



Gunnar Optiks
Digital Performance Eyewear
Market Test
March, 2009



METHODOLOGY

- Patients were recruited to participate in a market test for GUNNAR Optiks Digital Performance Eyewear, developed to reduce and minimize the eye muscle fatigue and dry eye symptoms associated with daily computer use.
- A total of 103 patients were recruited at three ophthalmology practices located in the Los Angeles area. Patients were required to spend a good portion of their work day at a computer, and to have normal vision (uncorrected or corrected with contacts.)
- At the Initial visit, patient vision was assessed, and an appropriate pair of Digital Performance Eyewear was prescribed to wear while using the computer.
- Patients visited the practice three times during the course of the market test.
 - The Initial Visit assessed baseline symptoms, and Digital Performance Eyewear were prescribed.
 - At the Second Visit—one week after the Initial Visit—symptoms were again assessed, and patients were asked several questions regarding their experience with the GUNNAR lenses.
 - The Exit Visit—approximately four weeks after the Initial Visit—was more extensive. Symptoms and perceptions were again assessed with a patient questionnaire, as was patient vision.



DATA ANALYSIS

- Data from the three visits was analyzed using standard market research techniques, using SPSS (Statistical Package for the Social Sciences) software.
- Data frequencies were prepared, and appropriate means and standard deviations were computed to facilitate comparing patient self-reported symptoms and perceptions across time.
- Improvements in Digital Sensation ratings (slides 20-23) were calculated by subtracting the Initial visit score from the Second/Exit visit score. For example, if a patient gave a rating of 'bad (3)' for their initial visit and a rating of 'mild (1)' for their second visit, the difference is -2, scored as 'Better'.
- Statistical significance testing was conducted using two-tailed *t-tests*, and was conducted at the 95% (alpha = .05) level. Results from this study are accurate to within +/- 11%, at a sample size of 103.
- In the opinion of the analyst—a professional market researcher with over 20 years of experience—the results of this study are robust, and demonstrate significant improvement in both symptoms experienced and perceptions.

