Family Doctor

A Journal of the New York State Academy of Family Physicians

Winter 2022

Volume ten, Number three

New York State Academy of Family Physicians

Focus:

Pediatrics and School Health

FEATURE ARTICLES:

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Leading Physician Well-being Program (LPW)

Learn to Lead Change and Champion Well-being

Physician leadership has never been a more important skill for the family physician than it is today. Thoughtful and capable family physician leaders can provide stability in uncertain times for their office teams, among their health system colleagues, and within their community. This physician leadership enhances the quality of care that teams can provide to their patients, improves the morale of the care team, and helps communities stay focused on health-enhancing activities.

Leading Physician Well-being (LPW), developed by the AAFP and **United Health Foundation**, is a unique, tuition-free certificate program designed to help you develop the leadership skills you need to spearhead that change among the physicians and other clinicians in your practice or health care organization.

An extension of the Academy's groundbreaking **Physician Health First** (PHF) initiative, LPW is finishing up its first year of the program which included of 100 physicians and is excited to begin receiving applicants for the 2022 program.

All AAFP active members are eligible for LPW. Residents are eligible if they have the support of their residency program and should submit a

Don't miss this tuition-free, 10-month series where you'll grow your knowledge and skills in three foundational areas:

1. **Physician well-being** – build expertise through education about the current state and importance of well-being, how to measure it, and best practices to achieve it, and develop a plan to raise awareness of its importance in your practice and organization.
2. **Leadership development** – learn how to lead through wielding influence, implement change management and performance improvement (PI) activities, and communicate with medical colleagues and others, and develop a change management plan to guide your organization's work to improve physician well-being.
3. **Performance improvement** – gain hands-on experience by developing and implementing a PI-CME project in your practice or organization that's expected to wrap up one year after the program's educational experience concludes.

This learning experience opportunity is made up of a mix of livestreamed and in-person events along with regular online learning activities – all of which combine to foster development of a supportive learning community.

2022 Tentative Program Activities:

- 4 program webinars: February, June, August and September
- 2 guest webinars: April and October
- 3 multi-day activities: 2 in-person* in April and November and 1 livestream in May
  *May change to livestream based on CDC/local health department recommendations and cohort members' ability to travel.

Creating Leaders of Change and Champions of Well-being

The Benefits of Participating in LPW

At completion, you'll earn:

- A Leading Physician Well-being certificate.
- AAFP thought leader and spokesperson recognition for physician well-being.
- CME credit – at no cost to you.

Over the 10-month course, you will gain:

- Peer-to-peer networking, guidance, and support from your colleagues.
- The satisfaction of knowing you're honing your leadership skills while becoming an effective agent for change and a physician well-being expert.
- Career development as a physician well-being leader and champion.
- A unique opportunity to complete a PI-CME project that directly impacts your practice organization and covers ABFM requirements for practice improvement.

From the Executive Vice President

By Vito Grasso, MPA, CAE

Delegates who attend our annual Congress of Delegates (COD) are familiar with the handbook which contains rules, reports, lists and other information of value, if not interest, to members who participate in the COD. One of the items we have included in the handbook for many years is a statement about a tradition which has been followed in selecting members of the board and the president. This "tradition" has been the topic of concern because it is not articulated as a requirement in our bylaws, but has been enforced in elections as a strategy to assure geographic balance in the composition of the board and the presidency. This tradition has been enforced by attempting to assure that each class of candidates includes an approximately equal number of members from Upstate NY and from Downstate NY. Downstate is generally considered to be New York City and Long Island. Everywhere else in the state is considered to be upstate. Additionally, the presidency has been alternated between an upstate member and a downstate member.

Adherence to this practice has resulted in election of "upstate" and "downstate" delegates and alternates to the AAFP COD. With the election this year of Dr. Sarah Nosal to the AAFP Board of Directors, our tradition has created a procedural problem which has compelled the NYSAFP Board to re-examine the need for geographic representation on both the Board and in the presidency of NYSAFP. Dr. Nosal was our downstate delegate and her election to the AAFP Board creates a vacancy in that position. Our bylaws require elevation of the "senior" alternate delegate to fill the remainder of the term. The senior alternate is Dr. Mark Josefski, but he is the upstate alternate. Following our tradition, the vacancy should be filled by the downstate alternate – Dr. Ray Ebarb. Dr. Josefski accepted the appointment. The Board then conducted an election to fill the vacancy in *his* alternate delegate seat and Dr. Barbara Keber was elected. She is from downstate which means our AAFP delegation now consists of two upstate delegates (Dr. Josefski and Dr. Marc Price) and two downstate alternate delegates (Dr. Keber and Dr. Ray Ebarb).

Following an informal practice in selecting board members and the president creates procedural problems which could concern members particularly regarding whether this practice may preclude a member from election because he/she/they are not from the geographic area which is "up next" for representation. Furthermore, it is just another barrier which limits advancement of members who have historically been underrepresented among our leadership. The experience with the vacancy caused by Dr. Nosal's election to the AAFP Board has forced NYSAFP to address this issue. The NYSAFP Board has recommended that the question of whether to codify this tradition should be decided one way or the other by the COD and plans to introduce a resolution at the 2022 COD to formally adopt the practice. The Board does not endorse codification of the tradition but simply recommends that the question be put before the COD. Consequently, the proposed amendment is made by members of the Board acting individually and not on behalf of the Board.

This is an important matter for many reasons not the least of which is the fact that many members are unaware of the practice of applying geographic balance as criteria for selecting candidates and conducting elections. It would be helpful to have member perspective on whether geographic balance should be a priority in constituting the leadership of NYSAFP. It has been our experience that members of our AAFP delegation and members of the Academy's Board generally have not actually represented areas of the state in fulfilling their duties as elected leaders. Indeed, in discussing the matter the Board concluded that deliberations within the Board and our COD rarely, if ever, reflect geographic differences. Differences are more likely to reflect practice modalities and settings rather than upstate and downstate location.

The 2022 COD will consider this proposal and address the issue. Your opinion is very important in informing that debate and contributing to this decision. This issue of *Family Doctor* includes pro and con articles in our Two Views columns on the proposed bylaws amendment. The intent is to provide members with perspective and context in considering whether we should formally codify this tradition or ignore it in conducting future elections. Your thoughts and comments are welcome and we look forward to hearing from you.

…many members are unaware of the practice of applying geographic balance as criteria for selecting candidates and conducting elections.

President's Post

By James Mumford, MD, FAAFP

The COVID-19 Omicron variant is rapidly emerging as the dominant variant and along with Delta, the cause of the latest surge in infections, hospitalizations, and deaths. The arrival of Omicron during the holiday season has the potential to create a worst-case scenario. Omicron has been estimated to be the cause of an estimated 73.2% of new infections according to the CDC and an estimated 92 % of new cases in New York and New Jersey and even higher in Washington, Oregon and Idaho, as of late December.

The Omicron variant has more than 50 mutations, more than 30 of which are in the spike protein which is a major target of antibody treatments.

There is evidence suggesting that Omicron is more than 3 times as likely to spread among households. R0 (pronounced "R naught") also referred to as the reproduction number, is another way to evaluate how contagious the virus is. R0 predicts the number of individuals who will contract a disease from an infected person. For example, the R0 of measles is 12 – 18 and influenza is in the range of 0.9 – 2.1. To date, the R0 of Delta variant is about 1. Current estimates for the Omicron variant are for an R0 of 3.47 – >4.

In addition to differences in the virus itself, psychosocial and seasonal factors can impact the R0. Cold weather and the holidays can result in increased indoor socializing which can increase the R0 of viral illnesses by 20 – 30%. Omicron symptoms seem to have a more rapid onset as well. Earlier this month, news reports told of a company Christmas party in Oslo, Norway which resulted in 70% of healthy, young (30-50 years old), fully vaccinated and test negative attendees developing symptomatic COVID infection after only 3 days. This can be compared with incubation times of 4-5 days for the Delta variant and about 5 days for others. The combination of a shorter incubation time and a higher R0 can result in a doubling of cases in 3 days.

There are a number of treatments available, and I will review some of the newer options here.

Pre-exposure Prophylaxis – Evusheld (Tixagevimab and co-packaged Cilgavimab) has received an EUA indication for pre-exposure prophylaxis. Like other monoclonal antibody therapies, these two antibodies are spike-directed attachment inhibitors administered as two separate consecutive IM injections. Evusheld is available for high-risk, immunocompromised individuals, or those with a medical contraindication to the vaccine. Voluntary non-vaccination is not listed as a criterion for use.

COVID -19 Treatment Only – Sotrovimab (GSK) COMEY-ICE shares indications with other monoclonal antibody treatments not for post exposure prophylaxis.

Treatment and Post-exposure Prophylaxis – ReGEN-COV or Regeneron (Casirivimab and Imdevimab) and Bamlanivimab and etesevimab which has not been as effective against Delta but has been approved for use in pediatric cases.

Omicron has not been as susceptible to available antibody treatments. Casirivimab and Imdevimab have good activity against the Delta variant whereas Bamlanivimab and etesevimab does not. Neither of these treatments is effective against the Omicron variant. Both sotrovimab and Evusheld are active against both the Delta and Omicron variants.

All these monoclonal antibody treatments are currently in short supply and are indicated for specific groups targeting older (>65) and immunocompromised individuals. Purchase of monoclonal antibodies has been centralized to governmental distribution at the state and federal levels, which mean they are unlikely to be available to smaller practices.

Oral Home Therapy Both the Pfizer and Merck drugs received FDA approval in the past week. They are indicated for mild to moderate COVID-19 disease. The hope is that they will remain efficacious against variants since they do not target viral spike proteins.

Paxlovid (nirmatrelvir) (Pfizer) is a protease inhibitor taken twice daily for 5 days in combination with ritonavir. Paxlovid is administered as three tablets (two tablets of nirmatrelvir and one tablet of ritonavir) taken together orally twice daily for five days, for a total of 30 tablets. A Pfizer study demonstrated reduced risk of hospitalization or death by 89%, compared with a placebo, when taken within three days of symptom onset. The mechanism of action is inhibition of a SARS-CoV-2 protein to stop the viral replication, and ritonavir, which slows down nirmatrelvir's breakdown to help it remain in the body for a longer period at higher concentrations. The cost has been reported to be around $530 but may be available at no cost.

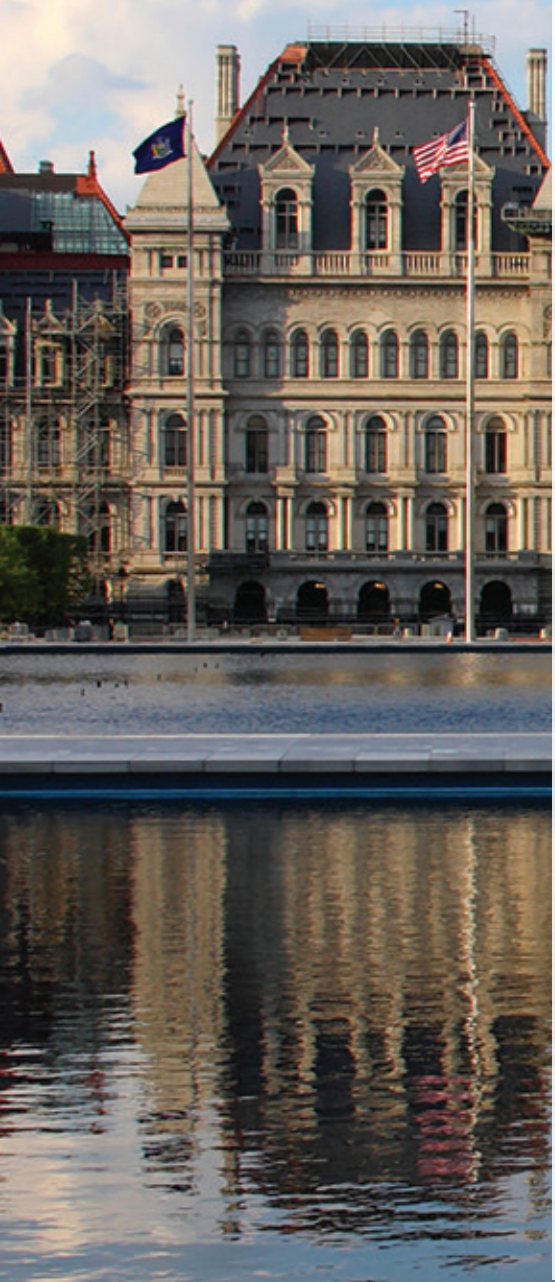
Molnupiravir (Merck) not recommended < 18 years older during pregnancy. Molnupiravir is administered as four 200 milligram capsules taken orally every 12 hours for five days, for a total of 40 capsules. The mechanism of action is introduction of errors in the SARS-CoV-2 virus' genetic code, preventing viral replication. The estimated cost for a course of therapy is $700.

Based on a study done in the United Kingdom, and anecdotal experience, Omicron may cause milder disease but that data is confounded by the impact of milder disease as a result of prior infection or vaccination. The surge appears to have reached its peak in Africa and the United Kingdom. An optimistic perspective would be a highly transmissible variant that causes mild disease and provides durable post exposure neutralizing antibodies.

Our most effective and most available tools remain vaccines and masking, particularly N-95 when providers are involved in patient care. As family physicians, our responsibility is to continue to educate our patients on effective prevention and treatment from a culturally competent, collaborative context.

Albany Report

By Reid, McNally & Savage



Roll Out of Pediatric COVID-19 Vaccinations in NYS

As of December 7, 2021, Governor Hochul's office reported that over 30.6 million COVID-19 vaccine doses have been administered in New York State. 86.4% of New Yorkers aged 18 and older have received at least one vaccine dose and 78.7% of those aged 18 and older have completed the COVID-19 vaccine series.

And with the COVID-19 vaccine now approved for those ages five and older, the data shows that 74.8% of all New Yorkers have received one dose and 67.3% have completed the COVID-19 vaccine series. Additionally, the State Department of Health informally shared that 2.7 million New York residents have had a third shot of COVID-19 vaccine, and that 20% of those aged 5-11 have received one shot of the vaccine with 5.8% of children being fully vaccinated.

While the overall vaccination rates are positive in that they show an overwhelming majority of residents have now been vaccinated (not including booster dose rates), there are certain areas of NYS, populations and age groups that have far lower rates, and we still have a long way to go to reach widespread population immunity. Closing these gaps quickly is especially important with what we are seeing with COVID-19 variants, including Delta and most recently Omicron which is slated to soon be the dominant strain throughout the US.

With this in mind, and the recent emergency use approval of the Pfizer COVID-19 vaccination for kids aged five and older effective November 2, 2021, we are focusing our update for the winter journal on the roll out of pediatric COVID-19 vaccines, sharing available guidance and resources and looking at what recent surveys are finding about parental views on whether to vaccinate their children.

Approved COVID-19 Vaccines by Age Group

With multiple vaccines approved to prevent COVID-19 each having their own eligibility criteria, we will start by sharing the chart below, which outlines the three FDA and CDC ACIP approved vaccines, recommended age group(s), number of doses and recommendations for booster shots.

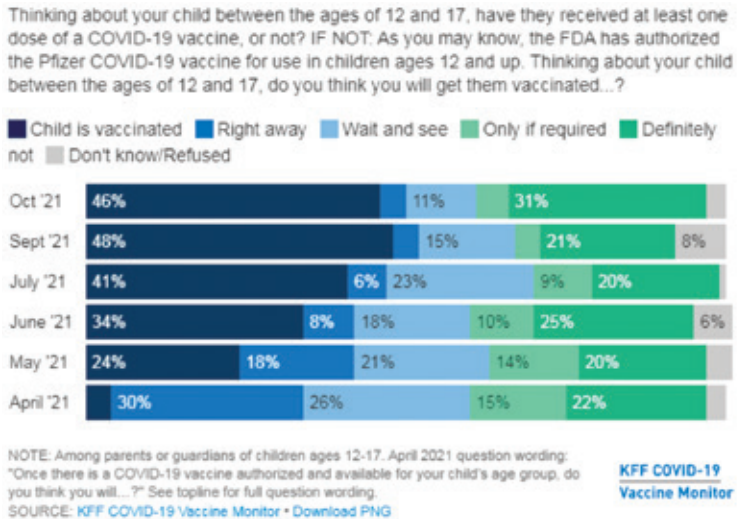
Vaccine	Pfizer	Moderna	Johnson
Type of Vaccine	mRNA	mRNA	Adenovirus
Recommended Age to Receive	Ages 5-15 (EUA) Ages 16+ (Full Licensure)	Ages 18+ EUA)	Ages 18+ EUA)
Number of Doses	2 doses 21 days a part	2 doses 21 days a part	1 dose
Booster Doses*	1 dose, 6 months after primary series Recommended for individuals 18 years and older	1 dose, 6 months after primary series Recommended for individuals 18 years and older	1 dose, 2 months after first dose Recommended for individuals 18 years and older

Let's Get Immunized New York, 2021

Parental Views on COVID-19 Vaccines

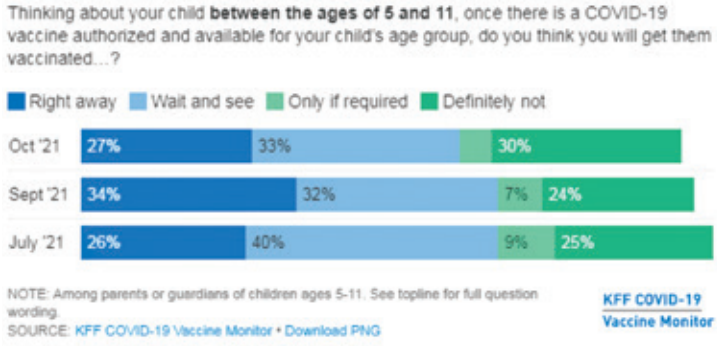
Kaiser Family Foundation has an ongoing research project tracking the public's attitudes and experiences with COVID-19 vaccinations. The chart below based on data published in November 2021, asks parents of children ages 12-17, whether they will get them vaccinated against COVID-19. While the percentage of children vaccinated in this cohort has nearly doubled since May 2021 to 46%, as of October 2021, 11% of parents said they still planned to wait and see and 31% said definitely not.

Kaiser Family Foundation COVID-19 Vaccine Monitor:
Will parents get their 12-17 year-old vaccinated?



Now looking at the younger children for which the Pfizer COVID-19 vaccine was approved for on November 2nd, 27% of parents said in October 2021 that they planned to get their children in this age cohort vaccinated right away, compared to 33% who were going to wait and see and 30% of parents who said definitely not. Clearly there is a great deal of work left to do to educate parents, answer their questions and concerns and help them to feel comfortable getting this vaccine for their children. And the unique ability of a child's family physician or pediatrician to effectively do so cannot be overstated.

Kaiser Family Foundation COVID-19 Vaccine Monitor:
Will parents get their 5-11 year-old vaccinated?



NYSDOH COVID-19 Pediatric Vaccine Resources

Since the CDC's approval of the Pfizer COVID-19 vaccine under an FDA EUA for children ages 5-11 on November 2nd, the State Health Department has included a wide range of information about childhood eligibility for COVID vaccine resources, including frequently asked questions and answers, and scheduling on its COVID-19 vaccine webpage:

https://covid19vaccine.health.ny.gov/covid-19-vaccines-children-and-adolescents.

And below are specific links to particular resources that have been posted to https://coronavirus.health.ny.gov/covid-19-vaccine-information-providers:

Guidance for the New York State COVID-19 Vaccination Program: Vaccination of Children Ages 5-11;

Information for Health Care Professionals about the Screening Checklist for the Administration of Pfizer-BioNTech COVID-19 Vaccine for Children 5-11 years old; and

COVID-19 Immunization Screening and Consent Form: Children and Adolescents Ages 5-12 years old

NYSAFP Advocates for Small Practice Access to Pediatric COVID-19 Vaccine

Anticipating vaccine approval for children aged 5-11, NYSAFP and its leadership had been advocating with NYS to ensure access to the COVID-19 pediatric vaccine for small practices that are interested in providing it for their young patients. NYSAFP was alerted by Vaccine Subcommittee Chair Dr. Phil Kaplan, that anticipated 100-dose lots had not yet been made available after the first week of November despite prior statements by the State Health Department that they would be doing so.

Our firm worked closely with NYSAFP EVP Vito Grasso to reach out to Governor Hochul's Administration/ NYS Department of Health (NYSDOH) staff to stress the importance of ensuring the ability for smaller practices, often in rural areas and underserved communities, be given access to smaller dose lots so they may serve their communities and provide easy and trusted access to the COVID-19 vaccine for young children.

