

# EDITORIAL

## REFRACTION REVISITED

**O**ptometric teaching of refraction has its foundation in the mastery of optics. This is classically followed by courses devoted to the epidemiology, physical considerations and models of hyperopia, myopia and astigmatism. Other courses and companion laboratories teach the student the tools of refraction, such as keratometry, retinoscopy and the subjective examination. All of these academic endeavors comprise the science of refraction.

However, optometric education has recognized that while the science of refraction is prerequisite for preparing students for some of the complexities of refraction, competent and successful refraction in clinical practice is truly an art. Consequently, it is usual that third year students begin to refract “real” patients, under the supervision of clinical faculty. At this time, the learning of the art begins. This can be confusing to students because the art is not a static, well defined entity that is universal among their clinical teachers.

A recent book, *Clinical Pearls in Refractive Care*<sup>1</sup> provides a rationale and structure to this art that has not been previously available. The authors, Drs. D. Leonard Werner and Leonard J. Press were both faculty members at the State University of New York, State College of Optometry. Dr. Werner, now retired, went from private practice to academia, while Dr. Press went the other way. They co-taught a course in Case Analysis. This book is a product of that course and

the authors’ years of experience in didactic and clinical academia, and “real world” practice. Further, they represent a blending of the best of the two major optometric models to obtain the optimal ophthalmic prescription: Dr. Werner can be viewed more as a proponent of the Graphical Analysis Method, and Dr. Press more of the Optometric Extension Program’s 21 Point Analysis. This blend results in successful refraction not being conceptualized as an isolated entity but rather in the context of the total visual system and the patient’s personality and needs.

The first chapter contains 22 Pearls of Conventional Wisdom. Some are quite basic, but as such, can easily be forgotten by even seasoned practitioners. Others are usually not taught or even verbalized, such as:

- The patient’s last doctor may have been wiser than you initially thought.
- Avoid examining close relatives, refer them to distant colleagues.
- If the patient presents with a shopping bag full of unsatisfactory spectacles, you will probably add to the collection.

Eleven of the remaining chapters address all refractive scenarios, including the ametropias, presbyopia, binocular vision considerations, diabetic patients, cataract patients, and the dissatisfied patient. Each chapter begins with a discussion of the topic and is followed by the presentations of a number of clinical encounters. The authors outline the history

and the “high yield” tests that were done. Then, by using the appropriate Pearls, they provide their rationale for determining the final prescriptions. Readers might not agree with the authors’ reasoning in all cases because of philosophical differences. Nevertheless, the strength in these case presentations rests in the clarity and logic with which the rationale is given.

I found the chapter on autorefraction particularly enlightening. Drs. Werner and Press propose that it is a “smart retinoscope”, but that the practitioner must learn to interpret its results intelligently. Thus, it is a tool to be used in the interest of accuracy and time spent. It does not necessarily replace conventional retinoscopy and in some instances autorefraction can indicate a need for it.

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They propose that a minimum of three autofraction readings be taken, and discuss how the confidence values of the findings are best interpreted. This chapter lays the groundwork for autorefraction, which is used in virtually all other chapters, but provides a unique factor in the discussions of myopia, hyperopia and astigmatism.

A major goal of this book is stated in Dr. Jack Runniger's foreword, and the authors' preface. It is to provide optimum, but not necessarily maximum refractive care to the patient. This is driven by the economics and reality of today's managed care environment. The identified audiences are two groups. The first is students and recent graduates; a careful reading of the book can give them valuable insights that otherwise take years of clinical experience to acquire. The other group is those who were trained to perform the maximum refractive care even, as the authors suggest, when it isn't always necessary to arrive at the most appropriate prescription. I would offer a third group that the authors did not identify; optometrists who provide minimum refractive care because they devote maximum care to other areas of the ocular and visual evaluations even when the extra testing doesn't result in optimum patient care.

This book can potentially serve another purpose. I recently went on amazon.com and did a search for "refraction." A large number of books were cited, some not appropriate for clinical refraction, and a number that were cogent. However, virtually all those in the latter group were either out of print or not in stock. I propose that this is indicative of the loss of importance refraction has suffered in both optometry and ophthalmology. I believe this lowering in status occurred in the medical profession when "ophthalmologist" replaced "oculist". The same scenario has occurred more recently in optometry although, arguably, to a lesser extent. Hopefully this book will reawaken an awareness of the primary role that refraction had occupied in optometry's history, and a reminder that its ap-

plication serves the major reason people seek eye and vision care.

*Clinical Pearls in Refractive Care* is available from OEP (See Product News, page 43).

#### References

1. Werner DL, Press LJ. *Clinical Pearls in Refractive Care*. Boston: Butterworth-Heinemann; 2002.