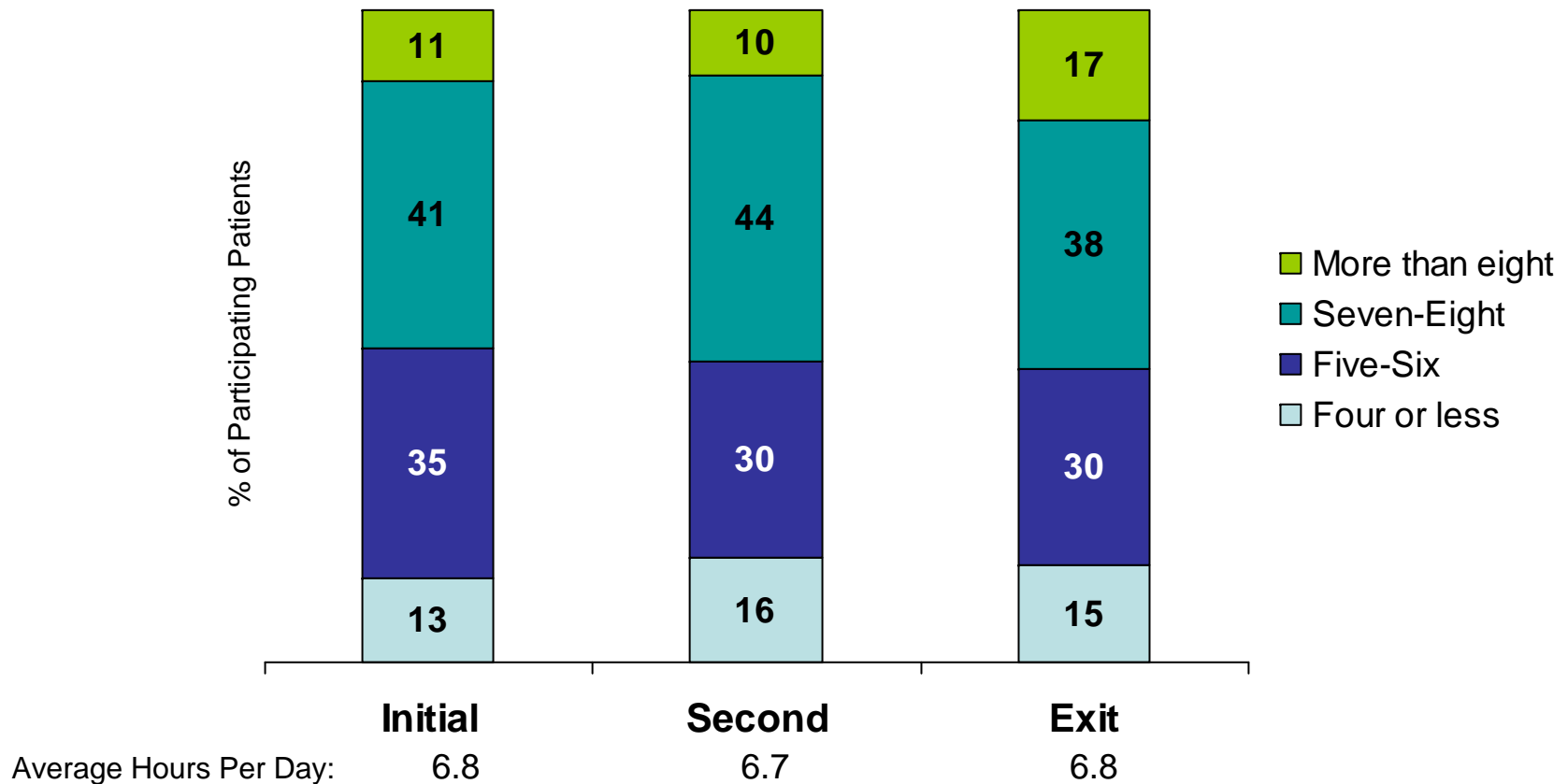


Section 1: Patient Perceptions



Across the three visits, no changes in the number of hours spent at the computer were noted. Participating patients work an average of 7 hours per day on the computer.

