

Chapter 39

COLOR CODING of DRUG SYRINGE LABELS.

INDEX:

1. Introduction.
2. Color coding of drug-syringe labels.
3. Color blindness / color vision defects.
4. Temporary artificial color blindness (Laser-protective goggles).
5. Color Coding in data visualization.
6. Basic information on color-coding used for syringe drug label data visualization.
7. The 2019 ASPF Pro-Con debate on anesthesia syringe label color coding.
8. Tentative evidence supporting color coding of anesthesia drug syringe labels.
9. Conclusion.

This hot debate topics is 22 pages long in the full chapter, and with 49 references. This is a major anesthesia safety discussion aspect)

1. INTRODUCTION

The use of color coding in identifying various medication product variants or pharmaceutical identities has been popular, but it is very resistant to research proving safety advantages. Color coding was tested against other physical features to differentiate self-injectable product variants¹. Color failed to help test subject groups of patients and physicians easily distinguish the variant products. Color coding for pharmaceutical products is an over 30-year-old ongoing debate².

Color maps in scientific publications, particularly those using red-green gradients, are meaningless to 14% of the population. Red and green must never be used in opposition, e.g., red text on a green background.

The University of Arkansas (UA) gave teaching tips about using color in text in website design³. Never use color alone to convey meaning in text. Use additional text features like ALL CAPITALS, **bold print**, or *italics*. Never use the combinations (i) red and black, (ii) red and green, and (iii) blue and yellow for background and text colors. There are color-vision-deficient individuals who will be unable to recognize some of the texts. In addition, avoid using very bright colors for text written over very bright backgrounds, regardless of the pair of colors.

2. COLOR CODING OF DRUG SYRINGE LABELS.

Drug syringe labels color-coded for the pharmacological group are probably currently the most popular drug safety measure in world anesthesia practice. There is much argument that it is the most useless safety measure and maybe even harmful.

(The hot debate on this topics is 22 pages long in the book's full chapter, and with 49 references. This is a major anesthesia safety discussion aspect)