In response to our advocacy, the State Health Department released guidance stating that effective November 9, 2021, practices may order Pfizer pediatric COVID-19 vaccine through the Health Commerce System NYSIIS (state level) or CIR (NYC) in 100-dose ordering quantities.

For more information related to NYS' COVID-19 vaccine program and ordering vaccine please visit https://coronavirus.health.ny.gov/covid-19-vaccine-information-providers which lists information at the top of the webpage related to the newly approved vaccine for the 5-11 year old population.

Booster Doses

On November 30, 2021, the NYS Department of Health updated its COVID-19 Vaccination Program Guidance to conform with the CDC's updated recommendations on booster doses to indicate that everyone 18 years of age and older should get a booster shot either 6 months after their initial Pfizer or Moderna series, or 2 months after their initial J&J vaccine. And most recently, the Food and Drug Administration on December 9, 2021 authorized a booster dose of the Pfizer-BioNTech Covid-19 vaccine for 16- and 17-year-olds.

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You can view the latest NYSDOH guidance posted in the NYSDOH guidance repository: https://coronavirus.health.ny.gov/covid-19-guidance-repository.

To help patients determine eligibility for a booster shot, please view this link: https://covid19vaccine.health.ny.gov/booster-doses.

Physician Administration of COVID-19 Vaccines in NYS

On November 16, 2021, NYSDOH shared the below enrollment statistics on the number of primary care and other physicians in New York State (not including New York City) who enrolled to administer COVID-19 vaccines in New York. As of this date, 2025 physicians outside NYC were enrolled, with family physicians leading at 681. This is out of over 5,000 enrolled providers in the State.

We inquired with the NYC Department of Health for similar data but it was not provided. We thought this snapshot would be useful, understanding that many physicians may not administer vaccines in their offices but are assisting in local health department clinics, mass vaccination sites and other venues. We are hopeful that the roll out of 100-dose lots last month will assist those practices that are interested in administering the vaccine in their offices but could not previously utilize the larger dose quantities.

Medical practice - internal medicine	550
Medical practice – pediatrics	464
Medical practice - family medicine	681
Medical practice - other specialty	259
Medical practice - OB/GYN	71

COVID-19 Vaccine Enrollment Statistics, NYS

Let's Get Immunized NY

On December 8, 2021, *Let's Get Immunized New York* celebrated its one-year anniversary since launching! Just over one year ago, Let's Get Immunized NY, a campaign created by NYSAFP, the NYSAFP Foundation, and other supporters launched with the mission of providing reliable and trustworthy information on immunization and encouraging New Yorkers to get recommended vaccines. In the past year Let's Get Immunized NY, with the support of its 40 statewide and local partners, has accomplished this goal and will continue to work toward protecting and improving access to immunization, increasing awareness of the public health benefits of vaccination, and addressing health disparities with vaccine access.

Over the last year, the campaign has addressed questions and concerns from underserved communities by co-hosting a Town Hall about COVID-19 vaccines with the State Senate Health Chair Gustavo Rivera. The campaign sponsored a radio advertisement encouraging COVID-19 vaccination in upstate areas of New York with lower vaccination rates and also helped to amplify partner voices and messaging that support and promote immunization through blog posts, opinion pieces, and other earned media. The campaign website serves as a hub of information and resources to help New Yorkers make informed, science-based decisions about their health and immunization. The campaign has also served as a resource to many campaign partners to provide information, present in webinars, and assist with organizational efforts to promote immunization.

Our firm and NYSAFP looks forward to what this important effort can accomplish in the year ahead. Please be sure to check out the campaign website and resources at www.letsgetimmunizedny.org and follow LGINY on social media: Facebook (@ImmuneNY), Twitter (@Immune NY), and Instagram (letsgetimmunizedny).

Managing Student Health:
Q & A with a School Nurse

By Joan McMahon Verardo, RN, BSN and Louis Verardo, MD, FAAFP

The history of formal school health programs goes back to the early 20th century. Multiple professional and governmental organizations have weighed in on the responsibilities and roles of clinicians caring for students, with the majority of these involving the duties of the school nurse. While often joined in this role by other educational staff, as well as a school medical director and community practitioners, the nurse is clearly central to the overall supervision of student health in both classroom and athletic settings.

What follows is an interview between a family physician (LV) and a school nurse (JMV) about the day-to-day experiences seen in a school setting. Full disclosure: we are a married couple, both now semi-retired, who worked briefly together in a school setting several years ago, but who otherwise have maintained separate professional careers.

LV: Could we start off by having you describe what was a typical day for you?

JMV: Sure. Once in my office, I would review messages which came in from parents and others, returning calls as needed; I'd assess symptoms on any students coming to school sick; I'd restock any needed supplies for the office; then I'd pre-pour medications scheduled to be given out to students that day.

LV: That sounds very busy. Do you have any help with all this work?

JMV: I typically had a part-time office assistant, plus additional clerical and clinical resources were made available for volume events such as sports physicals and mandated screenings.

LV: Continuing with the daily work, you mentioned medications. Could you be more specific?

JMV: Students need written authorization from their prescribing clinician (as well as a parent or guardian) to take any medication during school hours, and usually this is done by completing forms. Once on file with the school nurse, this allows the student to either come to the office for administration or, in the case of an epinephrine auto-injector device, to self-administer the medication. Examples of medications I'd administer included psychotropic drugs (primarily for ADHD) and asthma inhalation treatments.

LV: What about emergency situations, where a student is ill or becomes injured; how are those handled?

JMV: For a true medical emergency, I would assess the student to identify the symptoms and clinical status, providing any needed first aid; a call would go out to the local fire and rescue department for assistance (their nearby location provided a faster response time than going through 911); and contact would be initiated with the student's parent and school administration to communicate what was happening to the child. There are less urgent situations which happen, certainly, and those are handled on a case-by-case basis. One of the lesser-known roles I would perform on occasion was "pill identification."

LV: What's that about?

JMV: A student or a pill, or both, would be brought to my office for two purposes. For the student, a clinical assessment of symptoms

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being experienced (e.g., dizziness, loss of consciousness, impaired reflexes, impaired coordination) would be performed. If an unknown pharmaceutical was discovered either on the individual or somewhere on school grounds, a drug identification resource would be utilized to identify the specifics of the substance, including dose and manufacturer. And this would involve both prescribed and OTC medications.

LV: Would any of these situations involve a possible drug overdose, and if so, how would that be handled?

JMV: I never had to deal with a drug overdose on the school grounds, but there was Narcan available in the office, and I had received training in its administration.

LV: Let's move on to a different aspect of your work. Could you describe the screenings you do on students at the school, and who orders those?

JMV: Those are actually mandated by New York State, and they include hearing, vision, and scoliosis screenings done periodically throughout the pre-K to 12th grade. While many of these same tests are actually being done by the personal clinicians of students, the school screenings provide an additional opportunity to ensure no child falls between the cracks. I'm aware that scoliosis screening has been re-evaluated recently by the United States Preventive Services Task Force, or USPSTF, but this remains an item mandated to be performed in our state. Any deviations from anticipated norms on these screenings require notification to the student's parent for referral to the student's clinician and subsequent close clinical follow-up.

LV: OK, let's move on to student exams, both general and sports physicals. What involvement would you have with community physicians in this process?

JMV: The ideal would be for each student to have a personal physician who would fill out a (now standardized) examination form, which would then be reviewed by the school nurse for any significant finding (e.g., if a student was "cleared" following a prior illness, injury, or surgical procedure). Completed forms would then be forwarded to the designated school physician for his or her signature. During the review process, any need for further medical evaluation would be identified, or referral to a specialist recommended, before the student could be permitted to return to usual school activities.

The percentage of students with a dedicated family doctor in our district I'd estimate at greater than 90%. If there were any health issues which needed further clarification, it was always helpful to be able to pick up the phone and reach out to a familiar voice regarding any concerns. However, I will add that for certain school exams, a significant percentage of kids with their own doctor would opt to get their exam done by the school physician; this was largely for purposes of expediting the process of getting clearance for sports participation.

If the student did not have a personal physician, the school nurse would place that student on the school physician's list for examination, then actively assist the student in locating an available resource where they could obtain ongoing primary care. In our community, this usually involved new students coming into the district as recent immigrants with limited English-language skills. The process of getting these students established with a clinician was greatly enhanced several years ago by affiliation of our local community clinic with an integrated health system operating in the region, offering the additional benefit of access to specialty clinicians in a variety of disciplines. An added plus was that this major health system also provided continuing education geared to school nurses on diverse topics pertinent to school health.

Sports physicals occurred typically as a baseline each year, and then periodically throughout the three school year seasons, i.e., fall, winter, and spring. Processing all the forms and coordinating with the various sports teams involved a close working relationship with the athletic trainer (AT), and that individual often provided early recognition of a previously-unreported injury or condition. If not already counseled by the AT, I would be responsible for contacting the student and parent to arrange appropriate follow-up for this issue, including review by the student's personal doctor, the school physician, and any required specialist. By the way, all of this information needed to go from paper to computer, and that data entry required a significant time commitment.

LV: Sticking with athletics, did you utilize a concussion protocol?

JMV: Yes, there is a New York State concussion protocol which follows a standardized process for returning a student to both academic and athletic activities. Students are evaluated by their personal clinicians and any specialists as indicated, and reports on their progress are reviewed by the school nurse against the protocol. In some cases, this might involve arranging for individualized instruction for those students unable to return to classroom learning; in other instances, it could be the provision of classroom accommodation for an injured student athlete while on campus.

LV: Are there other school staff with whom you'd interact during the course of the school day?

JMV: Teachers may often send students to the nurse's office for any number of reasons, ranging from unusual behavior to personal hygiene concerns. In addition, by reviewing health exam forms (and through contact with kids on a daily basis), you discover additional mental health issues, such as anxiety, which require discussion with the parent, school social worker, and school psychologist. As the school nurse, I sat on a committee which met regularly to discuss students experiencing problems within school for varied reasons. HIPAA protocols would be observed during any discussion related to a student's medical information.

LV: Any particular cases come to mind as an example?

JMV: There was one student case I recall discussing. The student was new to the district and came from out of state. It soon became clear that he had significant mental health issues as he accused others of harassing him, resulting in several unprovoked assaults on students. As a consequence, the student was suspended from school (which he already wasn't attending regularly), and he then became uncooperative with any attempts of outside school instruction. CPS initially refused to intervene, as there was no substantiated physical abuse at home. It was only when I contacted them and changed the complaint to educational neglect, with the student being a potential danger to himself and others, that the state stepped in with additional services, including mental health.

LV: Pretty dramatic. Let's go to something more mundane. How do you get vaccine information on students?

JMV: That used to be one of the more labor-intensive parts of the job, especially prior to the initiation of the school year: a lot of paper forms to review, a lot of repeated requests for immunization information, a significant influx of last-minute faxed records needing verification prior to the student's entry into the classroom. Much of that process has become simplified with access to NYSIIS, or the New York State Immunization Information System. This centralized registry now provides access to the vaccine records of children registered in the state, and a copy can be easily included in a student's school health record. Separate from the data management, however, is the continuing educational need to keep current with updates within the vaccine schedule; this requires regular study and ongoing review of both the New York State regulations and recommendations from the CDC.

LV: What kind of teaching did you do with students?

JMV: Most of the teaching I did was done in one-on-one communication with students I saw throughout the school day for various reasons. I also arranged school-wide events for specific health topics: these included The Great American Smoke-out for tobacco cessation and a presentation by the Donor Network on organ donation. For high school juniors and seniors, I provided resources for instruction on breast exams to female students and testicular self-examination to male students. Our school's formal health curriculum, however, was under the direction of the physical education department.

LV: You've provided a very comprehensive and detailed description of a school nurse's work. Could you talk about the impact of the COVID-19 pandemic on that work?

JMV: Well, although I retired a few months before the virus hit, I still remain on the substitute list within the school district. Between conversations with the current high school nurse, as well as my return to several of the district campuses during the past year, I have observed both physical and procedural changes. The initial procedural change was the use of remote learning, which resulted in no physical presence of students at any location; later, when the district re-opened, the use of PPE and the need to immediately isolate any student coming to school with suspicious symptoms created a markedly different work flow in the office. Gone were opportunities for what I'd call the "therapeutic cot" in the nurse's office, where students would find respite during the school day for any number of reasons, and where they might often be comfortable enough to share information about their lives with the school nurse. Some of this sharing provided insight into either a medical or behavioral issue a student could be experiencing; sometimes it offered a glimpse into the student body culture which was not readily visible in the course of the typical school day.

LV: Do you have any closing thoughts you'd like to share?

JMV: When we are talking best practices, I think having a dedicated school physician available to the school nurse, especially someone willing to provide immediate access, is the ideal situation. Having the ability to contact community practitioners in a timely fashion about their students is another big plus, especially as it relates to continuity of care. Having access to community resources, including those for mental health, would be another essential factor needed to adequately manage student health.

Receiving regular continued education pertinent to the issues faced by school nurses is a key component to maintaining both competence and excellence in caring for students. An annual "meet and greet" involving district school nurses, community clinicians, school staff, and other parties active in school health: that would greatly foster both enhanced communication and interdisciplinary care.

All of these measures would enhance the school nurse's ability to advocate for their students, which is both a personal goal and a stated objective of professional groups like the New York State Association of School Nurses (NYSASN). Membership of a school nurse in that organization and its affiliates (zone and national) provides a framework for shared experiences and further professional development.

LV: That seems like good place to end this interview. Thank you for sharing your experiences with our readers.

JMV: You're very welcome. School nurses would welcome forming clinical partnerships with clinicians in the community; that can only advance the cause of school health for all stakeholders.

NOTE: Included in the list of selected references are articles which describe the role of the school physician specifically, as well as articles which detail opportunities for collaboration between community clinicians and the school nurse. Some of the citations are of historical interest, others are more current and focused on specific health issues involving secondary and college-age students, and one is a policy statement from the American Academy of Pediatrics. On the AAFP website, if you search the *American Family Physician* (AFP) database using terms "school health", "school physician", or "school nurse", you will find an extensive listing of condition-specific references for a variety of clinical and psychosocial issues involving school-aged children and young adults.

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TWO VIEWS: Upstate-Downstate Leadership Tradition

VIEW ONE

LET'S MAKE THE TRADITION PERMANENT

By Raymond L. Ebarb, MD, FAAFP

Although not codified in our bylaws, we, the New State Academy of Family Physicians (NYSAFP), practice the tradition of nominating candidates for office by alternating physician leaders based on the two geographic locations in New York, specifically upstate counties (counties north and west of Westchester County) and downstate counties (Westchester County, five boroughs of NYC, Suffolk and Nassau Counties). The wisdom of our practice, ensuring geographic diversity in the NYSAFP leadership, is critical to our staying relevant, strong and unified. The distinctiveness of our geographic regions is a microcosm of the larger AAFP.

As a state organization, the most compelling reason we instituted and have maintained this tradition is so one region, particularly a heavily populated area, would not dominate the leadership of the Academy. We are not the only member state in the AAFP who chooses their leadership in this manner. In New York, the downstate counties are highly concentrated with family physicians compared to the upstate counties, which will inevitably result in the domination of our organization by the downstate counties. This would minimize the opportunity of the airing of issues that are relevant to the medical and practice issues of our upstate brethren. What a loss of perspective for the patients we serve!

In addition, without this insightful tradition of ensuring geographic inclusion, recruitment of upstate members to actively and meaningfully participate in the Academy from the northern and western counties would be even more difficult than it presently is. An unintended consequence will be to significantly limit the opportunities for leadership positions and representation by our upstate colleagues. By extension, if a member is unable to get elected within their home state of New York, their chances of election to a national AAFP position are remote.

Without a mechanism to include the upstate and western counties, it also sends a message to members that their issues are not important to the NYSAFP. Due to this tradition, the Academy has been able to maintain a balanced leadership slate of officers that reflect the needs of the various modes of practice throughout all of New York State.

New York State is more than just the New York metropolitan area. Our leadership needs to reflect and address the needs of both upstate and downstate members of the NYSAFP. The process of alternating officers from both upstate and downstate assures that the needs of both regions will receive priority consideration and will be appropriately represented.

VIEW TWO

LET'S NOT USE ARBITRARY GEOGRAPHY TO LIMIT HIGHLY QUALIFIED CANDIDATES FOR LEADERSHIP POSITIONS

By KrisEmily McCrory, MD, MS Med Ed, FAAFP

In 1992, the NYSAFP Congress of Delegates passed a resolution stating clearing that geography could be considered as one component of a candidate's qualification for a leadership position, but should not be the sole criteria for any elected leadership position. Despite this, for decades, we have maintained a tradition of upstate-downstate politics that recently created a chaotic situation when our tradition butted up against our formal policies and bylaws.

When I tried to learn the origin of the tradition, I discovered at least four or five different versions of why we do this. Most agree it was to help with a presumed power differential, but whether it was to help upstate or downstate varied by which version was being told. No one could definitively identify when we started or why, yet we have continued to push this tradition in our elections.

When a recent vacated position led us to examine the actual bylaws, leadership realized that our current tradition not only was not codified but stood in stark opposition to current bylaws.

The solution proposed has been a bylaw change that would codify the tradition of upstate-downstate. Many members of leadership identify this as a simple solution, but I would argue that the role of the geography should not be how we determine leadership in the Academy. Limiting candidates' ability to run based solely on geography is neither prudent nor practical.

Geography is only one of any number of criteria that differentiate members and at the level of leadership we should not be using that as a determination of who should be permitted to run.

Geography is arbitrary. While we have this tradition of upstate-downstate, this is not defined in any objective way. We have said if you are north of Westchester County, then you are upstate. When I spoke to staff to even identify how many members exist in each of these realms, I learned we do not actually keep track of such records. We do not define members by geography, and one could argue that we could be hard pressed to do so. If you work above the Westchester line but live below it, are you upstate or downstate?

In an even more complicated situation, the AAFP allows members to choose which state they pay dues to regardless of where the member resides or work. We have NYSAFP members (including board members) who neither reside nor work in the state of NY and presumably could not be defined as either upstate or downstate.

The roles we have traditionally allocated to be geographically relevant have also been arbitrary. Our president, vice-president, delegates,

View 1, continued

An argument has been made that the upstate/downstate tradition should not be applied in nominating our delegation to the AAFP Congress of Delegates. This argument maintains that the delegates to the AAFP are to represent the policies adopted by our Congress of Delegates and Board, who are already representative of the entire state. In theory, this makes sense, but in reality, it does not hold true. A delegate will present a more impassioned argument if the issue is more personal to them or their home region. Varied delegates from different geographic locations sharply increase the chances of having regional issues that are professionally and personally relevant to all NYSAFP members presented at the national level. The "fracking" issue is an example. If it were not for the persistence & impassioned efforts of our upstate members, we would have not been able to influence its prohibition in New York State.

Our AAFP delegation is the main vehicle through which we communicate with other state chapters. The national misperception is that New York State and New York City are one and the same. If our AAFP delegation was dominated by New York City members, which can happen if the upstate/downstate tradition were abandoned, it would reinforce this misperception. It is to our advantage, as the chapter of a national organization, to send a message to our AAFP colleagues that we are not a one issue, single-minded state chapter with a narrow focus. Having delegates from both upstate and downstate allows us to develop a rapport with delegates from state chapters, especially those that are predominantly rural and small-town, as well as family physicians in suburban and metropolitan practices.

Over the years, New York State has emerged as a leader of state chapters in the AAFP. This is a result of the wisdom and dedication of our physician leaders, the talent and hard work of our staff and the ability of our representatives to relate to and collaborate with physicians from around the country, of all types of practice environments.

If we are to be true to our bylaws, as required by law, we need to incorporate changes in them to maintain a system that has worked well for our state chapter over the years. Continuing this tradition without sanction of the bylaws exposes us to potential challenges of violating the spirit and the expressed intent of our bylaws, which do not currently specify that membership of the NYSAFP Board must reflect geographic balance.

Raymond Ebarb, MD *was born and raised in Brooklyn, New York. He earned his BS in biochemistry from SUNY Buffalo and his MD at the Autonomous University of Guadalajara. He completed his residency program at Southside Hospital, then an affiliate of SUNY Stony Brook School of Medicine. He was in private group practice for many years, until his practice became an affiliate of St. Francis Hospital, The Heart Center of the Catholic Health System of Long Island. He serves as the medical director of the AHRC, a subsidiary of ARC and is an assistant clinical professor at both SUNY Stony Brook Medical School and Hofstra/Northwell Medical School.*

Dr. Ebarb has been an active member of the NYSAFP for over 30 years, and served as president from 2013-2014. He is currently the NYSAFP Alternate Delegate to the AAFP.

