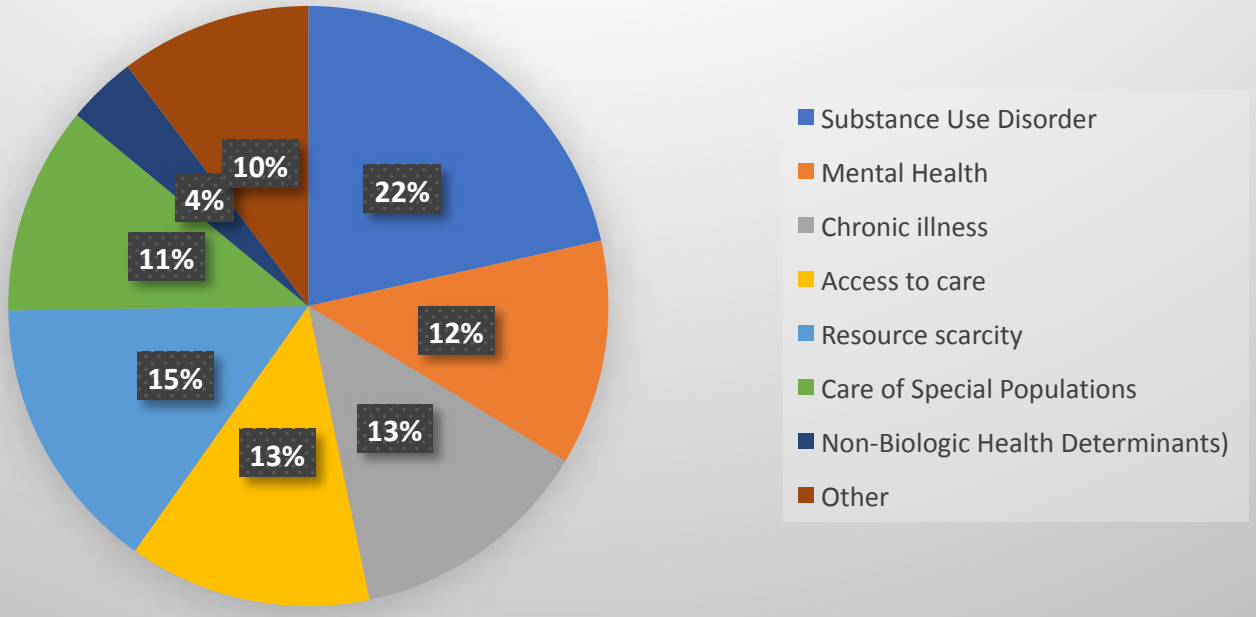
We have capitalized on this unique experience of our students to have them learn more about public health through their own community health assessment project. The project's goals are multifaceted: 1) to give students an understanding of the intersection of primary care and public health 2) to give students the opportunity to explore a public health issue affecting the community in some depth and 3) to have the students learn more about the community in which their clinical rotation is completed. The project itself is quite straightforward: students must choose a public health issue and complete a short (five-page) community health assessment including the following four components in narrative form:

1) Provide descriptive details about practice site's community:
   a. Demographics
   b. Overall health indicators
   c. Population density
2) Identify a community health concern
3) Perform a community interview
4) Discuss the community health problem/concern

The students receive didactic instruction and are provided with readings to give a foundation of general public health concepts, the utility of community health assessments and resources for public health data and community demographics. Their final project must include the narrative described above, a bibliography of appropriate references and any pertinent figures/tables/maps as appendices.

Thus far in the course of the academic year 2019-2020, 107 students have completed their community health assessments. Students choose their own public health concerns to address, and while the individual topics are wide-ranging, they fall into several broad categories (figure 1).

