Myopia Management during the COVID-19 Pandemic

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1. Biggest challenge is balancing the time in the office (social distancing) and the undeniable fact that myopia management takes longer than primary care
	1. Options
		1. Decrease time in the office at each visit
			1. Safety issue for patients and parents
			2. Safety issue for doctors and staff
				1. Work in teams
				2. May require more than one tech works with the patient

Pre-test

I&R

* + - 1. CDC – it’s not just about keeping six feet apart!

“Data are insufficient to precisely define the duration of time that constitutes a prolonged exposure. Recommendations vary on the length of time of exposure, but **15 minutes of close exposure can be used as an operational definition**. Brief interactions are less likely to result in transmission; however, symptoms and the type of interaction (e.g., did the infected person cough directly into the face of the exposed individual) remain important.”

* + 1. Decrease number of visits to the office
			1. Compliance more important than ever – goal is to reduce visits to the office
			2. Ask about supplies – drops and CL solution – do they have enough?
			3. Empirical ordering of CL’s vs trying them on- perception for parents
				1. Example – previous wearer who is now put into MiSight
			4. I&R follow ups – videos – telehealth
			5. EyeQue.com
		2. Social distancing – physically
			1. Parent(s) always accompanies child
			2. Have child appropriate masks ready
			3. Prep parents on phone to prep the patient about temperature and you and your staff will be wearing masks
			4. Use online history forms
			5. Schedule enough time between patients so they go straight to pre-test or an exam room – not your waiting room
			6. Use telehealth for initial visit to determine candidacy
1. Demographics of the US myopia problem
	1. 42 % of the total US population
	2. 25% of children
	3. 10 million children – who because of COVID-19 are spending more time indoors and on digital devices
	4. Much bigger problem outside the US
2. Current definition of myopia
	1. Does “refractive error” equal disease?
		1. It is NOT a disease
			1. Does anything change in our thinking?
		2. It IS a disease
			1. Does anything change in our thinking?

A disorder of structure or function in a human, animal, or plant, especially one that produces specific signs or symptoms or that affects a specific location and is not simply a direct result of physical injury.

* 1. Optical anatomy of a myopic eye
		1. *Why* is the eye too long?
		2. Emmetropization
			1. What part of the retina is responsible?
			2. Earl Smith, OD, PhD Monkey studies
				1. Macula
				2. Periphery
		3. How do you know it’s too big?
		4. What’s normal axial length growth
			1. Two techniques to measure
				1. Contact
				2. Non-contact – optical biometry

Plusses of each technique

Minuses of each technique

* 1. Nature vs. nurture debate
		1. How much of myopia is caused by nature vs nature?
		2. Nature
			1. Genetics overview
		3. Nurture/environment
			1. Outdoor time – ESPECIALLY DURING COVID-19
				1. Onset
				2. Progression

Why the difference between onset and progression

Kazuo Tsubota, MD research

* + - 1. Near work – **ESPECIALLY DURING COVID-19**
				1. Digital device use vs. conventional near work
				2. Effect of body posture
				3. Effect of text/background color

Increase in choroidal thickness

* + - * 1. Indoor dioptric stimulation
	1. When does myopia start?
		1. Zadnik, CLEERE, +0.75 study
		2. Is decreasing low hyperopia the start of myopia?