View 2, continued

alternate delegates to the AAFP and our resident/student representatives are the only candidates we limit geographically. Yet, if there is a true concern for power differential, why would we not extend that balance to the board itself where the determination of how to execute policies, operations, and management of the NYSAFP occurs?

When I posed this question, I was met with how complicated that would be, even though you could easily divide the state into three regions and select a representative from each region without changing current numbers on our board. This inconsistent application of geography to roles that have similar if not more power components reinforces the fact that ultimately the tradition of geography does not impart much value to the actual leadership roles.

While geographical differences exist, those differences are far more nuanced than merely upstate-downstate. The needs and concerns of a family physician in Long Island looks different than a family physician in Manhattan despite both being downstate. What troubles a Capital District family physician differs somewhat compared to that of one practicing in the middle of Onondaga County, which differs from someone in Buffalo. When it comes to determining policy of the NYSAFP we absolutely need voices from all these places and in fact, we incorporate them in the form of county delegates to the NYSAFP Congress of Delegates. This body, charged with creating policy for the NYSAFP, has representation from the county chapters and is a legitimate venue for geographic representation.

In stark contrast, the role of the AAFP delegate and alternative delegates is not to make policy at all. Their charge is to speak for the adoption of the resolutions they are elected to present to the AAFP COD (which come directly from our own Congress of Delegates, not from the elected AAFP delegates). They are also depended upon to use their judgement with consideration of the good and welfare of the NYSAFP when acting upon any motions or resolutions about which they have not been instructed. By dividing our delegates into upstate-downstate, we create a false delineation of delegates representing not the NYSAFP or state of NY, but the region of the state from which they are elected from. The role of the delegate is to represent the will of the academy as determined by the COD not a geographical subsection of the state. The individual elected to the role of AAFP delegate or alternate delegate should possess the necessary skillset to act on behalf of the entire membership of the NYSAFP and geographical location has no bearing on that skillset.

Additionally, when utilizing a staggered election, the role of a senior versus junior alternate delegate makes far more sense than a geographical limitation. As is in line with our current bylaws, we should be moving a more senior alternate delegate into the role of the delegate when the need arises, as they would have had more experience for the role. Geography should be irrelevant for the role. Why would we as an organization want to promote a less experienced alternate delegate to delegate merely because they happened to be from the same geographical region as the delegate they would be replacing?

The traditional role of geography also limits our slate of candidates and if anything, we need more candidates running, not fewer. Over the past seven years, the slate of candidates presented to the COD for

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alternate delegate and delegate to the AAFP have each been contested only once (in 2016 for the delegate and in 2017 for the alternate delegate). Even looking at our vice-president candidates which are essentially our presidential candidates, we haven't had a contested slate in at least the same time frame. At a time when we are looking to increase the opportunities for members to serve and we are looking to continue to expand the pool of individuals who serve in leadership roles, perpetuating the false value in geography as the initial litmus test seems counterproductive. This is not to say that an individual candidate may identify a demographic trait, including geography, as a strength for their candidacy. Rather, the role of geography should not be the first thing we look at in a candidate when trying to fill leadership roles and certainly it should not be a means for excluding a highly qualified candidate.

When the Congress of Delegates comes into session in May 2022, a bylaws change will inevitably be proposed. I would strongly propose that such a bylaws change codifying a poorly framed tradition would serve to create unnecessary barriers to leadership opportunities and hinder rather than promote a more robust slate of candidates.

KrisEmily McCrory MD, MS Med Ed, FAAFP *practices full scope family medicine including obstetrics in the Capital District. An active member of the NYSAFP for more than a decade, she has held a variety of leadership roles including New Physician Director as well as Women's Delegate to the National Conference of Constituency Leaders. Currently, she serves as the Board Chair to the NYSAFP Board of Directors. Dr. McCrory also enjoys teaching and is a past recipient of the NYSAFP Family Medicine Educator of the Year.*

Upcoming Events 2022

Jan 14-16
Winter Weekend
Saratoga Springs
VIRTUAL

Feb 27-28
Winter Cluster and Advocacy Day
Renaissance Hotel
Albany

May 21-22
Congress of Delegates
Desmond Hotel
Albany

August 6-7
Summer Cluster
Buffalo Marriott at LECOM HARBORCENTER

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

Fit Kids for Life:
An Interdisciplinary Program

By Peter Morelli, MD and Sharon Martino, PT, PhD

Background and Fit Kids for Life Program Description

Childhood obesity is a rapidly growing health issue facing many children and their families throughout the developed world. This reality has been further challenged by the recent viral pandemic which has led to a five-fold increase in the proportion of US children who are obese.[1] Currently, 22% of US children and teens are obese, likely fueled by online or hybrid home schooling, cessation of structured physical activity, and limited opportunities for healthy meals.[2] The overall prevalence of obesity in 10–17-year-olds in the United States is at 19.3%, affecting about 14 million children and adolescents, with current child and adolescent obesity rates at 11.5% in New York State.[3]

Obesity is caused by a complex interaction of genetic, environmental, and societal factors. The marked rise in childhood overweight and obesity is *not* primarily due to changes in biologic factors, but instead, mainly due to environmental and lifestyle factors. Adverse lifestyle factors such as high caloric/low nutrient dense diets combined with sedentary lifestyles have placed children and adolescents at jeopardy for lifelong weight-related cardiovascular, pulmonary, endocrinologic, musculoskeletal, hepatic, and psychosocial health risks.[4] This prompted pediatric physicians, physical therapists, dieticians, and other health professionals at Stony Brook Children's Hospital to form a comprehensive lifestyle modification program directed at obese youth. This program, Fit Kids for Life, initiated in 1998, has evolved over 22 years. In the following paper, we hope to offer a blueprint for family physicians and other health professionals that may be an aide in their management of families with such lifestyle concerns. We will detail how the program was instituted and has evolved, and the benefits of utilizing a multidisciplinary, collaborative approach. Additionally, we will share preliminary results of studies which may guide practitioners when counselling patients on the importance of such interventions. Finally, we will share various observations and lessons learned to inspire those who may want to organize such a program for their patients, families, and communities.

Fit Kids for Life (FKFL) is a multidisciplinary program conceived in the summer of 1998 at Stony Brook Children's Hospital in Suffolk County, situated about 60 miles east of New York City on Long Island. Started in the division of pediatric cardiology at Stony Brook Children's Hospital, and recruiting dieticians from the department of family medicine, the program offered 20 sessions over 10 weeks of comprehensive lifestyle modification for children 8-17 years of age, who presented as overweight or obese (BMI ≥ 85th%). Initial enrollment was 10-15 children per session. The children and their families were routinely referred by local primary care physicians, with an occasional self-referral.

Screening was performed by the pediatric cardiologist who met each child prior to enrollment into FKFL. This screen consists of a cardiovascular (CV) risk 14-step questionnaire, basic CV physical exam and ECG. Occasionally other screening tests such as an echocardiogram or exercise stress test would be performed. In the office setting the child and parent/ caregiver(s) would be interviewed using a motivational interviewing method and the child's goals identified. Finally, those children medically and emotionally cleared to exercise in a group setting were enrolled into the next 10-week/20 session class.

Each session met for 2 hours; one evening consisted of 1-hour of nutrition (for child and parent/caregiver) followed by 1 hour of exercise (30 workstations, each 2 minutes long, covering cardiovascular and strength/resistance training exercises). The second session of the week was 2 hours of exercise. For this session, the children would again move through 30 workstations including aerobic and strength training exercises. Classes would wind down with some fun group activity (dodge ball, obstacle course) that was well received by the children. Our program initially involved minimal supervision, with the entire fitness session overseen by 2-3 volunteers. The wide range of both ages and experience in exercise levels presented challenges which were further compounded by marginally adequate supervision. Often children would drift off to less effective routines.

As the popularity for the program expanded in the community, the need for enlarging our enrollment and additional supervision increased. We realized that since obesity results from a complex interaction between the patient, family, environment, and cultural factors, it was logical to transition the program to a multidisciplinary team approach. The team grew to include a registered dietitian who provides nutritional education to both the children and the parents /caregivers. The dietitian enlisted several dietary interns who would assist in the delivery and supervision of the educational material and hands on activities. Additionally, we added licensed physical therapists that vitally assisted with the development and delivery of the exercise portion of the program. Finally, behavioral psychology students assisted with the behavioral modification portion of the program.

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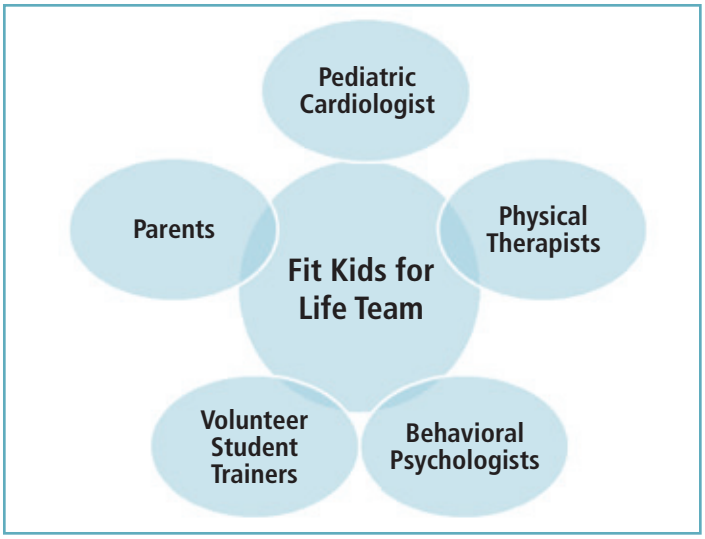
Figure 1: FKFL Team Members



But perhaps the most vital team members added were the volunteer students that represent medicine, physical therapy, athletic training, disability studies and dietetic interns (fig. 1). Rich in interprofessional service learning, these volunteers engaged in cross conversations about wellness and fitness training and provided a one-on-one/ trainer-to-child ratio. This resulted in a more structured and safer exercise program. At this juncture, the FKFL was enrolling upwards of 20 children for each session and recruiting 20+ volunteer students to assist.

While we celebrated our new model with increased volunteers and the ability to engage with more families, we were quickly outgrowing the hospital -based physical therapy gym and needed to find a larger physical space. By engaging with the community, we developed a relationship with a local high school and "brought the program to the people." The new space offered state of the art fitness equipment, a large open gym, outdoor track and fields, a cafeteria space for nutrition classes, and ample waiting room for parents/ caregivers. The space allowed for easier access and parking, increased visibility for the program, and created a positive public persona for an academic institution addressing the community's needs.

The growth of FKFL was further enhanced by fine-tuning the exercise component, which clearly experienced the greatest evolution over the past 10 years. The exercise portion initially began as a relaxed one-to-two-hour session with children partaking in various cardiovascular and strength training activities. Children were allowed to freely move from one station to the next at their leisure. It became obvious that children would gravitate to only select exercise stations – often foregoing some of the other stations and resulting in an unbalanced exercise routine. Additionally, the group was supervised by 3-4 fitness trainers with a 1:5 ratio of instructor to child. Low adherence and participation rates were noted around the 5th week of the program and disinterest in the exercise portion was apparent. Approximately 5 years into the evolution of the program, it was decided, with help from a consultant behavioral psychologist, to add more structure into the exercise sessions, resulting in three main sections consisting of cardiovascular exercise, strength training and floor/core exercises.

For the "Cardio Corner", children are given the choice from several pieces of equipment including bikes, treadmills, ellipticals, and rowers, and are encouraged to perform 5-10 minutes of exercise on three different machines (total ~ 20 minutes). Intensity of this exercise is initially self-selected to allow the child to familiarize with the equipment. Pace of the aerobic exercise is progressed over time and by use of a pediatric exertional scale, the trainer will keep their trainee in a desired exercise intensity for the majority of the 20 minutes allotted for cardio. For the last few years, heart rate monitors adjusted for each child based upon their target heart rates have been utilized. These watches are color coded and allow for the children and trainers to get feedback on exercise intensity.

For "MuscleMania", children work through a complete circuit of isotonic machines with the goal to complete at least 8 machines doing 3 sets of 10 repetitions. In this section, proper lifting form and breathing technique are emphasized, as well as alternating "push then pull" exercises (i.e., biceps/ elbow flexion followed by triceps/ elbow extension). Starting weights for machines evolve around 10- repetition max with adjustments made by the trainers as needed. All children have clipboards to record their work and to allow for trainers to progress the workload on each machine.

The third section, "Core on the Floor" has shown the children that one does not need elaborate gym equipment to achieve a great workout. This section taught children how to do basic calisthenics such as jumping jacks, push-ups, and sit-ups, but also challenged children to work in high intensity modes with brief rests between sets, while doing such activities as goblet squats or burpees. Dumb bells, weighted balls, and rubber straps were used, and parents are encouraged to look for such items for home use. Children are also encouraged to do this type of home exercise on the off days of the program. Thus, our exercise portion was "shaping up" nicely with each section supervised by a group leader and having recruited enough "personal trainers" (medical, PT and AT students) to arrive at a 1:1 trainer-to-trainee ratio. Class sizes were now averaging 35 kids. One last aspect of FKFL includes a junior trainer program. This is offered to the adolescent participants who thrived in the program and allowed them in future classes to serve as role models to the younger children. This further reinforced the healthy lifestyle behaviors in the junior trainers' lives and enhanced the overall enjoyment of the participants.

Fit Kids for Life Research

Over the years, several studies have been conducted that have included the children and families as participants. We believe measuring various parameters to assess the efficacy of the program is invaluable, not only to advance medical knowledge, but more immediately to encourage the child and their family about the benefits of their hard work in creating lifestyle change.

An early randomized control trial was performed to examine the effects of the FKFL program on body composition (as measured by dual-energy absorptiometry [DXA]) as well as fitness measures (muscle endurance, strength, CV endurance). Results indicated significant changes in body composition (decreased percent body fat [%BF]) despite no change in weight, after 10 weeks of exercise and

Table 1: Summary of Program Evolution and Research Initiatives			
	Early years	Past 10 years	Future
Nutrition	One RD with both parents and kids	One RD with dietary interns; kids and parents separate	Interactive cooking classes
Exercise	1:5-6 trainer to kids ratio; open floor plan and unstructured exercise program	1:1 trainer to kid ratio! Supervised and structured program; alternative exercise options (Zumba, yoga, tai chi) offered	HIIT training TRX training Functional exercise
Outcome measures used	BMI Vitals	Body Composition, CV health, Fitness measures	Sleep studies Physical activity tracking at home
Research topics/ methods	Body composition studies with DXA	Body comp with Bod Pod. FMD studies. HIIT vs. MICT research. Inclusive wellness	Sleep studies Prediction models of the heart disease Executive functioning as related to obesity

nutrition. This early work revealed to us that the program worked when body composition, as opposed to weight, was the outcome measure. Several challenges of using DXA include the cost, the need for a licensed X-ray technician, and the slight amount of radiation. Fortuitously, the physical therapy program was able to purchase a Bod Pod to use for air plethysmography body composition. The Bod Pod is accurate, easy to use, and has no radiation. All children in the program now undergo body composition pre and post FKFL.

Another area of interest has been exercise intensity. In a recent study (manuscript in prep) we found that high intensity interval training (HIIT) and moderate intensity continuous training (MICT) were both well tolerated and safe for this population and resulted in significant decreases in %BF. Endothelial response to different exercise intensities was also examined using flow mediated dilation (FMD), and preliminary data indicates that MICT may be more beneficial than HIIT. Further studies with larger sample sizes are planned. Several qualitative research studies have been conducted looking at interprofessional service-learning aspects of FKFL as well as the inclusive nature of FKFL. FKFL has always welcomed all children who are overweight/obese, despite physical, mental, or learning disabilities, to attend the program. Having a multidisciplinary team and 1:1 trainer-to-trainee ratio on board makes this possible.

A summary of the program evolution and research initiatives can be seen in table 1.

Observations and Lessons Learned

Nutritional component: The initial program involved one nutritional group session for both parents/caregivers and their children together. It became evident that this combination did not work- some parents/ caregivers dominated the discussion, some children seemed uncomfortable to speak, etc. Upon separation of the groups, it was immediately apparent that the children were much more attentive to the discussion and overall group participation improved. The development of smaller break out groups within the nutrition class further facilitated individual child participation. The addition of parent/ caregiver-only nutrition classes allowed for the discussion of sensitive issues with the nutritionist away from their child and enabled the nutritionist to cover the material at a more mature rate and manner.

Exercise component: Children and adolescents like structure in the gym. Having a program to follow and a personal clipboard to track progress guides children to reach goals. Trainers that directly engage with their child act as role models and promote adherence. Offering a variety of exercise options for overweight and obese kids inspires them to seek new and different ways to move their bodies. For example, Zumba, Tai Chi, boxing and yoga are now offered. Group play is also an important aspect of the exercise portion. All kids have an equal chance to be captain of the team and be on the team – vastly different than their experience in gym classes.

Lessons Learned:

1. **You Need Parent/Caregiver Buy In** – Children and parents/ caregivers BOTH must be integrally involved in lifestyle modification programs for the child to truly commit to lifestyle changes
2. **Separate but Equal** – Parents/caregivers and children seem to be more involved and more attentive when separated.
3. **Keep it Organized** – Children thrive and better comply with the nutrition and exercise sessions when *more* structure is added to the program.
4. **It Takes a Village** – Obesity is a multifaceted problem, and it is best approached with a multidisciplinary team. It is likely your community has many professionals interested in tackling this epidemic problem. Talk to your colleagues and recruit others interested in childhood obesity.
5. **Don't Hesitate to Overbook** – When enrolling people into a lifestyle program, anticipate attrition. We have learned to overbook each class and they NEVER are overcrowded. Overbook in anticipation of the natural attrition rate that inevitably will happen.
6. **Make it Fun to Get Healthy** – Children who enjoy the lifestyle changes were the ones most likely to finish the program, have positive changes in various measured health parameters, and have a better chance in continuing to modify their lifestyle accordingly.
7. **Empower Children** – Celebrate "graduates" from the program and allow graduates to be ambassadors to new children enrolled in the program.

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8. **Measure Something** – Assess some tangible measures to show the child, the family, and YOU that the program is making a positive difference in their lives and their health. Positive change will motivate the child, the family and YOU to continue with this noble venture.

Childhood obesity is a growing societal problem that is not going to go away without a comprehensive, coordinated effort from both medical, governmental, academic and community programs. This article describes a successful program, Fit Kids for Life, and demonstrates that short term success can be achieved when children undergo a proactive, supervised lifestyle program. Lifestyle changes *do* work for weight reduction and lowering of cardiovascular risks in children. However, long term *compliance* to such changes is the challenge. Future research is needed to identify those factors in children that create significant joy of fitness and improved self-efficacy for healthy living. Tapping into these dynamics will foster health and compliance in this population.

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The Pre-Participation Physical Examination Today

By Edward Degerman MD; Priyal Bhagat, DO, MS; Patrick Cleary, DO, CAQSM; Anter Gonzales, MD, FAAP, CAQSM; Derek Ho, DO, CAQSM, FAAPMR; and Christine S. Persaud MD, MBA, CAQSM, FAAFP

Introduction

The preparticipation physical examination (PPE) is a common reason for visiting one's primary care doctor and as school sports are returning to full swing, these exams will be in high demand, particularly for the youth and adolescent population. PPEs are required for children and adolescents prior to participation in New York State and required annually for interscholastic sports. These examinations are important in determining an athlete's general physical and psychological health and evaluating for the risk of life-threatening or disabling conditions such as sudden cardiac death and exercise-induced bronchospasm.