Figure 1: Student Identified Public Health Concerns



The most frequently discussed topics include substance use disorder (with a high percentage focusing on opioid use disorder), resource scarcity (which includes food insecurity), chronic illness, access to care and mental health. These categories dovetail with what the NYS DOH has identified across New York as priority areas for the Prevention Agenda, and specifically with the areas of focus under each priority. For example, under the priority area of "Prevent Chronic Disease" the DOH has areas of focus including, but not limited to, "increase food security." The students, on their own, have been able to identify key public health concerns based on their brief experience in these community settings. Most students from Albany Medical College do not enter family medicine upon graduation, but many students report they gain a significant appreciation, through both this community health assessment project and their clinical experience, for the complexity of the care that family physicians provide, and the role family physicians play in their communities.

Over the years, several students have taken the opportunity provided by this assignment to engage more fully in their clerkship sites' communities. Some of them have specifically used the community health assessments and plans devised by the cooperation of LHDs and community hospitals. Others have made significant connections to the community and even participated in advocacy and policy as a result of these assignments. Below are two examples:

Example #1:

Two students were assigned to a community health center for their rotation. Despite being in a county ranked very highly for many health outcomes, the students recognized through their own experience and review of public health data that both obesity and substance use disorder were prominent issues for their patients. They reviewed the Community Health Needs Assessment and Plan developed by the LHD and community hospital and found that obesity and its relationship to chronic disease and substance use disorder were identified in this document as well. The students analyzed the available data and the local projects undertaken to address these two public health issues, including one based in the community health center where they were completing their rotation. The students participated in a multi-institutional summit where they presented their findings. They were also scheduled to present their work to the local school of social work, who had participants in one of the projects. Unfortunately, that was cancelled due to the COVID pandemic. The students had a fantastic experience and contributed in a meaningful way to local projects addressing the issues they identified. Their local community faculty member, a physician at the health center, was instrumental in showing them the power of community-based medicine in collaboration with public health.

Example #2:

Through his experience at a local community clinic, another student decided to explore the connection between a patient's personal trauma history and health outcomes. During the investigation and data gathering for his community health assessment project, the student was able to connect with Prevent Child Abuse NY, a statewide non-profit with a focus on child abuse prevention. Through this connection he learned about the group's advocacy at the legislative level to increase the use of Adverse Childhood Events (ACE) screening for patients. This student was invited to participate in a focus group and added a medical student perspective as the group discussed how the state might implement more effective policies to prevent abuse. The group of interdisciplinary experts began to shape policy directed at increasing ACE screening, education and evidence-based interventions to those at high risk.

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It is important to teach medical students the power of public health and its connection to the care of patients. Through this assignment, students have had this experience, but, as illustrated by the examples above, others have connected and contributed in a way much greater than anticipated by the project alone. The students are not only learning through experience, but they are gaining experience through learning.

Endnotes

1 Schwenk TL. Public health--the role of family physicians. *American family physician*. 2003;68(10):1926, 1929-1930.

2 Gruen RL, Campbell EG, Blumenthal D. Public roles of US physicians: community participation, political involvement, and collective advocacy. *JAMA*. 2006;296(20):2467-2475.

3 Prevention Agenda 2019-2024: New York State's Health Improvement Plan. https://www.health.ny.gov/prevention/prevention_agenda/2019-2024/. Accessed 5/19/2020.

4 Progress to Date on Local Collaborative Planning. https://www.health.ny.gov/prevention/prevention_agenda/2019-2024/docs/sha/local_collaborative_planning.pdf. Accessed 5/19/2020.

5 The New York State Prevention Agenda 2019:20-24: An Overview. 2020; https://www.health.ny.gov/prevention/prevention_agenda/2019-2024/docs/ship/overview.pdf. Accessed 5/19/2020.

6 Campos-Outcalt D. Public health and family medicine: an opportunity. *J Am Board Fam Pract*. 2004;17(3):207-211.

7 In: Gebbie K, Rosenstock L, Hernandez LM, eds. *Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century*. Washington (DC)2003.

8 The Family Medicine Milestone Project. 2015; https://www.acgme.org/Portals/0/PDFs/Milestones/FamilyMedicineMilestones.pdf. Accessed 5/19/2020.

