

Objective Refraction

The techniques described in the previous chapter dealt with the principles of the *subjective* refraction. All these techniques rely on having an awake and alert patient guide you in providing them with the proper lenses. What happens, though, if you have a patient whose mental status is such that he cannot answer your "better one, better twos" or whose vision is so bad that he can't read any of the lines on the Snellen chart? What do you do with the 2-year-old boy who not only can't tell you the names of the Allen figures, but barely sits still long enough for you to put different lenses in front of his eyes? These patients, who cannot help you to perform a *subjective* refraction on them, can almost always benefit from a good *objective* refraction.

In order to perform an objective refraction, you will need to learn how to use a device called the *streak retinoscope*. However, the retinoscope is not only good for patients with low levels of mental status and small children. Every patient who comes to you for a refraction will benefit from a good objective refraction. Without having to ask your patient any questions at all (except for, "can you see that light at the far end of the room?"), you can figure out a patient's refractive error down to within a half a diopter or so just with the retinoscope. Then you only need to perform a quick follow-up subjective refraction ("better one, better two?") to fine tune it. Because you are now making all the decisions instead of asking your patient to, you will save yourself a great deal of time with every refraction.

Copeland invented the streak retinoscope, and with it, he was a master of the objective refracting technique known as "estimation." Estimation is a way to estimate a patient's refraction without using lenses—just by using the retinoscope. With lenses being so available these days, it is a rare clinician who takes the time to learn the estimation technique. Most of us use the retinoscope in combination with lenses, utilizing a technique known as "neutralization." When I talk about "objective refraction" in this chapter, I will be talking about the "neutralization" technique.