Throughout the past two years, the landscape of school and youth sports has changed due to COVID-19, and new issues have come to light regarding clearance for participation. For example, certain regions in the state, such as New York City, require COVID-19 vaccinations for student-athletes in "high-risk" sports like football, volleyball, basketball, wrestling, lacrosse, rugby, and bowling. Those student athletes who have recently been infected with COIVD-19 require thorough evaluation for participation, particularly, considering possible ongoing effects of COVID-19 such as myocarditis (Figure 1). Patients with pre-existing conditions such as diabetes, heart disease, kidney disease, or asthma who have recently

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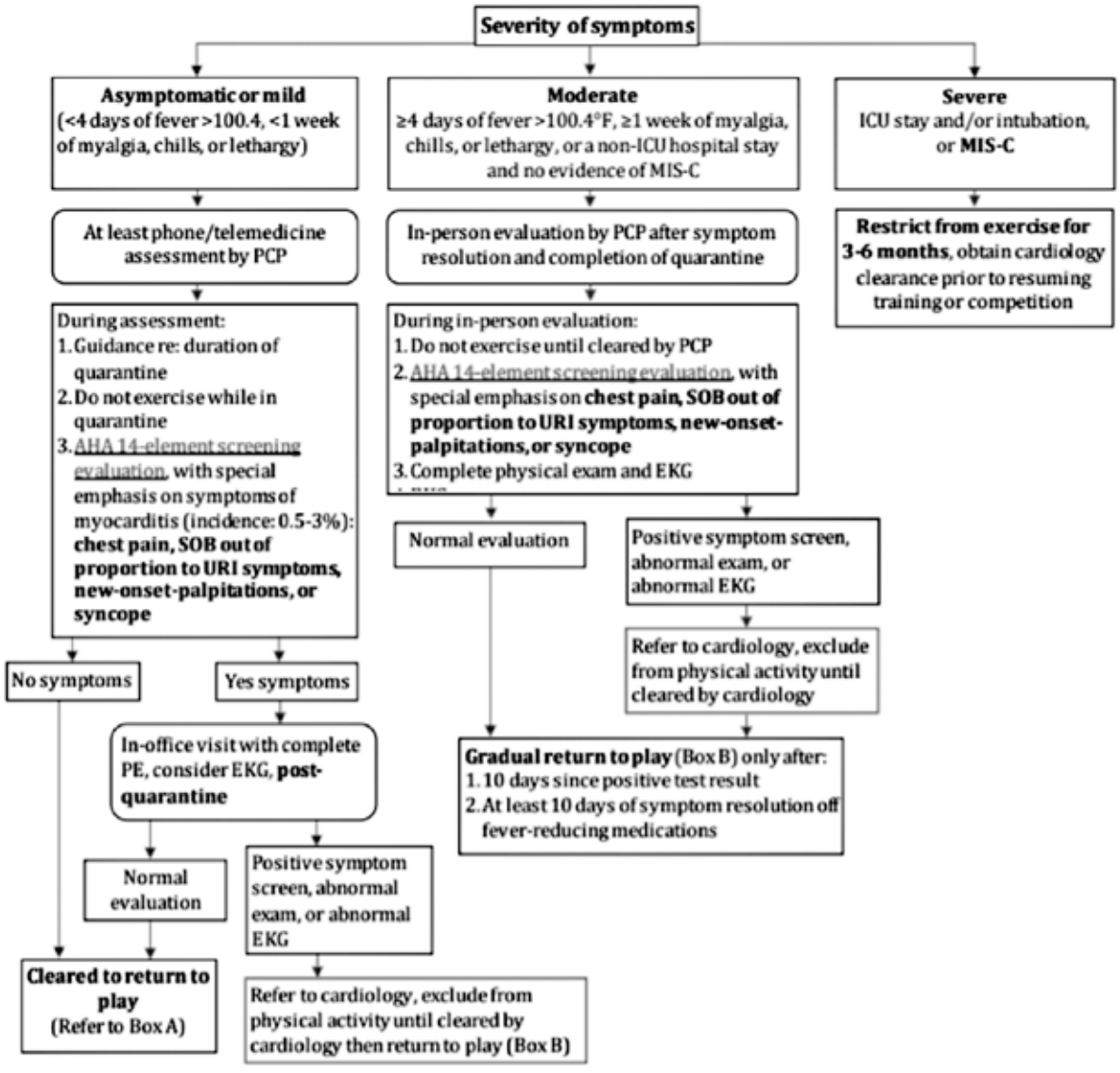
Figure 1: Guidance for Return to Play after COVID-19 Infection from the AAP[1]



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been infected with COVID-19 also merit special consideration prior to clearance. The mental health of young athletes has also been profoundly affected by COVID-19, after potential long periods of isolation and cessation of sports participation. It is important for providers to be aware of these potential new issues when seeing these athletes and clearing them for play.

Goals of PPE

The overall purpose of the PPE is to ensure that athletes can participate safely in their sport. The exam screens for any conditions that may predispose the athlete to injury or lead to sudden death during play. It tends to focus on the cardiac and musculoskeletal systems but tries to detect any condition that may limit an athlete's participation as well as determine whether an athlete needs further evaluation, treatment, or rehabilitation prior to participation. Additionally, as a general health screening, the PPE can provide an opportunity for physicians to determine general health, discuss other health-related questions, screen for potential risky behaviors, and update vaccinations if needed. It may also be an opportunity for athletes to establish care with a provider.

Timing and Setting of the Exam

Most states, including New York, require a yearly PPE for participation in interscholastic athletics. The health examination is valid for a period of 12 continuous months, through the last day of the month in which the exam was conducted; and through the entire sports season, even if the exam's expiration is before the season is completed. It is generally best for PPE to be completed at least six weeks before the season starts to allow sufficient time for further evaluation of potential problems that may arise during the exam.

Although the American Academy of Pediatrics recommends that the PPE takes place in the athlete's primary care medical home, mass PPEs are oftentimes offered in a group setting at a school or facility for the convenience of a school or the athletes. In such arrangements, athletes move between different stations for each part of the exam. It is important for providers to be aware of the pros and cons of the individual versus mass PPE, as the latter allows entire teams to be screened and an opportunity to meet with coaches and trainers. On the other hand, this may limit an athlete's privacy in screening certain organs or provide challenges in creating an ideal environment for auscultation of heart sounds.

Performing the Exam

Medical History

Providers should obtain a thorough medical history of the athlete. This is often done with a health questionnaire that the athlete can fill out with their parent or guardian (Figure 2, page 23). The questionnaire should include different sections that ask about preexisting medical conditions and injuries; it should also assess cardiovascular risk, symptoms of exercise-induced bronchospasm, prior concussion or other neurologic history, and signs and symptoms related to female athlete triad (low energy availability with or without disordered eating, menstrual disturbances, and low bone density). Personal medical history and family history can identify potential medical problems that may not be found on a physical exam. It is also important to ask about medications that the athlete is taking. The provider then reviews the questionnaire with the athlete and family member to further investigate any positive findings and to help guide any needed additional focused physical exam maneuvers. Questionnaires can also ask about mental health issues like depression and anxiety as well as substance use, and feelings of security in the home environment.

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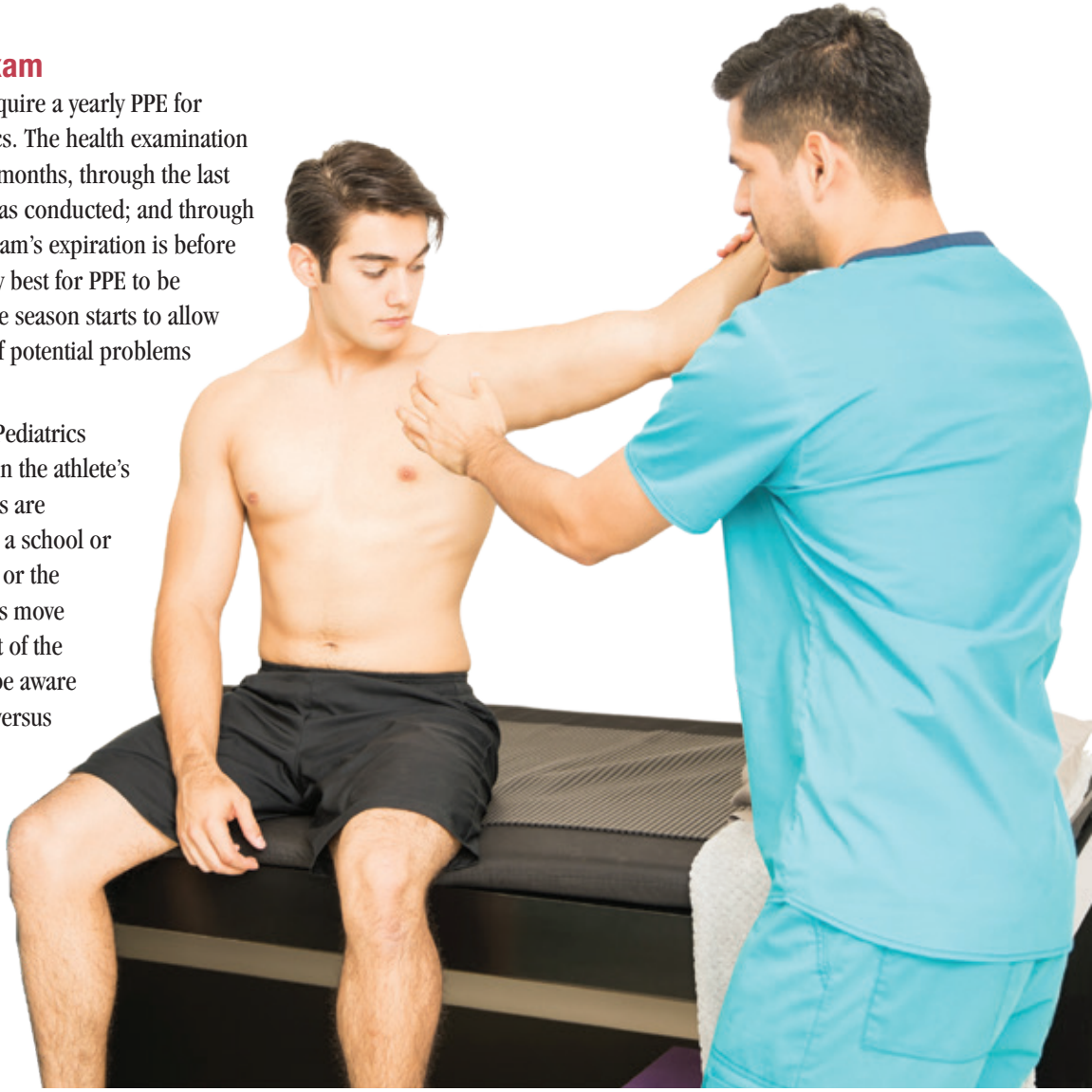

Figure 2. PPE History Form from American Academy of Family Physicians, American Academy of Pediatrics, American College of Sports Medicine, American Medical Society for Sports Medicine, American Orthopaedic Society for Sports Medicine, and American Osteopathic Academy of Sports Medicine[3]

PREPARTICIPATION PHYSICAL EVALUATION (Interim Guidance)

HISTORY FORM

Note: Complete and sign this form (with your parents if younger than 18) before your appointment.

Name: _____ Date of birth: _____

Date of examination: _____ Sport(s): _____

Sex assigned at birth (F, M, or intersex): _____ How do you identify your gender? (F, M, or other): _____

Have you had COVID-19? (check one): ☐ Y ☐ N

Have you been immunized for COVID-19? (check one): ☐ Y ☐ N If yes, have you had: ☐ One shot ☐ Two shots

List past and current medical conditions. _____

_____

Have you ever had surgery? If yes, list all past surgical procedures. _____

_____

Medicines and supplements: List all current prescriptions, over-the-counter medicines, and supplements (herbal and nutritional).

_____

_____

Do you have any allergies? If yes, please list all your allergies (ie, medicines, pollens, food, stinging insects).

_____

_____

Patient Health Questionnaire Version 4 (PHQ-4)

Over the last 2 weeks, how often have you been bothered by any of the following problems? (Circle response.)

	Not at all	Several days	Over half the days	Nearly every day
Feeling nervous, anxious, or on edge	0	1	2	3
Not being able to stop or control worrying	0	1	2	3
Little interest or pleasure in doing things	0	1	2	3
Feeling down, depressed, or hopeless	0	1	2	3

(A sum of ≥3 is considered positive on either subscale [questions 1 and 2, or questions 3 and 4] for screening purposes.)

GENERAL QUESTIONS (Explain "Yes" answers at the end of this form. Circle questions if you don't know the answer.)	Yes	No
1. Do you have any concerns that you would like to discuss with your provider?		
2. Has a provider ever denied or restricted your participation in sports for any reason?		
3. Do you have any ongoing medical issues or recent illness?		
HEART HEALTH QUESTIONS ABOUT YOU	**Yes**	**No**
4. Have you ever passed out or nearly passed out during or after exercise?		
5. Have you ever had discomfort, pain, tightness, or pressure in your chest during exercise?		
6. Does your heart ever race, flutter in your chest, or skip beats (irregular beats) during exercise?		
7. Has a doctor ever told you that you have any heart problems?		
8. Has a doctor ever requested a test for your heart? For example, electrocardiography (ECG) or echocardiography.		

HEART HEALTH QUESTIONS ABOUT YOU (*CONTINUED*)	Yes	No
9. Do you get light-headed or feel shorter of breath than your friends during exercise?		
10. Have you ever had a seizure?		
HEART HEALTH QUESTIONS ABOUT YOUR FAMILY	**Yes**	**No**
11. Has any family member or relative died of heart problems or had an unexpected or unexplained sudden death before age 35 years (including drowning or unexplained car crash)?		
12. Does anyone in your family have a genetic heart problem such as hypertrophic cardiomyopathy (HCM), Marfan syndrome, arrhythmogenic right ventricular cardiomyopathy (ARVC), long QT syndrome (LQTS), short QT syndrome (SQTS), Brugada syndrome, or catecholaminergic polymorphic ventricular tachycardia (CPVT)?		
13. Has anyone in your family had a pacemaker or an implanted defibrillator before age 35?		

Figure 3. PPE Physical Examination Form from American Academy of Family Physicians, American Academy of Pediatrics, American College of Sports Medicine, American Medical Society for Sports Medicine, American Orthopaedic Society for Sports Medicine, and American Osteopathic Academy of Sports Medicine[4]

PREPARTICIPATION PHYSICAL EVALUATION (Interim Guidance)

PHYSICAL EXAMINATION FORM

Name: _____ Date of birth: _____

PHYSICIAN REMINDERS

1. Consider additional questions on more-sensitive issues.
   - Do you feel stressed out or under a lot of pressure?
   - Do you ever feel sad, hopeless, depressed, or anxious?
   - Do you feel safe at your home or residence?
   - Have you ever tried cigarettes, e-cigarettes, chewing tobacco, snuff, or dip?
   - During the past 30 days, did you use chewing tobacco, snuff, or dip?
   - Do you drink alcohol or use any other drugs?
   - Have you ever taken anabolic steroids or used any other performance-enhancing supplement?
   - Have you ever taken any supplements to help you gain or lose weight or improve your performance?
   - Do you wear a seat belt, use a helmet, and use condoms?
2. Consider reviewing questions on cardiovascular symptoms (Q4–Q13 of History Form).

EXAMINATION		
Height: Weight:		
BP: / (/) Pulse: Vision: R 20/ L 20/ Corrected: ☐ Y ☐ N		
COVID-19 VACCINE		
Previously received COVID-19 vaccine: ☐ Y ☐ N Administered COVID-19 vaccine at this visit: ☐ Y ☐ N If yes: ☐ First dose ☐ Second dose		
MEDICAL	**NORMAL**	**ABNORMAL FINDINGS**
Appearance • Marfan stigmata (kyphoscoliosis, high-arched palate, pectus excavatum, arachnodactyly, hyperlaxity, myopia, mitral valve prolapse [MVP], and aortic insufficiency)		
Eyes, ears, nose, and throat • Pupils equal • Hearing		
Lymph nodes		
Heart[a] • Murmurs (auscultation standing, auscultation supine, and ± Valsalva maneuver)		
Lungs		
Abdomen		
Skin • Herpes simplex virus (HSV), lesions suggestive of methicillin-resistant *Staphylococcus aureus* (MRSA), or tinea corporis		
Neurological		
MUSCULOSKELETAL	**NORMAL**	**ABNORMAL FINDINGS**
Neck		
Back		
Shoulder and arm		
Elbow and forearm		
Wrist, hand, and fingers		
Hip and thigh		
Knee		
Leg and ankle		
Foot and toes		
Functional • Double-leg squat test, single-leg squat test, and box drop or step drop test		

[a] Consider electrocardiography (ECG), echocardiography, referral to a cardiologist for abnormal cardiac history or examination findings, or a combination of those.

Name of health care professional (print or type): _____ Date: _____

Address: _____ Phone: _____

Signature of health care professional: _____, MD, DO, NP, or PA

The cardiovascular risk assessment is particularly important because most sudden deaths in athletics are related to cardiovascular causes and relative risk for sudden cardiac death has been found to be higher in athletes.[2] The American Heart Association has recommended questions for screening for cardiovascular risk, and these are usually included in most PPE medical history questionnaires.

Physical Examination

The physical examination begins with vital signs and vision testing. While the exam focuses on the cardiovascular and musculoskeletal systems, it also should include assessment of the lungs, skin, ENT, and neurological systems. More detailed examination may be warranted for specific symptoms and positive findings found when eliciting the medical history. General appearance is assessed, looking for any Marfan stigmata such as arm span greater than height or pectus excavatum. Cardiac auscultation is performed to assess for murmurs or irregular heart rhythm. A standardized musculoskeletal exam is performed (Figure 3, page 24) in asymptomatic athletes with a more focused physical examination done for athletes with a history of a musculoskeletal injury or a current injury. Depending on findings, further testing including labs and imaging may also be required prior to clearance.

Levels of Clearance for Participation in Sport

If no concerning signs or symptoms are found on history and physical exam, the athletes are usually given full clearance for participation without any limitations or restrictions. Athletes can also be cleared pending further evaluation and treatment, or not cleared with appropriate reasons and further recommendations given. Depending on the problems found, it needs to be determined if the problem puts an athlete, or any other participant, at increased risk for injury. The athlete's sport and severity of injury are considered, and it should be determined whether an athlete can still participate safely with the appropriate treatment or rehabilitation. Athletes may not receive clearance for some sports due to the nature of a particular sport, such as contact vs. non-contact sports, if certain conditions can become more problematic as a result of high-speed contact. The American Academy of Pediatrics has an extensive table with medical conditions as well as conditional clearance and recommendations that may rule out sports involvement. (https://www.healthychildren.org/English/health-issues/injuries-emergencies/sports-injuries/Pages/Medical-Conditions-That-May-Rule-Out-Sports-Participation.aspx)[5]

The athlete may need further evaluation and clearance may be delayed until that evaluation and any necessary treatment is sought out and performed. Examples of findings on screening that warrant further evaluation include hypertension and vision abnormalities. An elevated blood pressure finding on screening may warrant further evaluation prior to clearance. The American Academy of Pediatrics Clinical Practice Guidelines lists normative tables for blood pressure categories and stages based on age, sex, and height for children less than 13 years of age.[6] For children > 13 years of age the stages and categories match with the American Heart Association and American College of Cardiology adult guidelines with prehypertension 120/<80 to 129/<80 mm Hg, Stage 1 HTN 130/80 to 139/89 mm Hg and Stage 2 HTN > 140/90 mm Hg.[6] In certain cases, with supporting history, athletes may need further evaluation if secondary hypertension is suspected. On the eye exam, providers need to determine if an athlete has vision defects in one or both eyes with a visual acuity less than 20/40 corrected vision.[7] This can put an athlete at risk in certain sports and they may need further evaluation for protective eyewear or be held out of certain sports.

COVID-19 and Clearance for Sport

The pandemic has changed the landscape of school and youth sports all over the country. Many seasons were postponed, or altogether cancelled, disrupting the lives of many young athletes and their families. The overall impact on the lives and health of young athletes has not and likely will not be fully understood for quite some time. There have been impacts on mental and physical health that should be addressed when assessing an athlete's readiness to fully return to play. There are certain precautions and safety measures in place across different leagues and school systems. In New York City, the Public School Athletic League has included an addendum to their health history form asking questions about COVID history. Those athletes who have been hospitalized due to COVID may face increased risks, especially those with certain pre-existing health conditions like diabetes, heart disease, and kidney disease. The information in this history will be important for providers to assess whether further evaluation may be warranted prior to clearance to play.

Providers may need to be aware of new requirements to fully participate, for example the requirement in some leagues for athletes to be fully vaccinated against COVID prior to full clearance. The American Medical Society for Sports Medicine (AMSSM) recently convened an expert panel to address the PPE during the COVID pandemic. They state that athletes who qualify for vaccination should be urged to become vaccinated as soon as possible. They also state that the PPE is an opportune time for an athlete to receive the COVID vaccination, ideally in the athlete's medical home, but if done in a group setting, they suggest that arrangements be made with local departments of health and local hospitals to make the vaccination available in these settings. Vaccine recommendations are similar to general population and there is mention that a consideration should be made to temporary reduce training load in the first 48 to 72 hours postvaccine injection.[8]

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Children of the Nineteenth Century

By Thomas C. Rosenthal, MD

Dr. Jabez Allen walked the half mile to the Ablest home on a cold, clear January night in 1862. Mildred Ablest, attending her first year of school, had been feverish for four days with tearing red eyes, runny nose and painful cough. The rash appeared earlier that day, but Dr. Allen was summoned because six-year-old Millie could not be aroused. Typical of rubeola, the rash was spreading from forehead to chest. It now merged into raised crescent shaped patches that blanched, and the Koplik spots Doc Allen found in Millie's mouth confirmed measles. Millie responded little to the exam when, suddenly, her back arched into a grand-mal seizure leaving the child entirely unresponsive. Dr. Allen did his best to conceal alarm as Mildred's mother commenced the slow rocking hug unique to mother and child. Mom then pierced the silence with, "Is my little girl going to die?"