9 Wilder V, Gagnon M, Olatunbosun B, et al. Community Health Needs Assessment as a Teaching Tool in a Family Medicine Residency. *Fam Med*. 2016;48(8):635-637.

10 Potts SE, Deligiannidis KE, Cashman SB, et al. Weaving public health education into the fabric of a family medicine residency. *Am J Prev Med*. 2011;41(4 Suppl 3):S256-263.

11 Prunuske J, Chang L, Mishori R, Dobbie A, Morley CP. The extent and methods of public health instruction in family medicine clerkships. *Fam Med*. 2014;46(7):544-548.

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Upcoming Events

2020

August 8-9
Summer Cluster
Buffalo, NY

November 8
Fall Cluster, Board only
Albany, NY

2021

January 21-24
Winter Weekend
Saratoga Springs, NY

February 28
Winter Cluster
Renaissance Albany

March 1
Lobby Day
Renaissance Albany and Capitol

For updates or registration information for these events go to www.nysafp.org

Family Physicians Amidst a Health Crisis: A Call to Action

By Michael Mendoza, MD, MPH, MS

We are in a defining moment in our careers as family physicians. The COVID-19 pandemic has impacted us in ways not seen for decades, and unfortunately, it appears to be far from over.

Public health is having a moment, and there is arguably, no more important a time to be a family physician.

Change has been a constant throughout our careers, but never has it been as rapid and unpredictable as it has been in recent months. Primary care as we know it will be irrevocably altered. After several months, so far, patients have forgone untold numbers of outpatient visits, procedures, and other vital services. How will we help our patients to catch up?

Many of our offices have greatly altered how we care for patients. Although we have long imagined a future where we would transition to telemedicine, the COVID-19 crisis greatly accelerated that vision. With some form of telemedicine now a reality in many practices, reimbursement models must rapidly adapt to evolving needs and preferences for care, on our part and on the part of our patients. Will family medicine accept the challenge to fully engage in practice redesign, implementing measures that more fully support prevention and team-based primary care?

Early observations suggest that patients have avoided urgent and emergent care, fearing that hospitals and other health care settings may put them at greater risk. At the same time, amidst unprecedented economic challenges, hospitals have closed or have implemented alternate care delivery models. Critical staff have been furloughed. It remains to be seen how hospitals will recover, or if all hospitals *will* recover.

Long term care settings for older adults, including nursing homes and assisted living facilities, have discovered their vulnerabilities. To many such facilities, these vulnerabilities have been well known, but through unfavorable financial and regulatory climates, not adequately addressed. Families have lost loved ones without being able to say a proper goodbye. Surely there are lessons to be learned from these unfortunate realities that will improve our senior care system in general while preparing it for future crises.

This is an important time in which to be a family physician. It also turns out that this is also a unique time to be in public health. And for those of us who play a role in both, the opportunities are even greater.

The Intersection between Family Medicine and Public Health

The term 'public health' commonly refers to the health of populations. This is not a foreign concept to family physicians whose role caring for patients and families is in fact an important component of our public health system. Contemporary definitions of population health incorporate issues of health equity, also an issue of great importance to family medicine given the impact of poverty and racism in the lives and health of our patients.

During the 20th century, the health and life expectancy of persons residing in the United States improved dramatically. Since 1900, the

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average lifespan of persons in the United States has lengthened by greater than 30 years; 25 years of this gain are attributable to advances in public health.[1] The so-called Ten Great Public Health Achievements of the 20th century are listed below in Table 1.

TABLE 1

Ten Great Public Health Achievements of the 20th century[1]

- Vaccination
- Motor-vehicle safety
- Safer workplaces
- Control of infectious diseases
- Decline in deaths from coronary heart disease and stroke
- Safer and healthier foods
- Healthier mothers and babies
- Family planning
- Fluoridation of drinking water
- Recognition of tobacco use as a health hazard

Family physicians contribute substantially to all of these advances in our role as clinicians and advocates in diverse communities across the country. At the same time, traditional medical practices are not always well-suited to providing all of these services, given the growing demands on primary care and the high costs associated with care in traditional medical settings. In many instances, public health agencies, health departments, or community-based organizations may be better positioned to assume responsibility for many of the tasks associated with these achievements that have traditionally fallen within primary medical care.