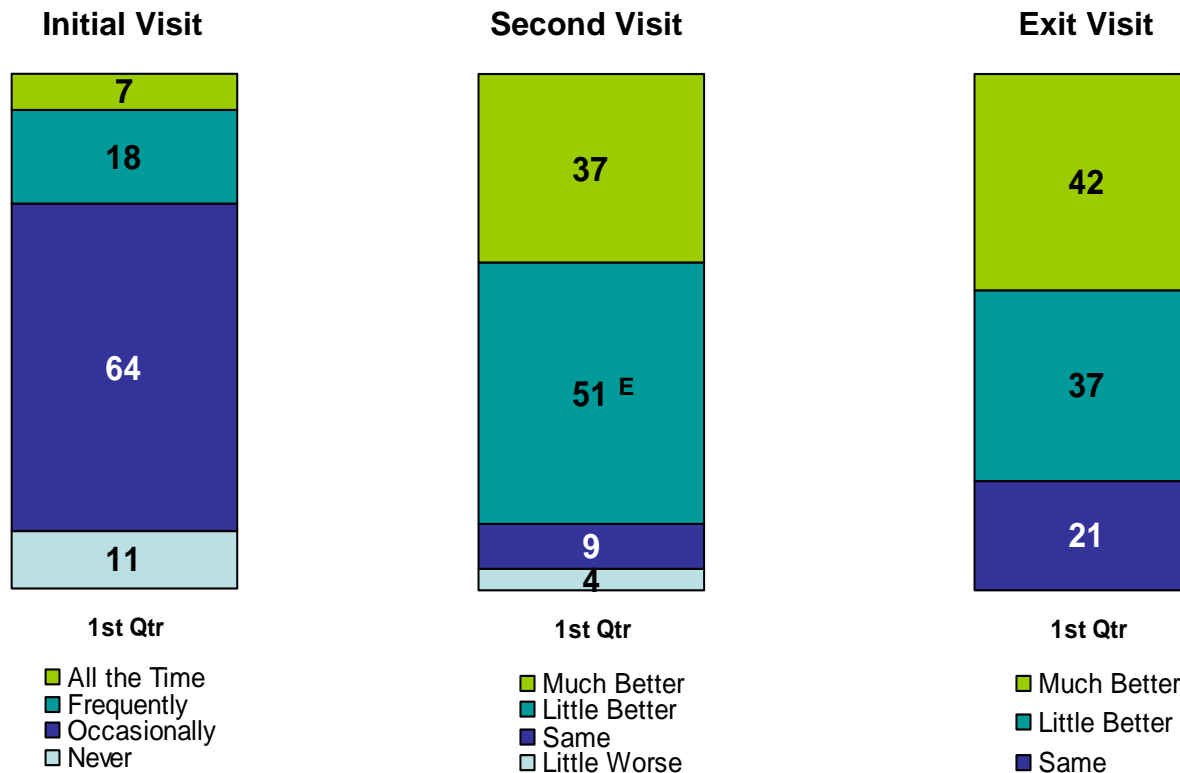
Number of Computer Hours per Day





At the initial visit, 90% of patients indicated that their symptoms reduced their productivity. At the second and exit visits, most noticed an improvement in productivity with the GUNNAR Digital Performance Eyewear.

Impact of Digital Performance Eyewear on Productivity



E: Significantly higher than Exit Visit

Question Text:

Initial: Do you feel these symptoms reduce your work productivity?

Second / Exit: Do you feel wearing GUNNAR Digital Performance Eyewear enables you to be more productive during your workday?



By the end of the market test, half (49%) of patients said the eyewear helped them have more energy at the end of the workday.

Has GUNNAR Digital Performance Eyewear helped you have more energy at the end of your workday?