Dr. Allen searched his brain for some comfort to offer Mrs. Ablest, but his own anxiety only lit on useless things; like a recent report about a Hungarian doctor, Dr. Katona he thought, using tears from children with measles as an inoculate, much like Jenner's cowpox. Millie was far beyond inoculation. Also, newspapers were reporting that rubeola was killing hundreds of Union troops. Finally, he heard himself respond, "I fear Millie's seizure indicates a profound inflammation of the brain not uncommon to measles. It carries a grave prognosis. I will stay the night. I will do all I can. God will determine the outcome."

Over the next several hours Dr. Allen placed drops of warm wine on Mildred's lips and applied a series of leeches behind her ears to drain inflammation. Just before sunrise Millie's pulse slowed and her respirations became irregular. Within the hour her spirit joined that of her Maker. There was little for Dr. Allen to do but step aside, allow the family full approach, and hide his own tears.[1]

Sick children exhibit a countenance of peace and acceptance that adults see as courage. They humble all who open their hearts to them. Caring for children is a challenging mix of expected success and profound failure that presents an unparalleled opportunity to observe the internal workings of families. Children absorb the influence of parents, siblings, teachers, peers, and experiences to create a new generation of families.

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In the nineteenth century, the seasonality of food availability required yearlong perspective and planning. Medical books told doctors that men required 4 ounces of meat, 3 ounces of fat, 15 ounces of sugary or starchy food, and one ounce of salt daily. Ten-year-old children needed about half that amount. Meat and cereals were valued as having the greatest nutritional value while effectively satiating the appetite. Still, by late spring a fifth of the population showed signs of scurvy.[2]

Though the term vitamin was not coined until 1912, an 1858 pediatric textbook recommended that children get regular doses of cod-liver oil, eggs, milk and sun exposure (winter included) to avoid muscle aches and bowing legs. Weekly servings of sauerkraut were prescribed to prevent the general lassitude, bleeding gums and brittle hair common to scurvy.[3]

Most women become pregnant within the first year of marriage and give birth at two to three-year intervals. The seven children this commonly produced made motherhood an exhausting vocation with only two percent of women living beyond the age of sixty-five. The lecturer, Dr. Robert Dale Owen advocated for smaller families, believing that improved finances and better food availability would benefit all of society. He shocked audiences with vivid descriptions of birth control by withdrawal and open displays of French condoms. Dr. Owen was one of the first to suggest that microscopic animalcules (sperm) in semen provided an essential nutrient to a woman's egg.

There was no safe alternative to breast feeding. Wet-nurses could earn $5.00 a week when the average wage for a female domestic worker was $1.00. Before the rubber nipple, invented in 1845, nursing vessels looked much like Aladdin's lamp with tiny holes in the spout. The first commercially produced canned formula appeared in 1860, but was little better than sweetened cows' milk. Weaning usually occurred between 24 and 36 months because nursed children seemed less susceptible to whooping cough, croup, scarlet fever, or infantile cholera. Nursing also delayed pregnancy.

In the 1840s, William A. Alcott published a personal hygiene textbook for secondary schools titled *The House I Live In*. Though well-grounded in anatomy and physiology, the book attributed the wondrous human body to God's construction, and disease to moral and physical transgressions. Alcott made no reference to reproduction, human sexuality, birth control, or sexually transmitted diseases, leaving children, and much of society, to the mercy of misinformation. In the vacuum, many families adopted unique rules of decorum and extraordinary dogmatic beliefs that trapped doctors in unexpected indiscretions.

As nineteenth century magazines exploded in popularity, readers became familiar with advertisements portraying young women and happy children collocated with stories promoting the same product, which often as not was a patent medicine. Magazines for children followed the same pattern though one, *Our Young Folks*, exposed children to celebrated writers like Henry Longfellow, Harriet Beecher Stowe and Charles Dickens.

But it was *Mother's Magazine*, published in Utica, NY, that invented the word 'parenthood.' For centuries, children became adults simply by mimicking their parents, gradually taking on responsibility for doing farm chores, and learning about procreation by observing animals. Early parenthood theories ignored fathers, while portraying children as empty vessels, each with the potential to become perfect human beings, if mothered correctly.

But one book offered a counterpoint. Authored by William Buchan and reviewed in the *Boston Journal of Medicine and Surgery*, the book prescribed six rules for raising children: be fair, be there, don't wobble, don't pretend to be perfect, don't be too serious, and be polite. Buchan suggested, "At the end of the day a parent should ask; did I feed the children, did I like at least one thing they did, and are they still alive? All three in any one day meant a job well done."[4]

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IN THE SPOTLIGHT

The NYSAFP Public Health Commission has selected the promotion of single payer health care as one of its priority areas for the 2021-22 year. In Family Doctor, we will feature pieces on this and related topics to help inform our membership. Here's our first installment, on the New York Health Act.

Here's to Your Health

By Wayne Strouse, MD

I'd like to dedicate this column to an issue that is near and dear to my heart – creating a sane, accessible, and affordable health care system. In this case, there is a specific bill in the State Senate and Assembly – the New York Health Act (NYHA).

Having experienced our current system, but also having worked in and received care in other health-care systems (the US Navy, a socialized system, and New Zealand, a single payer system), I much prefer the single payer system.

Basically, the NYHA makes NY State the payer of health insurance. Medicare, Medicaid, private insurance all are folded into this one healthcare system. We are all in it together. The state senator and the sanitation worker, the assemblyman and the auto mechanic – all have the same health insurance. If there's a problem that needs to be fixed, the legislator will be motivated to fix it. We are all in the same boat. If that boat is leaking, we all want to see it fixed.

You may hear that you won't have any choice like you do now. In a way this is true. In another way, this is deceiving. When I talk to my patients about choice, they all say the same thing – they want to be able to choose their doctor, their specialist, what hospital they go to. They really don't give a hoot about which insurance company is footing the bill.

Insurance companies limit choice. Is your doctor in network, or out of network? The NYHA gives you complete choice where it is most important – which doctor you are allowed to see.

You may hear that your taxes will increase. That is also true, but what you really need to know is – what will your out of pocket costs be? If you pay less in taxes, but more in deductibles and copays – are you really saving money? The NYHA eliminates deductibles and copays. Also, taxes are progressive – meaning if you make more money, you pay more taxes. Isn't that a much fairer way to pay for health insurance? Rich people pay more for insurance, and people who make less, pay less. In our current system, rich or poor, you are charged the same. Ultimately, by using taxes to pay for healthcare, and eliminating copays and deductibles, there is a good chance you will pay less for health insurance – possibly much less.

The other benefit is that EVERYONE is covered. And you are covered whether you are rich or poor, young or old, employed or unemployed. No staying in a job you hate because it provides health insurance. No more bankruptcies because you become ill – and suddenly realize you can't afford to pay your high deductible. No more GoFundMe pages or fund raisers to pay for healthcare bills. No more getting laid off AND losing your health insurance. And since there is only one set of rules, there are no surprises! You know what to expect, and so does your doctor.

Single payer health care means we are all insured, we each pay our fair share, we see whatever doctor we want, and everyone receives care under the same rules.

Finally, this is not a new idea! In fact, every other developed nation except the US is already doing this! They pay much less for health care, and show evidence of better health than we do. Look no further than across the Canadian border. They love their healthcare system (also called Medicare) – as do their doctors (it was that way in New Zealand as well). Sounds like something we can live with, eh?

Here's to your health!

***Dr. Strouse** is a rural, solo family physician practicing in Penn Yan in the beautiful Finger Lakes region of New York State. He is very active with the NYSAFP and was selected as the New York State Academy's 2020 Family Physician of the Year.*

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IN THE SPOTLIGHT

NYSAFP recently established a mentorship program, matching medical students with practicing family physicians. Following are some reflections from participating students and mentors.

Reflections from NYSAFP Mentors:

During my time as a mentor, I met with a medical student as he was applying into residency. I really enjoyed meeting with him, learning about his journey to medicine, and getting to pass along the tips I gathered from my time on the interview trail a few years earlier. He has a very bright career ahead of him and I'm excited to see where his future takes him!

I mentored only one student. I found it fruitful to guide someone in their journey and provide insight and the tools for them to help make some very important decisions.

I think as attendings we sometimes forget about our journeys and maybe think that our journeys were insignificant or smooth. When seeing the reaction to our journeys through students' eyes we begin to realize how complex and nuanced our paths have been. This opens up opportunities to help those that follow.

Being a mentor to a medical student through the NYSAFP is an experience I would highly recommend to any of my attending colleagues. The amount of time commitment can be driven by the student and comes in waves as the major milestones of medical school come and go. I have found it to help with my own symptoms of burn out when I talk with my mentee about how school is going and remind myself of the physician I want to be.

Reflections from Students:

When lockdown was happening in New York during one of the most important times in my medical career- finishing rotations and applying for residency- I needed direction. I came across this mentorship program as I was a member of NYSAFP and I am SO glad I did. Kelly couldn't have matched me with a better mentor. This mentor guided me and showed me the way of transitioning into a family physician. I keep in touch with her to this day!

My experience in the NYSAFP mentorship program was a true honor and privilege.

Prior to the internship, I was intrigued by the family medicine profession but wanted to gain greater insight in regards to what it entailed.

Thankfully, I had a chance to shadow different physicians throughout the internship who were extremely patient and who took the time to give me advice and educate me on the profession.

I'm truly appreciative of the time spent in my internship as it has strengthened my interest in the field. I know that the wisdom obtained will guide me as I move forward in my career.

If you're interested in learning more about being a mentor or having a mentor, go to http://www.nysafp.org/Member/Students

NYSAFP Member Participates in COVID-19 Real-Time Learning Network

Scott Hartman, MD, FAAFP has served as the AAFP's representative to the Real Time Learning Network (RTLN) since summer 2020. The RTLN is a collaborative multi-disciplinary clinician response focused on the treatment and prevention of COVID-19. Funded in part by the Centers for Disease Control and Prevention, with support from the Infectious Disease Society of America, the COVID-19 Real-Time Learning Network brings together the latest clinical guidance, clinical trials data, and resources from a variety of medical subspecialties.

Dr. Hartman joined several national physician advocates in summer and fall 2021 to produce a series of webinar/podcast content on the COVID vaccine rollout for children with an equity framework or lens. The December follow up to this series further explores issues related to children and COVID-19 in a three-part series of brief talks:

- Pediatric Vaccine Rollout and Updates
- Pediatric Vaccine Disparities and Updates
- Pediatric Vaccinations and a Case Discussion

For more information, visit the COVID-***RTLN website***: https://www.idsociety.org/covid-19-real-time-learning-network/about/

Preparing Teens with ADHD, Anxiety, and Depression for College, Work, and Ownership of Their Health Care

By Kristy Lamb, PhD, and Lewis Wong, MD

While the transition to adulthood, or emerging adulthood, can be an exciting time, today's teens face high levels of anxiety and depression, and early research indicates the spread and severity of these diseases have been exacerbated by the Covid-19 pandemic.[1] While young people newly diagnosed with concerns such as ADHD, anxiety, and depression first learn to manage them in a family context with parental oversight and support, as patients transition from school age into emerging adulthood, issues can arise with the management of mental health conditions.

Family physicians are uniquely equipped to help patients transition from pediatric to adult specialty care,[2] and can provide a constant for patients as specialists change. Some conditions may not need frequent check-ins with specialists in adulthood and there are a number of conditions that once diagnosed, can be ably managed by the family physician. Family physicians can play an integral role in preparing teenage patients with ADHD, anxiety, depression, or a combination thereof in their final school-aged years to transition to the workforce or college after high school graduation, and to take fuller responsibility for their own disease and medication management as they prepare to transition to adulthood.[3-5]

Doctors can begin to lay the groundwork for transitioning patient care early and should do so in a systemic fashion, with a plan in place and discussed.[6,7] Involving a child in the interview part of their examination from as young an age as possible starts the expectation that they participate in their own health care. Encourage parents or guardians to role play speaking to the doctor with their children, to help them prepare for the appointment and develop the ability to talk about their health concerns with someone other than a parent or primary caregiver.

For teenagers, consider giving them space to talk with their physician without their parent/ caregiver present. This can be a critical time to ask mental health, sexual health, and social history screening questions in a confidential setting, allowing more immediate effective care for the patient and establishing self-efficacy in the healthcare environment for the patient.[8] One might open the encounter with the teen and a parent/caregiver in the interview, then ask the caregiver to wait outside while the physician continues the appointment with the teen, and finally invite the parent/caregiver back in to address any final issues or questions. This practice gives both privacy and newfound independence to the teen at a developmentally appropriate moment.

Giving part of the appointment to a one-on-one with the teenage patient not only transitions the patient into being accustomed to interacting directly with the physician and self-advocating, but also provides parents and caregivers with the opportunity to practice stepping back and allowing the teen to conduct their own affairs. This is an especially important experience for families who have been their

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children's primary advocates in not only health, but also in the development of Individual Education Plans (IEP) for their child's K-12 education. As these parents/ caregivers will not be the drivers of conversations about accommodations in a workplace or higher education environment, this practice is important. Parents or caregivers may be accustomed to taking on the responsibility instead of the patient, and it may be necessary to have a frank conversation about preparing the patient to take responsibility.

Discuss openly with the patient what their plans are for continuing care if they are moving away as a young adult. This can easily grow organically from conversation with a patient about their future plans as they approach milestones. Helping to refer the patient to another physician, or discussing in advance how to find care if they are temporarily moving away from home, can help normalize the process of change for patients. This also presents a good time to discuss what management might look like in the next phase of life – what would normal change look like, and when would it be time to check in with a provider?

Medication adherence decreases in patients between school age and emerging adulthood[9] and pharmacotherapy is often disrupted in the transition from childhood to emerging adulthood.[10,11] Some young people consider trying college or employment without the medication or accommodation supports they used in high school, hoping that they have "outgrown" their younger diagnoses. Having a conversation about the expectations the patient has for their diagnosis going forward, and encouraging the patient to register with their college's office for student accommodations early and/or set up a relationship with a local provider, if necessary – before a crisis emerges – can greatly smooth a transition, which can be more difficult for someone with anxiety or ADHD.[12] For young people who struggle with the idea of going to talk to someone new about their needs, whether headed to the workforce or university, a referral for therapy where they can role play and practice holding these conversations, may be particularly valuable if the needs exceed the scope of what we can offer during a primary care visit.

One important facet of the transition to cover is health insurance coverage. Due to the Affordable Care Act, many young people are eligible to remain on their parent or legal guardian's insurance until age 26. This can pose privacy problems for young adults if the insurance company sends explanations of benefits directly to the primary policy holder, so one can counsel young adults on how to direct their insurance companies to protect their privacy, particularly surrounding sexual or mental health issues. Students may access a healthcare plan through their college or university. Young adults who join the workforce immediately may be eligible for employer-provided benefits. Others will be looking for care on the NYS health plan marketplace and should be given a referral to a marketplace navigator.[5]

Physicians can also support the healthcare transition by setting up clear office procedures for transfer of care, and openly sharing those procedures with patients who are moving away for the next phase of their lives. Checking in post-transfer to ensure the handoff is complete is particularly important for patients whose care plans include medication for which a disruption in continuity of care would be particularly worrisome. Also at the practice level, integrated mental health care in primary care settings can improve outcomes for young adults.[13] Consider partnering with mental health clinicians within your own setting - one the patient is already familiar with - or look for the availability of such partnerships in making referrals for young patients who are taking the next steps into adulthood elsewhere.

While we have the joy of watching countless young people grow up through our work, for each of them it is a new and sometimes fraught experience. By helping normalize the process of growing up and going through the process of taking responsibility for one's own health care, family physicians can prepare young people for lifelong self-advocacy for their health. Though one of the great joys of family medicine is lifelong care, our society today is quite mobile. Making sure our patients feel comfortable talking to new clinicians in the new places their lives may take them, or preparing them for more independent adult relationships with our own practices, is a critical skill in helping our young patients develop.

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The Role of Family Medicine Physicians in the Recognition, Treatment, and Prevention of Pediatric Male Epididymo-orchitis

By Joseph Hong, MD; Tony T. Koshy MD, MPH; Mekail Ahmed, MD; Amit Sharma, MD; Iziegbe Fenemigho, MD; Lawrence Okumoto, MD and Anil Gogineni MD, FAAFP

The diversity of pediatric cases warrants special attention by family medicine physicians, especially to identify emergent cases. Family medicine physicians and pediatricians have essential roles in screening and preventing urinary tract infections (UTI) and sexually transmitted infections (STI) in all demographic and patient populations. Specifically, the development of epididymo-orchitis (EO) has been concretely identified as an established complication, particularly for the pediatric male population. This article highlights the etiology and causes of EO amongst males at varying pediatrics ages, and reiterates the importance of increasing family medicine awareness, education, and training to treat the medical needs of the pediatric population.

Epididymo-orchitis is the inflammation of both the epididymis and the testicles, and is commonly associated with the development of UTIs.[1] EO occurs from infection that has spread from the epididymis to the testicle.[1,2] Most common causes of EO are bacterial in origin, such as *E. Coli, Pseudomonas aeruginosa*, and *Klebsiella* species, and from hematogenous seeding from another site.[1] The cause of EO has a bimodal curve that is dependent on age, with the prepubertal group peaking at <5 years of age and then during early puberty.[5] The types of bacterial infections change for the two groups with the onset of sexual activity in adolescence. In older males between the ages of 14 and 25, who engage in increased sexual activity, *Chlamydia trachomatis* and *Neisseria gonorrhoeae* are the most common pathogens for EO.[5] On the other hand, in children <5 years of age, anatomic abnormalities that may foster the growth of bacterial infections are noted to be the most common reasons.[4] The anatomic abnormalities include posterior urethral valves and hypospadias, which decrease urine stream strength and increase urinary retention.[4] These anatomic obstructions create conditions that allow for genitourinary tract pathogens to ascend into the epididymis.[4,5]

The etiologies of both abnormalities are thought to be multifactorial, including genetic, environmental and endocrine factors. Specifically, hypospadias is the most common penile malformation, and second only to cryptorchidism when it comes to congenital disorders in males, affecting one in 200-300 boys.[15] Hypospadias is a congenital anomaly that involves abnormal positioning of the urethra meatus.[15,16] It occurs when the external urethral opening is located at the ventral surface of the penis instead of the apex, while on the other hand, epispadias is due to the incomplete closure of the urethral plate and an abnormal placement of the dorsal urethral location.[15,16] Hypospadias can be classified based on the location of the abnormal urethral meatus- 1) Anterior; subcoronal and glandular 2) Middle; distal penile, proximal penile and mid shaft 3) Posterior; scrotal, penoscrotal and perineal.[17] *(Figure 1)* In hypospadias, the incidence of recurrent urogenital infections increases following repair.[18]

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Figure 1- Different Locations of Hypospadias[21]

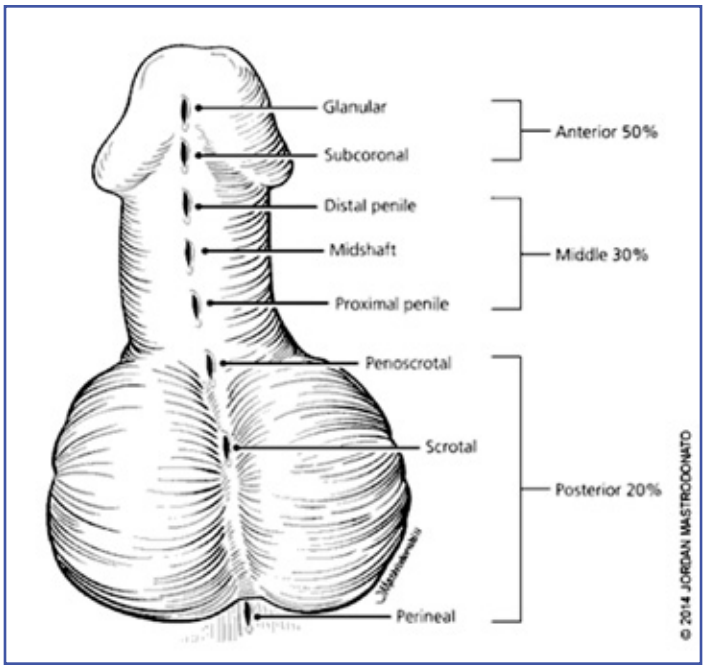
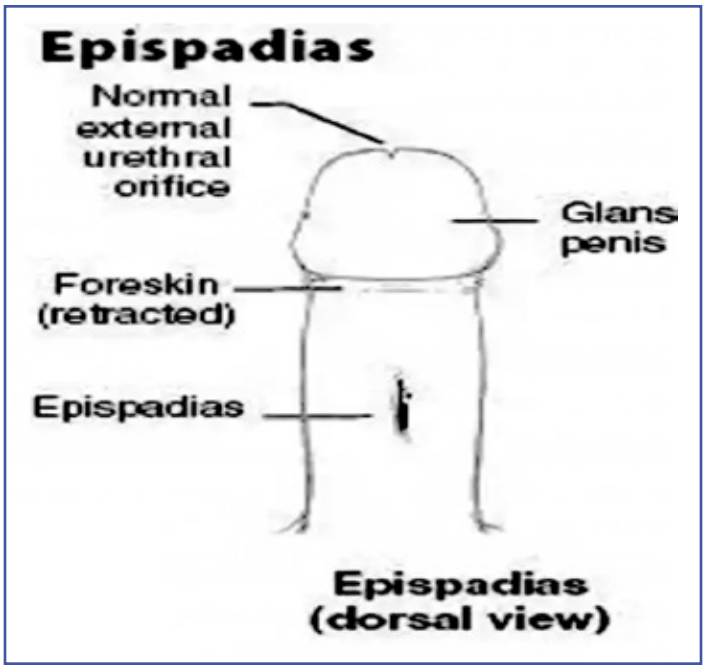


Figure 2- Epispadias[21]



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Epispadias, on the other hand, is part of a spectrum of genitourinary abnormalities that ranges from isolated anomalies to cloaca exstrophy which is the extreme, involving omphalocele, bladder exstrophy, imperforate anus and spinal defects.[16,18] This spectrum, also known as Exstrophy-epispadias complex (EEC) has a prevalence 1 in 10,000 births.[18] Epispadias in itself is the failure of the urethral plate to close resulting from a developmental arrest, resulting in a dorsal positioning of the meatus.[17,18] *(Figure 2)* Based on the location of this meatus, it is divided into penopubic, penile, or glandular.[18]

As anatomical abnormalities such as hypospadias and epispadias may increase the risk for EO, it is beneficial for family medicine physicians to be comfortable in conducting pediatric male genital exams from newborn to adolescent patients in the outpatient or acute setting. The genitourinary examination in male neonates is focused on detection of these congenital anomalies by careful examination of the penis including the phallic size, the foreskin, and especially the location of the urethral meatus.[20] The physical exam continues and advances throughout adolescence as physicians are to carefully inspect the penile skin for unusual lesions and the urethral meatus for discharge.[20]

Recurrent epididymitis and UTIs are part of the numerous complications that can arise from EEC, requiring resource intensive long-term care.[19] It is therefore important that family physicians learn to identify these abnormalities promptly to effectively manage these patients to alleviate the burden for patients and families.