The Role of Local Health Departments in Family Medicine and Primary Care

Public health regulations in NYS require that counties with more than 250,000 persons be led by a Commissioner of Health who must be a medical doctor and have a combination of a master's degree in public health or a related field and 3- years administrative experience in public health. Commissioners lead twelve local health departments in NYS. Public health directors lead the remaining 46 local health departments and are required to have a master's degree in public health or a related field and 3 years of public health experience.

Disease Surveillance. For rare or communicable illnesses, family physicians and primary care clinicians play a vital role in public health surveillance. Because family physicians are often first to evaluate undifferentiated symptoms, we may have the first opportunity to identify rare syndromes under surveillance by public health authorities. In New York State the primary reporting responsibility rests with the treating physician, although other agencies and institutions may also report suspected or confirmed communicable illnesses. When an illness listed requiring mandatory reporting is suspected or confirmed the local health department of the patient's county of residence should be notified immediately.[2]

Reporting these illnesses appropriately will ensure that necessary measures are taken to contain the spread of communicable diseases. In many instances, a clinical or presumptive diagnosis of certain infections will warrant quarantine or other immediate actions on the part of local health officials.

Case Investigations and Contact Tracing. As individuals with presumed infection are identified, local health departments have the legal authority and responsibility to investigate potential sources of infection and to trace subsequent contacts who may be at risk. Although much of this work requires statutory authority under Public Health Law, family physicians may be well positioned to contribute or potentially assume some contact tracing. When a member of a household is confirmed with a communicable disease, everyone else in that household will be subject to evaluation for quarantine or isolation. Given that family physicians often care for entire households – and many family contacts of members in that household – contact tracing may be easier and more effective if facilitated by a trusted family physician rather than a well-trained but otherwise unfamiliar individual.

Environmental Health and Sanitation. Local health departments are perhaps best known for their role in addressing food-borne illness. In one of their few enforcement functions, health departments in New York State issue operating permits, conduct inspections, and may suspend or revoke permits for violations of sanitary code that pose a threat to public health. Family physicians and primary care clinicians can play an important role in preventing food-borne illness by eliciting a food exposure history for patients presenting with suspected food-borne illnesses. With knowledge of patients with a confirmed infection (either through clinician reporting or via confirmed lab results) health departments can begin contact tracing to identify sources of infection and other at-risk contacts.

Advocacy and Communication. As family physicians, we communicate about health to a variety of important audiences outside of our traditional role as clinicians. As medical experts, we bring the weight of science and evidence to questions about health. As humanists we value the stories that our patients and colleagues share with us. Combined, these perspectives afford us a unique opportunity to articulate a narrative that deserves greater voice with policymakers, the media and community organizations, among others.

Complexity and Uncertainty. As family physicians who care for a person's total health, we are no stranger to complexity. We often care for the whole constellation of health concerns that our patients experience. If we are not directly caring for a condition that is under the primary management of a specialist colleague, we must still remain aware of the relationship between that condition and the many others for which we are providing primary care. The interplay of biological health, psychosocial factors, and spirituality fall well within the scope of family medicine. And as these concerns evolve throughout the many years during which we see a patient and a family, so too does the complexity associated with managing all of the

above. The clinical practice of family medicine frequently presents us with undifferentiated complaints and the associated uncertainties for the patient. In the course of patient care, often we uncover more questions while we work to provide answers. In doing so, there is an inherent amount of uncertainty experienced by our patients, and often by us. The early months of the COVID-19 pandemic has foisted upon us uncertainty on a global scale. Although public health officials work diligently to communicate with an uncertain public, family physicians share long-standing care relationships that can also serve as a foundation for helping patients and families manage their uncertainties and fears.