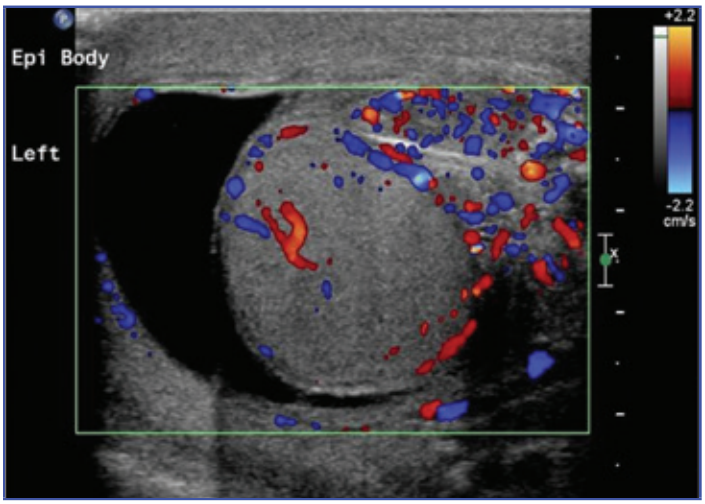
Common systemic symptoms of EO, in similar comparison to that of epididymitis, include pain that is gradual, fever, anorexia, vomiting, and dysuria.[2] Sexually transmitted EO is commonly accompanied by urethritis, a condition that is usually asymptomatic.[2] If symptomatic urethritis is present, there can be accompanying discharge.[2] Prehn sign (pain relief with testicular elevation) supports the diagnosis of EO but is not definitive.[2]

A key differential in the diagnosis of bacterial epididymo-orchitis is ruling out trauma or torsion as a cause of the testicular or scrotal pain.[9] Intermittent torsion can cause inflammation of the epididymis, which would present itself as an abrupt pain as opposed to that of EO, where the pain would be more gradual. Physical examination findings differ with testicular torsion as the ipsilateral cremasteric reflex would be absent on the affected side, and the anatomical position of the affected testes would be more elevated.[9] Testicular torsion needs to be ruled out as it requires immediate surgical intervention for the preservation of the fertility in the testes.[9] Urethral discharge is only suggestive but not diagnostic of epididymitis or EO and needs to be correlated with other physical and clinical findings.[5,9,10]

Investigative imaging via the scrotal ultrasound makes it possible to evaluate the condition of the epididymis and testis – their structure and presence or absence and size of abscesses and hydrocele.[22] Ultrasound findings play a crucial role in assisting in differentiating the severity of acute EO. For example, it can identify the presence of abscess up to 0.5cm, which indicates conservative treatment, only considering surgery if safe measures fail.[8] In opposition, abscess above 0.5cm may warrant surgical treatment immediately.[23]

A useful tool in the diagnosis, and also widely considered as the choice of study, is the color duplex ultrasonography as it provides information about the vascular supply to rule out torsion with valued accuracy.[8] Ultrasound findings in the epididymis demonstrate normal to increase vascularity and thickening of the epididymis[8] *(Figure 3)*. Sonogram of the testes show enlargement, normal to increase in vascularity, and increased perfusion.[8,11] It also has proven to be helpful in evaluating the scrotal contents for the presence of inflammation and associated complications.[22]

Figure 3- Scrotal Duplex of an Epididymis with Increased Vascularity Consistent with EO[23]



Laboratory findings also include peripheral blood leukocytosis, increase in C-reactive protein, and pyuria.[1,6,7] Urine culture is used for patients that are prepubertal but may not reveal the pathogen.[6,7] In sexually active patients, gram stain and urine culture can be used when there is a high clinical suspicion of a STI. If the presence of intraurethral exudate is present, gram stain and nucleic acid amplification test (NAAT) for *Chlamydia trachomatis* and *Neisseria gonorrhoeae* are indicated.[6,7,10]

Bacterial EO is widely treated with antimicrobial therapy. Initial outpatient therapy is empirical and targets the most common pathogens.[3] When *C. trachomatis* and *N. gonorrhoeae* are suspected, ceftriaxone and doxycycline are recommended.[3,13] When coliform bacteria are suspected in younger patients due to congenital abnormalities, such as posterior ureteral valves or hypospadias as discussed, ofloxacin or levofloxacin is recommended.[3,12,13] In the presence of further complications, such as testicular abscess or pyocele of the scrotum, the discussion for surgical intervention may be necessary.[12,13,14]

Moreover, epididymo-orchitis is an important medical diagnosis that is commonly seen in any setting. As a family medicine physician, the continuity of care in male patients can help guide therapy before the progression of the disease. Particularly in the outpatient setting, it is important for the physician to screen and be comfortable in obtaining a sexual history from patients to identify potential risk factors that may harbor infections that may develop EO.[20] In younger patients, a proper history and physical examination at routine visits can help identify patients that have congenital abnormalities, who then can be referred to specialists for treatment to prevent recurrent or progression of the disease. In adolescents, screening and

education are important aspects of family medicine, and both need to be addressed with patients to prevent widespread transmission of disease. In this case, early treatment can be implemented with early identification before a simple urinary tract infection progresses to a more complex epidymo-orchitis. Simply encouraging sexually active male patients to continue to practice safe sex is alone an important primary prevention of EO. This discussion will be dependent on the rapport between the patient and the primary care physician.

There are two main potential challenges in performing a detailed pediatric genitourinary exam. First, the lack of training of the practitioner and second, the reservation of both patients and/or guardians. This reservation is seen especially in adolescent patients. The comprehensive genitourinary exam is many times overlooked in medical training due to the more invasive nature of the exam and due to the barrier of the preceptor demonstrating the examination comfortably during patient care. Especially in the pediatric population, conducting any sort of physical exam requires tact, skill, and patience not taught in a textbook. Putting emphasis on the genitourinary exam just as any other organ system in medical training will help overcome the challenges of lack of training. It is also important to understand, the genitourinary exam is not simply about the necessary technical skills, but also about training physicians on how to properly inform the patient/guardian, how to get consent, and how to emphasize the need for the exam to avoid preventable complications. Not taking the time to conduct a proper genitourinary exam is neglecting an essential examination for a vulnerable population. Educating parents, patients, and even providers will allow for better communication and compliance with the genitourinary examination.

Additionally, EO highlights the benefit of bedside ultrasonography training that will augment technical skills and aid in critical diagnosis that can expedite care. It is clear that family medicine physicians' keen attention to specific pathologies like these can help sharpen both necessary medical and technical skills to improve the care of our patients.

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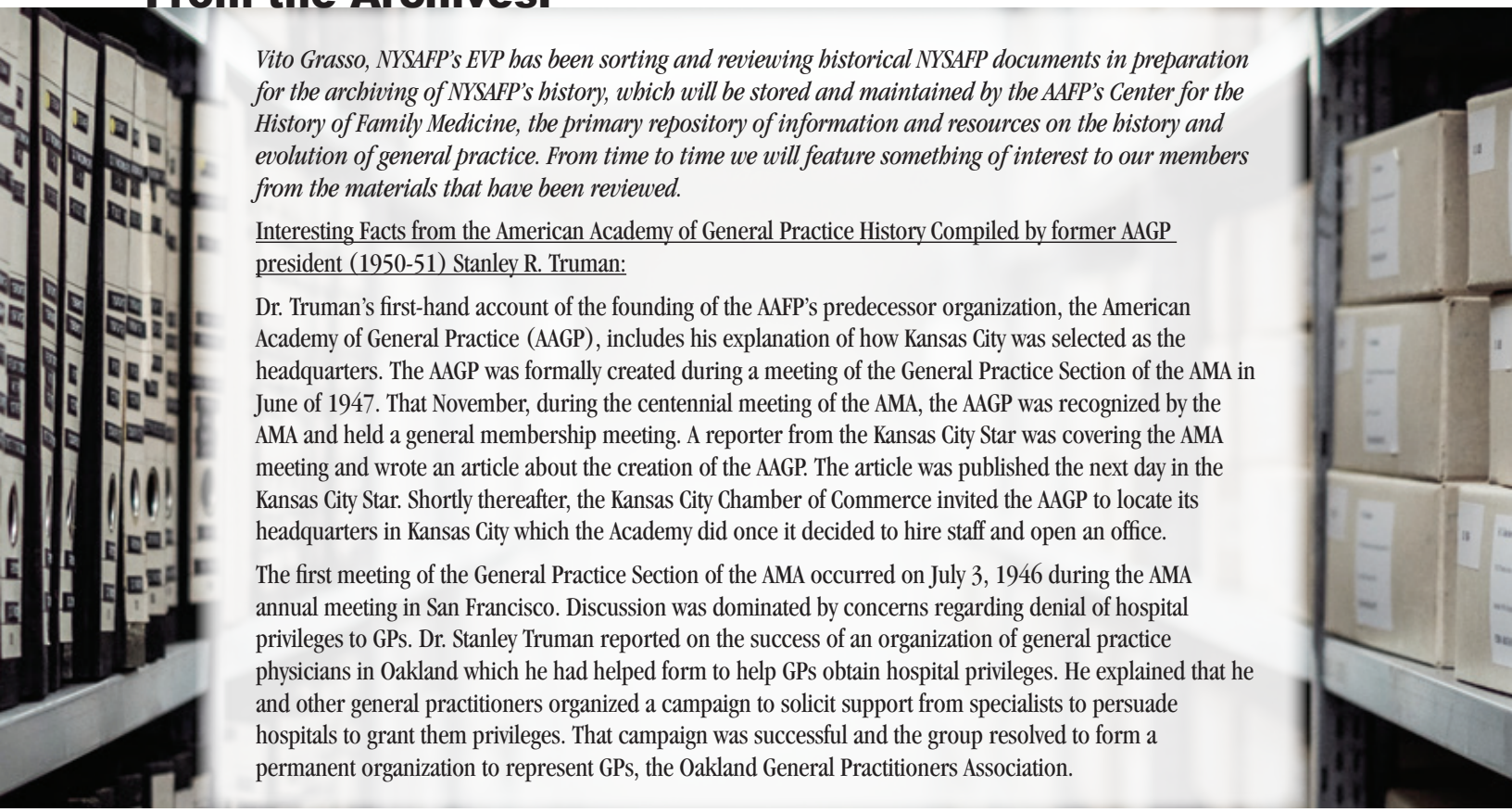
From the Archives:



Vito Grasso, NYSAFP's EVP has been sorting and reviewing historical NYSAFP documents in preparation for the archiving of NYSAFP's history, which will be stored and maintained by the AAFP's Center for the History of Family Medicine, the primary repository of information and resources on the history and evolution of general practice. From time to time we will feature something of interest to our members from the materials that have been reviewed.

Interesting Facts from the American Academy of General Practice History Compiled by former AAGP president (1950-51) Stanley R. Truman:

Dr. Truman's first-hand account of the founding of the AAFP's predecessor organization, the American Academy of General Practice (AAGP), includes his explanation of how Kansas City was selected as the headquarters. The AAGP was formally created during a meeting of the General Practice Section of the AMA in June of 1947. That November, during the centennial meeting of the AMA, the AAGP was recognized by the AMA and held a general membership meeting. A reporter from the Kansas City Star was covering the AMA meeting and wrote an article about the creation of the AAGP. The article was published the next day in the Kansas City Star. Shortly thereafter, the Kansas City Chamber of Commerce invited the AAGP to locate its headquarters in Kansas City which the Academy did once it decided to hire staff and open an office.

The first meeting of the General Practice Section of the AMA occurred on July 3, 1946 during the AMA annual meeting in San Francisco. Discussion was dominated by concerns regarding denial of hospital privileges to GPs. Dr. Stanley Truman reported on the success of an organization of general practice physicians in Oakland which he had helped form to help GPs obtain hospital privileges. He explained that he and other general practitioners organized a campaign to solicit support from specialists to persuade hospitals to grant them privileges. That campaign was successful and the group resolved to form a permanent organization to represent GPs, the Oakland General Practitioners Association.

The How-tos of Early Intervention in Primary Care

By Valentina Sedlacek; Aaron Williams, NP; Luzann Ampadu, NP; Katie Lashway, MS, RN; Roxana Inscho, MS; Kristin Kane; Michael Mendoza, MD, MPH, MS; David Holub, MD and Colleen T Fogarty, MD, MSc, FAAFP

Although family physicians and general pediatricians often find themselves responsible for screening for and managing concerns that arise in early childhood, they are seldom able to provide all necessary services.[1,2] One example is early intervention for suspected developmental delays. It is estimated that 15% of children in the United States have at least one developmental delay. Less than one-fifth of those children receive early intervention services before three years of age.[3] In New York State, the Early Intervention (EI) Program is administered by a local municipality, typically the local health department, which is responsible for evaluating children from birth to age 3 for developmental concerns, and for referring those who are eligible to the appropriate EI services (most commonly physical, occupational, and speech therapy). Despite timely referral to EI being one of the best things a primary care provider can do for a child with suspected or established developmental delay or disability, many clinicians are unsure of the nuances of the program or how the referral process works.[3,4,5] There is a great need to improve the process of referring to EI in a timely manner and initiate vital services. In this article, we will briefly review critical information for a busy clinician to learn about the Early Intervention Program (EIP) and the steps for referring a child to EI.

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What is the "Early Intervention Program"?

1. Early Intervention is a program within New York State's Children and Youth with Special Health Care Needs (CYSHCN) program. The program supports children and youth ages birth through 21 years with special health care needs due to physical conditions, intellectual or developmental disability, and/or behavioral or emotional conditions. CYSHCN influences public policy and provides financial support and technical assistance to programs in New York State counties that support these children. CYSHCN will also work directly with families to help them meet the medical and non-medical needs of their children, including financially, and will help connect them to local community resources.
2. EI offers evaluations and services for children (birth to age 3) with a suspected or confirmed developmental delay. The child must meet NYS eligibility criteria. Services available in EI include: OT, PT, speech, special education, vision, teacher of the deaf, social work, and developmental groups.
3. EI also provides monitoring for children that do not have a confirmed or suspected delay but whose parents/ guardians have questions about their child's development, or if the child is at risk for a delay, or a screening has indicated a need for continued monitoring. The monitoring program is called "Child Find" or "At Risk."

Role of Early Intervention in New York State:

The New York State Early Intervention Program allows children under the age of 3 years with suspected or established developmental delay or confirmed disability, as defined by NYS, to be eligible for services. The delay or disability must be in one of or more of the following areas of development: physical, cognitive, communication, social-emotional, and/or adaptive.

The program was first created by Congress in 1986 as part of the Individuals with Disabilities Education Act.[6] In New York State, it was established as a program in Article 25 of the Public Health Law and has been in effect since July 1, 1993. Today, it is administered by the New York State Department of Health through the Bureau of Early Intervention. Every county has an Early Intervention Official designated by the chief elected official of the county or municipality, who administers the EI program locally.

Goals for the NYS program are to be family centered, community based, coordinate services and track measurable outcomes for children and families.[7] Early Intervention and the medical home accomplish this by integrating primary and specialty health care providers. The two work together to support family participation in the early intervention services and aspire to assure equity of access, quality, consistency and accountability.[5,8]

Within family medicine, we should integrate and apply these goals into the referral process for early intervention services. While the importance of families in supporting the health and developmental outcomes of young children is well established, too often there remains a disconnection between the values of family-centered practice and the everyday practice of early intervention.[9]

The Process for Making a Referral:

Step 1: Making a Referral

The discussion about a referral is often initiated after a positive screen with a validated screening tool. Screening tools can easily be incorporated into the workflow of a primary care practice and used at regular, repeated intervals to supplement physician surveillance at well-child visits. Parent-completed and extensively evaluated tools such as the Ages and Stages Questionnaire and the Parents' Evaluation of Developmental Status have been proven to be most effective in this setting.[3,5]

Referrals can be made in a couple of ways: 1) As the clinician, you suspect a developmental delay or disability due to screening results or clinical judgement; 2) Parents suspect and self-refer using an online referral form or by calling the EI program. Ideally, the child is referred to EIP within 2 days of identification.

During the visit when the referral is made, the family is informed of the suspected developmental delay or disability and the benefits of EIP. It is essential that the primary care provider present EIP as a family-centered partnership. Parental/guardian buy-in is critical for the interventions to be effective over time.[9]

Things to stress to the family:

- EI is a voluntary program so checking for parent/caregiver agreement and willingness to participate is helpful. Helping parents understand that the EIP is family centered may reduce reluctance to engage.
- Let families know that there are no out of pocket expenses for the program. Insurance or Medicaid is billed and the county will pay any uncovered expenses.
- When making a referral, provide as much information as possible regarding developmental concerns.
- If a screening tool was completed, please include a copy in the referral. This documentation helps to determine if the child is appropriate for evaluation or developmental monitoring. It is also very helpful for the evaluation teams to have all pertinent information.
- Updated demographic information is critical to enable the EIP to contact the family through an accurate phone number/address.

Step 2: The Referral Process

1. Early Intervention official assigns an initial service coordinator.
2. Service coordinator provides a family visit. Visit goals include:
   a. Providing the family with information about EIP
   b. Informing the family of their rights
   c. Reviewing a list of evaluators (specific to type of delay or disability noticed in screening that prompted the referral)
   d. Obtaining insurance/ Medicaid information
   e. Obtaining other relevant information

Step 3: Determining Eligibility of the Child for Services or Developmental Monitoring

This step is completed by an evaluator who is a licensed clinician specially trained and qualified to use standardized, norm referenced

tests appropriate for the child's age. This multidisciplinary evaluation looks at the child's functioning in the five areas of development, including any area(s) of concern to determine eligibility (physical, cognitive, communication, social-emotional, and/or adaptive). There is the option for a "family assessment," which is a conversation between the family and a member of the child's evaluation team. The goal of this family-directed discussion is to identify the resources, priorities and concerns the family needs from EI services and other community services or supports to best care for and enhance their child's development. The information is kept entirely private and families decide what is shared.