The fields of family medicine and public health share many common underpinnings – a commitment to prevention and chronic disease management over time, a focus on the broader societal and environmental contexts of patients and families, and a special fondness for social justice and health equity, to name a few. And yet, in the everyday work of health promotion and disease prevention, each field operates largely independently of the other. At a time of challenging reimbursement for primary care, and decreasing funding for prevention and public health, the health of our nation stands to benefit greatly from improved collaboration from both public health and family medicine.

Endnotes

1 Centers for Disease Control and Prevention (CDC) Ten great public health achievements—United States, 1900–1999. MMWR. 1999;48:241–243.

2 https://www.health.ny.gov/forms/instructions/doh-389_instructions.pdf Accessed June 2, 2020

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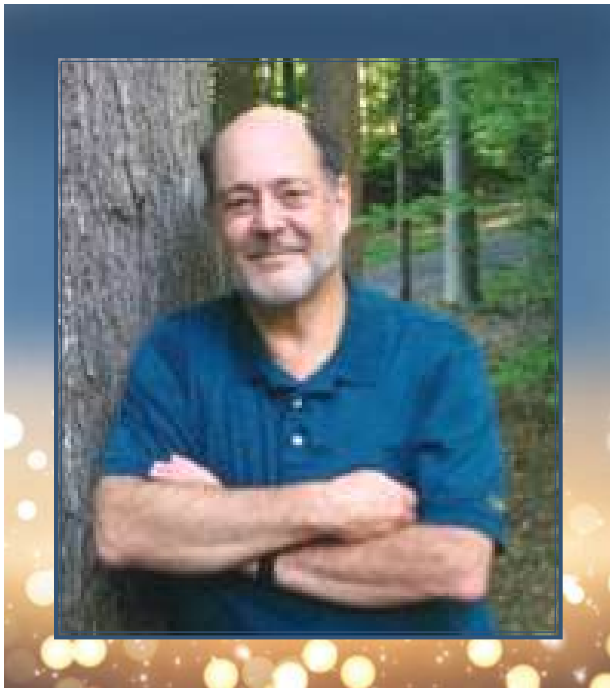
Two special awards were presented at our 2020 Congress of Delegates in June. Bravo to these dedicated family physicians!



2020 Family Physician of the Year
Wayne Strouse, MD, FAAFP

2020 Family Medicine Educator of the Year
Mark Josefski, MD, FAAFP

Winter Weekend 2021 Call for Presentations

The Winter Weekend planning committee is accepting presentation proposals. The conference will take place January 21-24 in Saratoga Springs.

Consideration of submitted proposals will begin in September. Proposals submitted after August 15th may not be accepted. Access the application through this link: https://www.surveymonkey.com/r/ww21

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- Representation at the AAFP
- Representation of the local county chapters at the NYSAFP Congress of Delegates
- Promotion of family medicine in the medical schools and support of student programs
- Support of family medicine residency & fellowship training programs
- Representation of family medicine in the federal & state legislatures and policy makers through the PAC

Saving Members Time

- Hosting of relevant and interactive CME workshops
- Hosting of ALSO instructor and provider courses
- Opportunity to interact with fellow family physicians throughout the state
- Reliable source of relevant and current events
- Weekly e-NewsBrief
- Quarterly peer reviewed journal – *Family Doctor*
- Timely access to current events of Academy via social media (NYSAFP Facebook | NYSAFP Twitter)

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- Sponsorship of students and residents to Academy meetings (Winter Weekend, Regional Family Medicine) and the Congress of Delegates
- Cultivation of the next generation of family physicians by offering scholarships and awards to pre-medical students, medical students, and residents to participate in family medicine conferences and programs
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AAFP Member Services: http://www.aafp.org/online/en/home/membership/resources.html

- A list of the AAFP professional resources
- A list of the AAFP "Member Advantage"
- Additional Partnerships: http://www.nysafp.org/index/resources-6/partner-programs-106.html
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