All of this information is gathered and summarized in a report. The outcome of this step is a recommendation for services or the developmental monitoring program. A letter is sent back to the referring provider with the outcome. With parental permission, the primary care provider will receive a copy of the multidisciplinary evaluation report.

Step 4: Making an Individualized Family Service Plan

The Individualized Family Service Plan (IFSP) meeting is conducted to develop a service plan. This plan includes:

a. Family identification of desired outcomes

b. Recommendation of specific EI services

c. Identification of an ongoing service coordinator to be in communication with family

This written plan must be developed and agreed to by the family and Early Intervention Official. Possible Early Intervention services for an eligible child include: assistive technology devices and services; audiology; family training, counseling, home visits and parent support groups; nursing services; nutrition services; occupational therapy; physical therapy; psychological services; service coordination; social work services; speech-language pathology; vision services; health services; transportation and related costs and special instruction.

The IFSP is reviewed after six months and evaluated annually to decide to continue, add, modify or delete outcomes, strategies and/or services. Parents may request to review the IFSP sooner. If parents request an increase in services, the EI officer may ask for independent evaluation.

Step 5: Transition of Services After age 3

Coordination of services and monitoring of development for children 3-5 years old is transitioned to Preschool Special Education (services under Section 4410 of Education Law) or to other early childhood services.

Child Find: If a child did not qualify for services, the child may be eligible for a developmental monitoring program called the Child Find Program. It is a voluntary program designed to identify and monitor children at risk for developmental delay but who do not qualify for Early Intervention services at the time of their initial evaluation. This program can be done in collaboration with the child's primary clinician following the physician's practice screening guidelines. A nurse works with the family and health care provider to monitor the child's skills by using developmental screenings as part of their regular health care follow up.

Answers to Frequently Asked Questions by Clinicians:

1. How would a clinician know if a child is already followed by early intervention?
   a. The best way is to ask the child's parents or guardians. In an EMR such as Epic, you can also look in the "media" section of the child's chart for a historical letter, or contact the EI team directly through their number.
2. Who do I call if I'm not sure whether to refer or have questions?
   a. If the delay is questionable or other circumstances are present, please feel free to contact the EIP directly. Or reach out to your local program through the municipality health department.
3. Who do I call if the child is older than 3 years?
   a. After 2 years, 9 months, it is most appropriate to call the Committee on Preschool Special Education (CPSE) in the child's school district. You can also call the EIP number and the EI clerk can give you the correct number to call.
4. How do I explain the EIP to a patient who speaks a different language from me?
   a. Please visit https://www.health.ny.gov/community/infants_children/early_intervention/ for flyers and brochures in different languages.

Minimizing long-term disability depends on both identification of developmental delays through standardization of developmental screenings, and connection to effective developmental services such as EI.[10] EI gives every child less than three years of age who is experiencing or is at risk of developmental delays evidence-based and affordable therapies.[11] Primary care providers play a key role in this process. By being involved in the EI process, primary care providers can activate families to pursue an evaluation, help them overcome any barriers to referral completion, and serve as trusted partners with the family and multidisciplinary teams to provide seamless coordinated care to children.[12,13] EI services have been shown repeatedly to improve developmental outcomes, mitigate secondary behavioral complications, and increase caregiver confidence.[10,14-18] It has been established that the majority of children eligible for CYSHN services are not receiving services for their developmental problems and that there is significant racial disparity.[19,20]

Acknowledgements:

This article was developed from the lessons learned from the implementation of an improved Early Intervention referral process at Highland Family Medicine in Rochester, NY. The team responsible for this project included practitioners, practice administrators, social workers, and Early Intervention Program staff at the Monroe County Department of Health.

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Expanded Cardiovascular Screening During Pre-Participation Physicals in the Era of COVID-19

By David L. Lee, MD; Robert S. Eberly, MD and Mark H. Mirabelli, MD

Introduction

One of the purposes of the pre-participation physical for school aged athletes is to facilitate safe participation from a cardiovascular standpoint, by identifying athletes who are at risk for sudden cardiac death. This is particularly important as while they are rare, cardiovascular disorders are the leading cause of death in young athletes during exertion. While cardiac screening methodology within the context of the pre-participation exams are controversial, cardiac complications of COVID-19 make this particularly important. In this paper, we will summarize the current guidelines for cardiovascular screening (largely formulated pre-COVID-19), review the cardiac complications of COVID-19 in school aged athletes, and suggest an additional screening procedure to evaluate for cardiac complications of COVID-19.

Background

While rare, cardiovascular disorders are the leading cause of sudden death in school aged athletes.[2] Current studies show an incidence of sudden cardiac death within the United States of 1.25 cases / 100,000 high school athletes per year, and 2/100,000 college aged athletes per year. Risk may change based on factors including age, gender, ethnicity, level of participation, and sport – for example, sudden cardiac death/arrest is more common in African-American Division I college basketball players (who have a risk of sudden cardiac arrest/death of 19/100,000 athletes per year).[2]

There are myriad causes of sudden cardiac death including congenital and acquired etiologies. These are further subdivided into structural and electrical disorders. Common structural causes include hypertrophic cardiomyopathy, coronary artery abnormalities, arrhythmogenic right ventricular cardiomyopathy, dilated cardiomyopathy, and aortic rupture in the setting of Marfan's disease. Electrical causes include channelopathies such as long-QT syndrome, Wolff-Parkinson-White, and Brugada syndrome. However, in a proportion of cases of sudden cardiac death no causes are identified on autopsy (otherwise referred to as autopsy-negative sudden unexplained death – ANSUD).[2]

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The current cardiovascular screening protocol recommended by the American Heart Association is 14-element screen that is as follows:[17]

TABLE 2

The 14-Element American Heart Association Recommendations for Preparticipation Cardiovascular Screening of Competitive Athletes

Medical history*

Personal

1. Chest pain, discomfort, tightness, or pressure related to exertion
2. Unexplained syncope or near syncope†
3. Excessive and unexplained dyspnea/fatigue or palpitations associated with exercise
4. Prior recognition of a heart murmur
5. Elevated systemic blood pressure
6. Prior restriction from participation in sports
7. Prior testing for the heart, ordered by a physician

Family

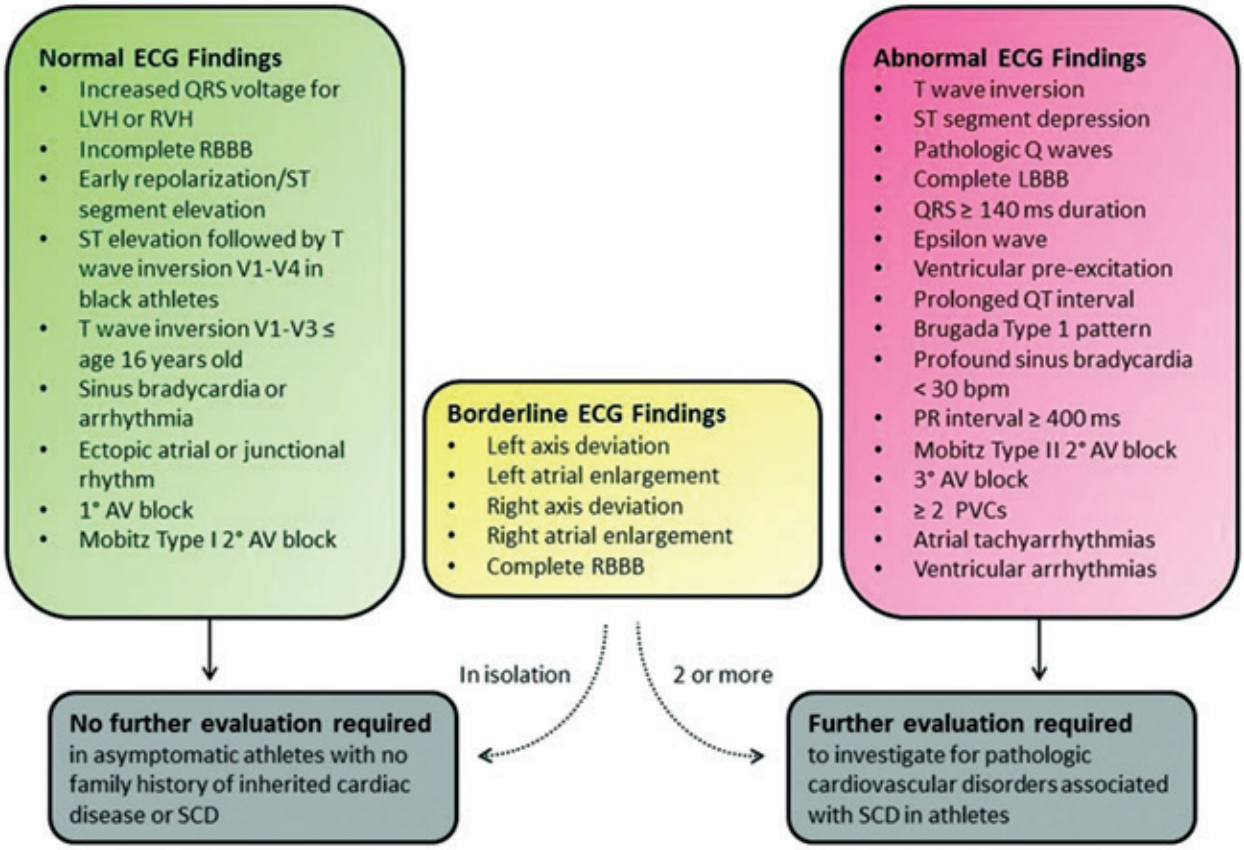
8. Premature death (sudden and unexpected, or otherwise) before 50 years of age attributable to heart disease in one or more relatives
9. Disability from heart disease in close relative younger than 50 years
10. Hypertrophic or dilated cardiomyopathy, long QT syndrome, or other ion channelopathies, Marfan syndrome, or clinically significant arrhythmias; specific knowledge of genetic cardiac conditions in family members

Physical examination

11. Heart murmur‡
12. Femoral pulses to exclude coarctation of the aorta
13. Physical stigmata of Marfan syndrome
14. Brachial artery blood pressure (sitting position)§

*—Parental verification is recommended for high school and middle school athletes.
†—Judged not to be of neurocardiogenic (vasovagal) origin; of particular concern when occurring during or after physical exertion.
‡—Refers to heart murmurs judged likely to be organic and unlikely to be innocent; auscultation should be performed with the patient in both the supine and standing positions (or with Valsalva maneuver), specifically to identify murmurs of dynamic left ventricular outflow tract obstruction.
§—Preferably taken in both arms.

Adapted with permission from Maron BJ, Friedman RA, Kligfield P, et al. Assessment of the 12-lead ECG as a screening test for detection of cardiovascular disease in healthy general populations of young people (12-25 years of age): a scientific statement from the American Heart Association and the American College of Cardiology. Circulation. *2014;130(15):1305.*



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Notably, routine EKG examinations are absent from the AHA recommendations. More intensive screening strategies have been discussed in certain populations, but data is still emerging to support such a recommendation.[10] It should be noted that this recommendation is not consistent worldwide, and a consensus statement published by the European Society of Cardiology has recommended screening EKGs.[7] If an EKG is obtained, this should be interpreted with caution to distinguish between normal physiological adaptation in athletes and an underlying pathological condition. Above are the international criteria for electrocardiographic interpretation in athletes:[11]

However, these guidelines were formulated pre-COVID-19. In general, children make up a small proportion of COVID-19 cases (as of 11/4/2021, approximately 16.7% overall), and represent an even smaller population of hospitalizations (children represent 1.7% to 4.2% of hospitalizations, and 0.1% to 2% of all pediatric cases result in hospitalization). Pediatric mortality from COVID-19 is also similarly lower than adults, with 0.00% to 0.03% of all cases resulting in death.[4]

While COVID-19 can cause multi-organ involvement, the cardiovascular system can be affected in particular. The specific incidence of cardiovascular complications in a pediatric population is still emerging. Initial data suggests that asymptomatic to mild infections do not pose an increased risk of cardiovascular complications,[6] which is reassuring as the majority of children fall into this category. In young college aged athletes (average age 20, the majority of which were asymptomatic or had mild symptoms), a recent study found a prevalence of 0.5%-3.0% of cardiac abnormalities after COVID-19.[19] Patients with COVID-19 of a severity that warrants hospitalization have an increased incidence of cardiac injury (up to 22% of cases if requiring ICU level care).[14]

Furthermore, it was found that in a small subset of children that they would develop Kawasaki disease-like symptoms. These symptoms would include persistent fever, elevated inflammatory markers, circulatory shock, and cardiac involvement. This condition has since been termed multisystem inflammatory syndrome in children (MIS-C).[21] In a multi-center European study in patients with MIS-C, it was found that the most common cardiac complications were myocardial involvement (93%), shock (40%), arrhythmia (35%), and coronary abnormalities (24%).[21] The permanency of these manifestations are unclear – there is some data that suggests that these resolve over time.[16,18,22]

Pathophysiology

There are several pathways in which the COVID-19 virus could cause cardiovascular injury. COVID-19 downregulates ACE2 receptors by binding them directly which leads to over-activation of the Renin-Angiotensin-Aldosterone System (RAAS), precipitating myocardial injury.[1] Furthermore, the downregulation of ACE2 can lead to a catecholamine surge and cytokine storm which causes further myocardial injury through the direct effect of cytokines, microvascular injury, stress-related cardiomyopathy, or myocardial infarction.[1] Additionally, in the histological examination of endomyocardial biopsies, a few patients (5/104) were found to have the COVID-19 genome in their tissues with associated myocardial necrosis, inflammation, and microvascular thrombi. This suggests that direct viral entry into cardiac myocytes is another pathway which causes myocardial injury, though this is controversial as this has not been consistently duplicated in studies.[1,9]

Current COVID-19 Cardiovascular Screening Recommendations

At present, screening with the AHA 14-element cardiovascular screening may miss COVID-19 cardiovascular manifestations which could prevent safe sports participation. This gap has been identified by several organizations, who have issued guidance to health care providers. Initial recommendations such as a consensus guideline published by the Journal of the American College of Cardiology were more aggressive due to uncertainty.[20] With emerging data these recommendations have been refined. The current recommendations of each organization are based on AHA guidelines but with additional considerations.

American Academy of Pediatrics

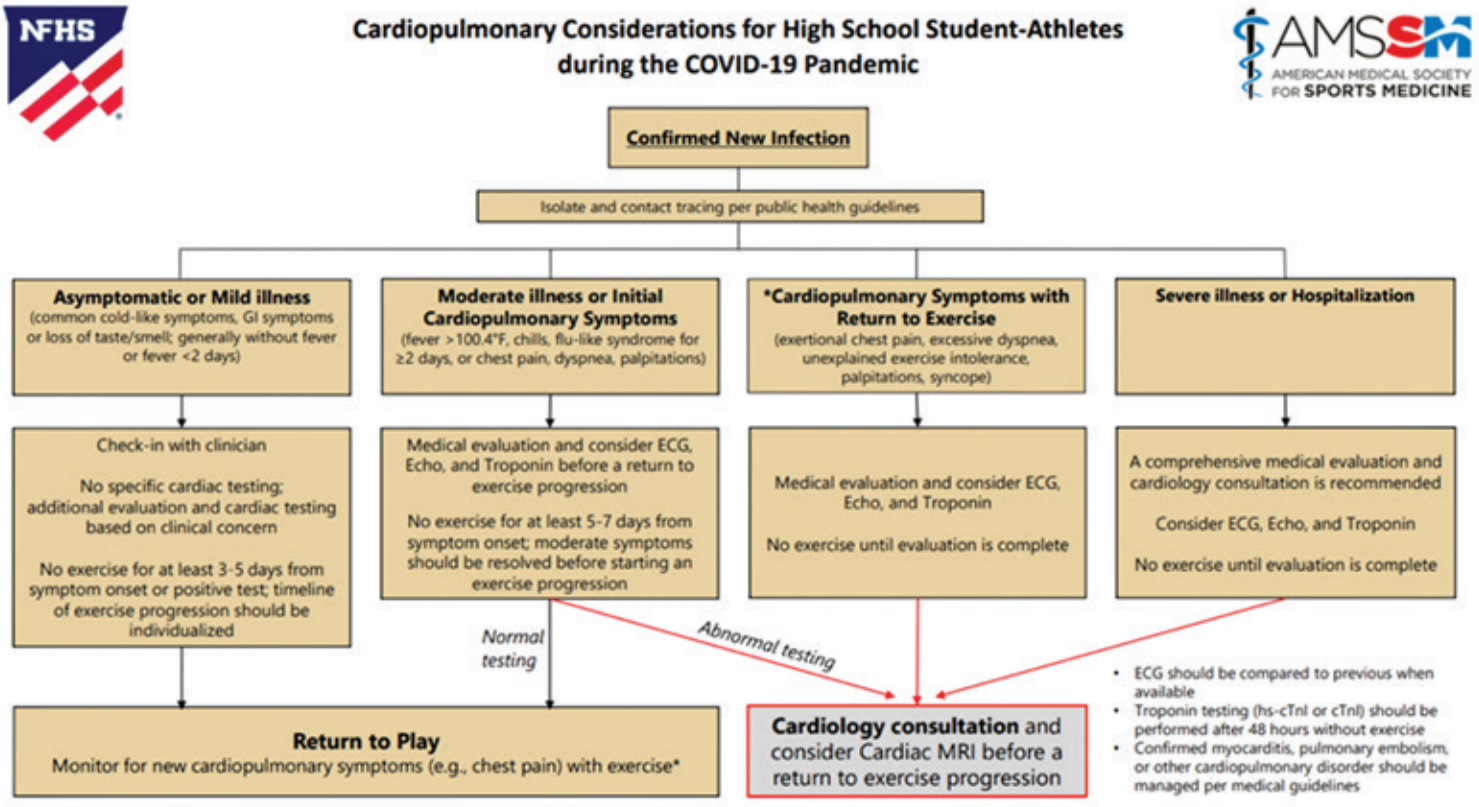
The American Academy of Pediatrics recommends that patients with asymptomatic/mild symptoms (<4 days of fever >100.4°F, <1 week of myalgia, chills, and lethargy) at a minimum have a telemedicine visit with their pediatrician with an emphasis on symptoms of myocarditis. If the patient has symptoms concerning for cardiac involvement they should have an in-office visit and consideration of an ECG prior to clearance. If a patient has moderate symptoms (≥4 days of fever >100.4°F, ≥1 week of myalgia, chills, or lethargy, or a non-ICU hospital stay and no evidence of multisystem inflammatory syndrome in children [MIS-C]), the patient should have an in-office visit with a review of the AHA 14-element screening evaluation, physical exam and an ECG. If there are no findings on exam, the patient can begin gradual return to physical activity 10 days after the positive test result and a minimum of 10 days of symptom resolution off of fever-reducing medication. If the cardiac screening, exam, or ECG are abnormal they recommend the patient be referred to cardiology for further testing. For patients with a severe COVID-19 course (ICU stay and/or intubation) or MIS-C, the patient should be restricted from exercise for a minimum of 3 to 6 months and obtain cardiology clearance prior to return to athletics.[3]

British Journal of Sports Medicine

An editorial published by the British Journal of Sports Medicine has similar recommendations. With patients categorized with asymptomatic infections (confirmed by antibody testing) they recommend a focused history and exam to screen for new findings and consideration of an ECG. For patients with mild illness (non-hospitalized), an EKG is recommended. Athletes with moderate to severe illness should get a comprehensive evaluation in conjunction with a sports cardiologist to include blood biomarkers (i.e. hs-cTn and NP), ECG, echocardiogram, exercise testing and ambulatory rhythm monitoring. All athletes with documented myocardial injury, regardless of illness severity are recommended to have blood biomarkers, ECG, echocardiogram, exercise testing, ambulatory monitoring and a cardiac MRI.[5]

National Federation of State High School Associations and the American Medical Society for Sports Medicine

The National Federation of State High School Associations (NFHS) in combination with the American Medical Society for Sports Medicine (AMSSM) issued guidance for preparticipation screening in high school athletes. Patients with asymptomatic/mild symptoms (common cold-like symptoms without fever, gastrointestinal symptoms,



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or loss of taste/smell) do not require additional cardiac testing unless clinically indicated. Patients with moderate symptoms and those with cardiopulmonary symptoms (e.g., fever >100.4°F, chills, flu-like syndrome for ≥2 days) or initial cardiopulmonary symptoms (e.g., chest pain, dyspnea, palpitations) should be considered for additional cardiac testing (ECG, TTE, troponins). If the patient had a remote infection with moderate symptoms >3 months ago but never had a workup and has remained asymptomatic after returning to sports they do not require further cardiac testing.[12] The current screening algorithm is shown on page 43.[13]

Discussion

It would be remiss not to point out that this paper would be moot if a COVID-19 infection was prevented in the first place. As such, to prevent cardiovascular complications in a pediatric population we recommend COVID-19 vaccination. From a cardiovascular standpoint the risk of mRNA vaccination associated myocarditis and pericarditis is rare: in the US military 23 cases were detected after 2.8 million doses, and in a Swiss population 151 cases were reported in the setting of 10.2 million doses (though this was in all patients – the condition was most common in male adolescents and young adults).[8,15] The pre-participation physical is an ideal time to address this recommendation as it is often the only medical evaluation that an athlete goes through every year.

Overall, data regarding cardiovascular complications of COVID-19 in a pediatric population is still being gathered. They currently suggest that children that are asymptomatic or have mild symptoms have no to a slightly increased risk of cardiovascular injury. Our recommended change to preparticipation cardiac screening, with the need for further risk stratification for moderate and severe COVID-19 infections, takes into account the impact of the COVID-19 pandemic and is based on the best available evidence to date. Incorporating the recommendations for cardiovascular screening after COVID-19 infection, we propose the addition of a 15th element to the AHA screening exam that delineates the patient's history of COVID infection(s) and the severity of the infection(s) (asymptomatic, mild, moderate, severe). Once this history is gathered, we suggest following the algorithm developed by the AMSSM in conjunction with the NFHS as this provides a logical rationale to differentiate between pediatric athletes who can start a return to play progression versus those who require additional cardiovascular testing and cardiology consultation.

KEY POINTS

- Standard preparticipation physical exam screening incorporates the AHA 14-element screen
- Cardiovascular sequela in pediatric populations are exceedingly rare
- Addition of 15th element of AHA screening that details COVID infection and severity
- Cardiovascular risk stratification should be reserved for athletes with moderate to severe infections
- Cardiovascular risk stratification should consist of ECG, hs-cTn, and echocardiogram
- If diagnosis or history of clinical syndrome concerning for myocarditis, a patient should have a resting echocardiogram, 24-h Holter monitoring, and an exercise 12-lead ECG.
- Encourage vaccination if the patient is eligible during the pre-participation physical

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Growing Pains – Apophysitis in Youth

By Priyal Bhagat, DO, MS; Edward Degerman MD; Anter Gonzales, MD, FAAP, CAQSM; Patrick Cleary, DO, CAQSM; Derek Ho, DO, CAQSM, FAAPMR; and Christine S. Persaud MD, MBA, CAQSM, FAAFP

Introduction

Accelerated growth periods predispose young athletes to overuse injuries, which are a major factor in the development of apophysitis. This pathology results from a traction injury to the cartilage and bony attachment of tendons.[1] This is a common type of injury in school-aged children that family physicians will encounter and should be aware of. Patients usually present to their family physician or pediatrician with this complaint first, so it is important to understand the signs, symptoms, and management of apophysitis.[2] Some of the commonly seen types of apophysitis include Osgood-Schlatter disease, Severs disease, Little Leaguers shoulder, and Little Leaguers elbow (Medial epicondyle Apophysitis).[3] In this article, we discuss the evaluation, imaging modalities, management and prevention of this condition (See Table 1).

Evaluation

History and physical examination play a critical role in the diagnosis of apophysitis. Young athletes normally present with pain and swelling at the affected tendon attachment. The pain is usually exacerbated by specific physical activities.[1] Obtaining additional information on repetitive activities performed can further assist in the diagnosis of apophysitis. For example, in Osgood-Schlatter disease, running, jumping, and climbing stairs are types of activities that may cause pain due to quadriceps activation.[4] Further examples can be found in Table 1.

Imaging Modalities

When the diagnosis is unclear, imaging can be useful to exclude other concerning pathologies, such as fractures, avulsion injuries, or osteochondromas. Oftentimes, radiographs are one of the first imaging tests ordered to assess musculoskeletal complaints, however other office-based imaging modalities have recently increased in popularity and utility. Ultrasound is an emerging modality in the diagnosis of these conditions. It can show a widened and fragmented apophysis, like radiographs, and provide contralateral comparison to provide additional evidence in making a diagnosis.[1] Ultrasonography provides no radiation and can be a valuable tool in assisting to confirm the diagnosis of apophysitis.[5]

Management and Prevention

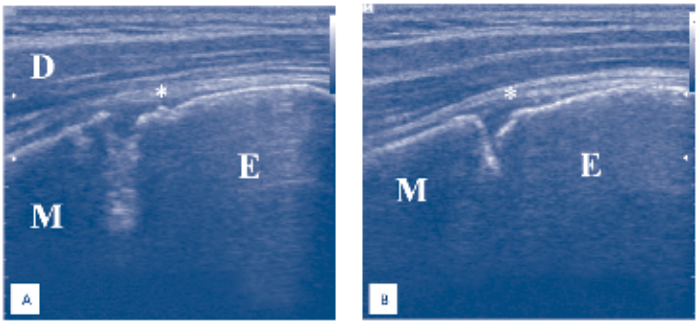
The primary treatment for apophysitis is conservative. An extended period of active rest is the treatment of choice. During the period of relative rest, physical therapy may be beneficial. Icing and oral or topical use of nonsteroidal anti-inflammatory drugs (NSAIDs) can also

Table 1: Apophysitis Evaluation, Imaging, Treatment and Prevention

Disorder	Evaluation	Imaging	Treatment	Prevention
Osgood-Schlatter disease	Anterior knee pain worse with repetitive activity and in flexion. Mild swelling and tenderness of tibial tubercle.[4]	**XR:** Mild swelling, possible fragmentation of the anterior aspect of the tibial tubercle. **US:** Possible neo-vascularization and thickened patella tendon.[4]	Ice, NSAIDs, relative rest, progressive stretching and strengthening.[6]	Cross-train when participating in competitive sports, regular assessments of muscle strength and flexibility.[6,7]
Severs disease	Pain over the posterior heel up to the insertion point of the Achilles tendon. Tenderness with palpation and compression at the medial and lateral aspects of the heel.[9]	**XR:** Increase in the density of the epiphysis, possible radiolucent line. **US:** Fragmentation of the apophysis (saw teeth appearance), thickening of tendon.[8]	Ice, relative rest, stretching, nonsteroidal anti-inflammatory drugs (NSAIDs), immobilization, and heel cups.[9]	Stretching exercises, shoes with firm support and shock absorbing soles.[9]
Little Leaguer's shoulder	Pain localizing to the dominant proximal humerus during the act of throwing or racquet swinging. Tenderness to palpation over the anterolateral or posterolateral aspect of the proximal humerus.[10]	**XR:** Widening of the proximal humeral physis, fragmentation, demineralization, or sclerosis. **US:** Physeal widening of the proximal humeral epiphysis.[10]	Complete rest from throwing until closure of physes, sling immobilization.[10]	Teaching proper pitching mechanics, limit pitch count.[10]
Little Leaguer's elbow	Repetitive overhead motions. Progressively worsening medial elbow pain. Medial epicondyle point tenderness, medial elbow pain with valgus stress, and sometimes subtle elbow contractures.[11]	**XR:** Widening of the medial epicondylar physis with a ragged and sclerotic appearance of the border of the ossification center. **US:** Medial epicondylar fragmentation.[11]	Rest, Ice, NSAIDs. Once pain free may begin strengthening exercises.[12]	Avoidance of overuse and appropriate rest between high-risk activities, limit pitch counts.[12]

be used. Once the pain has subsided, a progressive strength training program augmented with flexibility and neuromuscular control can be used to safely restore participation in sport.[1]

Strategies for youth and adolescent athletes are important in preventing apophysitis. Encouraging 2-3 months of scheduled rest away from training and competition can be an effective strategy.[2] Reducing early sports specialization, specifically before high school, is also important in minimizing potential overuse injuries.[3]



Longitudinal images of both shoulders via US. A. Throwing Shoulder: shows hyperechoic irregular growth plate with bony fragmentation and widening of proximal humeral growth plate. B. Non-throwing shoulder showing little to no widening of proximal humeral growth plate. (Asterisks indicate periosteum). D: Deltoid muscle, E: Proximal humeral epiphysis, M: Proximal humeral metaphysis.13 (Images courtesy of: Ku, Jung Hoei, et al., 2016)

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Adolescent Sexual and Reproductive Health

By Nathalie Morales, MD; Elizabeth Wetterer, MD and Margi Gold, MD

Family physicians are uniquely equipped to provide full spectrum reproductive health services to adolescents. Studies show healthcare providers often avoid talking about sexual health, and when they do it lasts on average less than one minute.[1] As with all patients, adolescents and young adults have a right to safe, respectful, evidence-based health services, and New York State law mandates the confidentiality of reproductive health care for adolescents of any age.

Gender Identity and Sexual Orientation

As many as 12% of US 13-24 year olds identify as lesbian, gay, bisexual, transgender, queer, or questioning (LGBTQ+).[2] Approximately 5% of adolescents aged 13-18 are unsure of their sexual orientation. Research has shown that LGBTQ+ adolescents seriously consider suicide as well as attempt suicide more frequently compared to their heterosexual/cis gender peers[3] (who identify with the gender assigned to them at birth), a result of living in a society that discriminates against and at times is objectively violent to gender-non conforming people. Using multiple sources, the Trevor Project estimates that more than 1.8 million LGBTQ +people aged 13-24 have "seriously considered suicide" in the past year.[3]

LGBTQ+ adolescents have many of the same concerns as their peers but also have added challenges secondary to the environment in which they live. Beyond struggling to become comfortable with their own sexual orientation and gender identity as any adolescent will, they must navigate a world with many prejudices against them. In addition, some may have limited family support and even less contact with LGBTQ+ peers and adults. Up to half of youth experiencing homelessness are LGBTQ+.[4]

Insurance and medical documentation can prove difficult as some may want to avoid sharing medical information with parents. Discussing and addressing adolescents' preferences up front is important. Laws defining the minimum age at which adolescents can seek services that are "confidential" vary among states. In New York, at age 12 adolescents may withhold information from a parent or guardian and object to disclosure for reproductive health care, mental health care, and substance use.[5] As providers, we may not reveal information to a parent/guardian if the patient requests confidentiality. As family doctors, we should always discuss the boundaries of confidentiality with every adolescent patient. If an adolescent requests or expresses concerns regarding the confidentiality of a health visit, providers can create "confidential" note types and relay visit type to administration so the visit and note will be completely electronically suppressed from the medical record. Health care professionals should consider this feature so parents/guardians do not have access.

Family physicians should work to create an inclusive and welcoming environment for adolescents of all gender identities and sexual orientations. All staff should be trained about inclusivity and confidentiality. A patient's experience starts at the front desk. Healthcare often assumes that people identify with the gender assigned to them at birth, called "cis-gender heteronormativity." Family physicians should invite adolescents to define their own identify in their own terms. Language used during an adolescent's first conversations with us needs to honor their identity and orientation; not doing so can lead to mistrust and decreased communication, and exacerbate healthcare disparities for those who identify as LGBTQ+. Offering gender-affirming care is life saving and within the scope of family medicine, and physicians should be educated not only on correct terms but also common questions and concerns in queer and gender-nonconforming youth, including hormone therapy. Excellent resources can be found through the World Professional Association for Transgender Health (WPATH)[6] and the University of California, San Francisco (UCSF).[7]

Abnormal Uterine Bleeding

The average age of menarche in the US is 12. Menstruating adolescents will often have questions and concerns about their periods; it is the most common reproductive health concern of adolescents with a uterus.[8] During the teen years, the HPA axis is still immature. It is normal for teens to have irregular and inconsistent cycles, but this is still often referred to as abnormal uterine bleeding (AUB), leading teens to think the bleeding is abnormal and needs treatment. For a small number of adolescents, anovulatory cycles can lead to heavy menstrual bleeding (HMB, formerly called menorrhagia), which is defined as any bleeding pattern that disrupts a menstruating person's quality of life.

Adolescents who report repeatedly soaking a maxi pad or tampon in one hour or passing clots greater than 1 inch may be at risk for iron deficiency anemia.[9] Initial work up should include vital signs and a complete blood count. A speculum exam is rarely indicated. While ACOG also recommends screening for endocrine and bleeding disorders, it is reasonable to defer more extensive work up until initial treatment is trialed.

If anemia is present, patients should receive oral iron supplements, daily or every other day, given equal absorption with both regimens. If the heaviness of bleeding bothers the patient, or if they have dysmenorrhea, they can use over the counter NSAIDs alone or with combined oral contraceptives (COCs). Progestin IUD or DMPA may be good alternatives for non-acute management if patients do not want to take frequent pills, and do not mind amenorrhea, or worry that a parent will notice and assume they are pregnant.

Acute heavier bleeding, or Hb 8-10, may be a reason to dose COCs more frequently (every 6 to 12 hours) until bleeding subsides. These patients can be followed closely in an ambulatory practice as long as reliable forms of contact exist.

While very rare, adolescents with severe anovulatory bleeding with a hemoglobin <7 or <10 accompanied by hemodynamic instability should be hospitalized. If refractory to oral COCs, they can be treated with IV estrogen or antifibrinolytics such as TXA or oral aminocaproic acid though this is rarely needed and has its own associated risks.

HMB due to anovulatory cycles generally resolves a few years after menarche. At that point, menstruating adolescents bleed for 2-7 days with 21-34 day cycles, similar to menstruating adults.

Polycystic Ovary Syndrome

PCOS affects 6-18% of adolescents[10] and is often difficult to diagnose. In adolescents with PCOS, there is prevalence of moderate to severe anxiety and depression,[11] as well as distressing menstrual and hormonal irregularities. Clinicians should pay attention to the factors that most influence an adolescent's quality of life, recognizing that the physical and hormonal features of PCOS may contribute to a patient's anxiety and depressive symptoms. Irregular menstrual bleeding is common in adolescents, and, as mentioned above, is often worrisome to patients and their parents, so they may seek care from their family physician. It is important for family physicians to avoid making the diagnosis of PCOS based on the menstrual history alone. *In adolescence, diagnosis of PCOS should be made at least 2 years postmenarche with clinical or biochemical signs of hyperandrogenism and irregular menses.*[12] Irregular menstrual cycles are defined as dysfunctional uterine bleeding (DUB), oligomennorrhea (at least 1 year post-menarche with less than 4 periods annually or 3-5 years postmenarche with less than 8 periods annually), or amenorrhea (absence of 3 consecutive menses).[12] Although PCOS is highly associated with obesity, only about 35-50% of people with PCOS are obese,[13] thus obesity is not required for the diagnosis of PCOS.

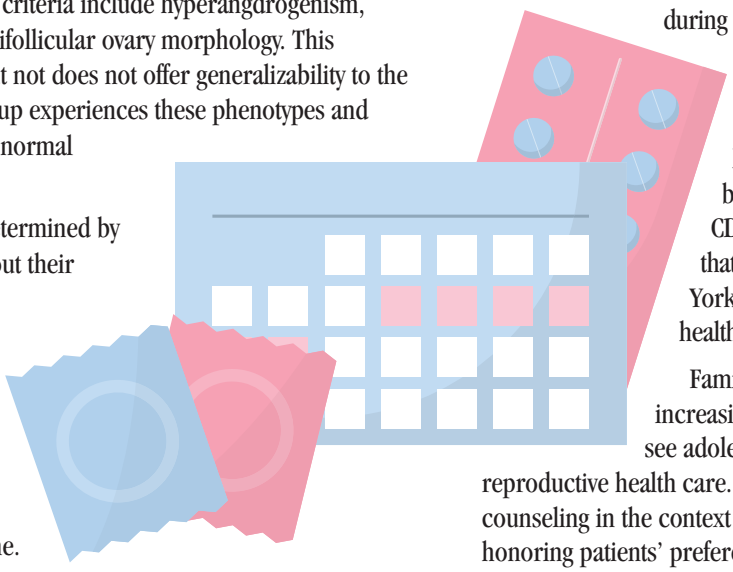
The presence of coarse hair on the chin, upper lip, chest, abdomen or back; acne; and/or androgenic alopecia should prompt a provider to further pursue a more detailed history and exam to get a diagnosis or differential since there is not one specific test that can make the diagnosis of PCOS. For clinicians, the current favored diagnostic methodology for PCOS is known as Rotterdam Criteria (RC), based on expert opinion. The three criteria include hyperangdrogenism, oligoamenorhea and multifollicular ovary morphology. This methodology is helpful but not does not offer generalizability to the adolescent as this age group experiences these phenotypes and symptoms as part of their normal pubertal development.[12]

Treatment should be determined by the patient's concerns about their symptoms and should be individualized for every patient. Moreover, COC can be utilized to decrease androgens, prevent endometrial hyperplasia, normalize menses, and decrease acne. For hirsutism, antiandrogens can be used as well as waxing and laser hair removal which has become widespread and a more affordable long term option.[12,14] It is important that the patient and provider approach a patient's general symptoms with a true understanding of its hormonal and metabolic effects while these patients are young, as management can directly impact and change as the patient transitions to different stages of life.

Contraception

According to the 2019 Youth Risk Behavior Surveillance System (YRBSS), 30% of 9-12th graders in New York State have had sex, slightly lower than the national average (38%).[15] Sexual experience increases by grade level and does not vary by gender; most adolescents have become sexually active prior to high school graduation.[1] This underscores the normalcy of sexual activity in adolescents as well as the need for access to gender-informed, confidential sexual and reproductive healthcare. New York is among the 23 states with laws to support minors' rights to consent to SRH care, including contraceptive services and abortion care[2,3] without parental involvement or notification.

Teens may come to see their family physician requesting information or specific contraceptive services. ACOG recommends talking about contraception regardless of sex practice and advanced prescribing of emergency contraception[16] for those who could become pregnant. ACOG also suggests discussing the most effective methods first ("tiered approach"). While this may make sense in some situations, providers should also keep in mind that the best contraception choice for a patient is the one that they choose. Some groups like the Reproductive Health Access Project have redesigned their handouts so that the most effective methods of contraception are no longer listed first. Studies have shown that physicians are more likely to promote Long Acting Reversible Contraception (LARC), IUDs and implants, to poor and minoritized communities.[17] This reflects a long and troubled history of injustice in contraceptive counseling, its use and removal in the U.S., rooted in white supremacy, eugenics, and demand within health care systems.



Almost 9 out of 10 high school students report condom use during their last sexual encounter while only 3 out of 10 report the use of prescription contraception.[1] This may reflect patient preference but may also suggest there is limited access in some areas. Data collected by the US Census Bureau, Guttmacher Institute, CDC, and Federal Communications demonstrate that over 1.2 million people in the state of New York live in areas with limited or no access to health care centers with contraceptive services.

Family physicians can play a clear role in increasing access to contraceptives as they routinely see adolescents and receive training in full-spectrum reproductive health care. Family physicians should offer contraceptive counseling in the context of promoting equity and social justice and honoring patients' preferences and autonomy.

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Insurance covers all forms of contraception in New York State and law prohibits any co-pays.[18] Adolescents may pay for contraceptive services in a few ways: 1 – employee or private parent/guardian insurance; 2 – government funded programs like Medicaid or a Title X Service Grant Clinic; 3 – other low - cost clinical or academic medical settings with free LARC methods through grant funding or other facilities with sliding scale fees; 4 – self pay. If providers work at a site without coverage for expensive services like LARC insertions, they should be aware of other local facilities that offer these services at reduced fees, and share the specific options available in the area so patients are informed about what resources are available.

Pregnancy

Pregnancy rates have been consistently falling in adolescents and young adults over the last couple of decades. This trend generally mirrors increased access to SRH services, including contraception and abortion. In 2017, 33 of every thousand people identified as women in New York age 15-19 became pregnant and 13 per thousand continued the pregnancy.[19]

Family physicians are the perfect people to work with adolescents as they make decisions about their pregnancy. Clinicians should use a reproductive justice framework to support adolescents in their right to have a child, end a pregnancy, and/or parent children though the provision of prenatal care, miscarriage management, abortion care, and care for their infants. This continuity can improve access to care and help to reduce adverse outcomes; infants born to parents <19 are more likely to die in the first year than those over age 20, with a higher risk among younger aged parents.[20] NYS family physicians can take the lead in providing comprehensive, equitable, non-judgemental SRH care to adolescents, and should support training and practice across the state.

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