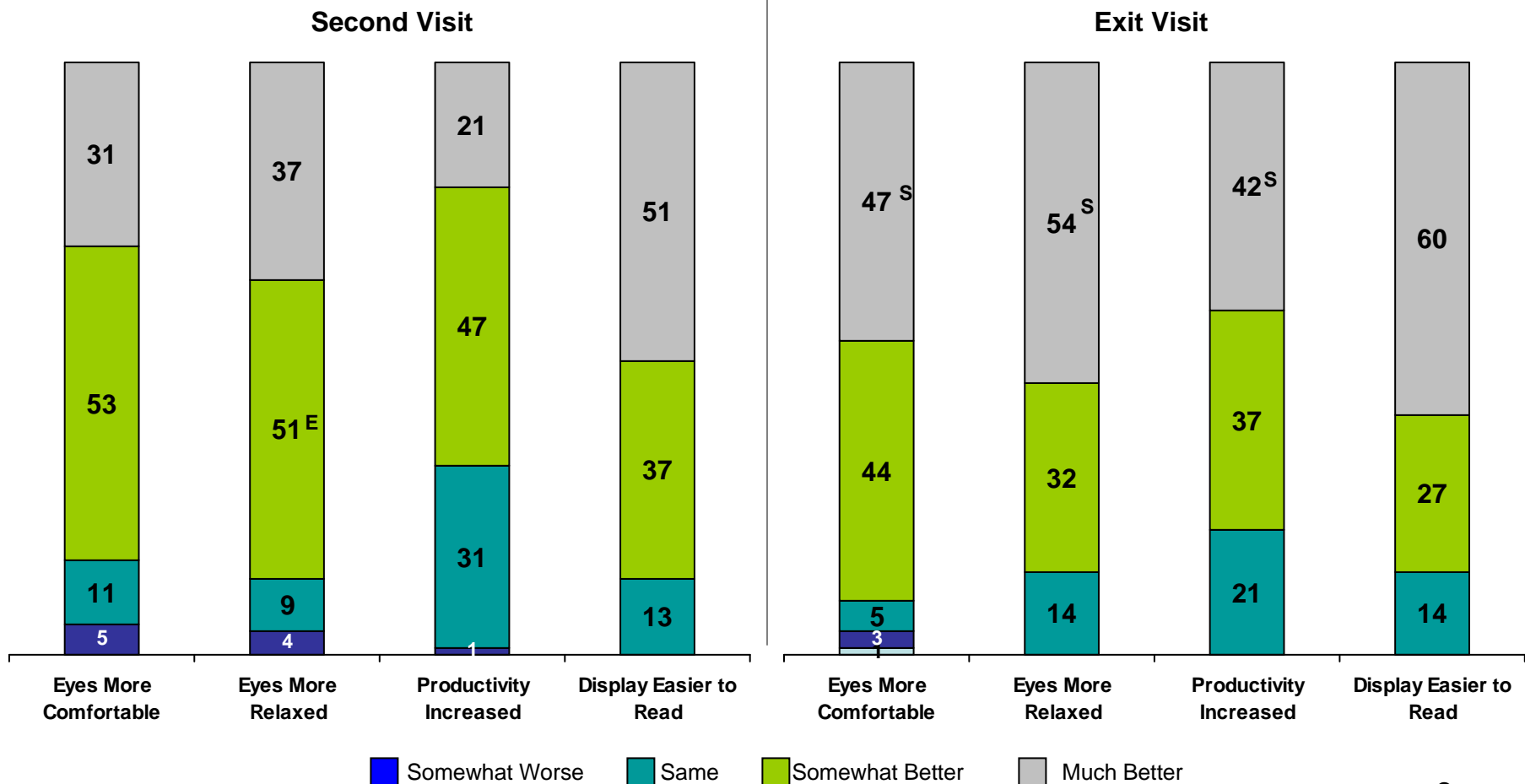
E: Significantly higher than Exit Visit
S: Significantly higher than Second Visit

Question Text:
Do you feel wearing your GUNNAR Digital Performance Eyewear helped you have more energy at the end of your workday?



Between the second and exit visits patients noticed improvements in eye comfort, eye relaxation, and productivity due to the GUNNAR eyewear.

Change in Perception Since Wearing GUNNAR Digital Performance Eyewear



Question Text:

Since you have been wearing the GUNNAR Digital Performance Eyewear, are your eyes...
 Since you have been wearing the GUNNAR Digital Performance Eyewear, do you feel your...

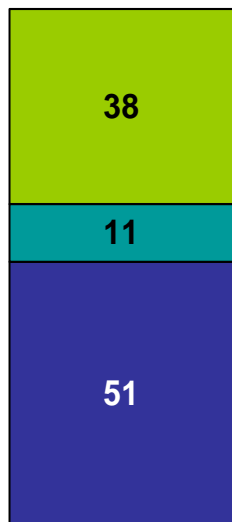
E: Significantly higher than Exit Visit
S: Significantly higher than Second Visit



At the exit interview, 6 in 10 patients noted an increased ability to focus, and 9 in 10 would recommend the Digital Performance Eyewear.

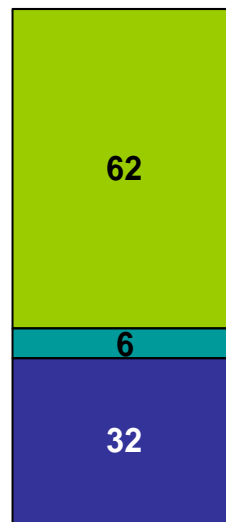
Change in Perception Since Wearing GUNNAR Digital Performance Eyewear

Decreased Incidence of Errors



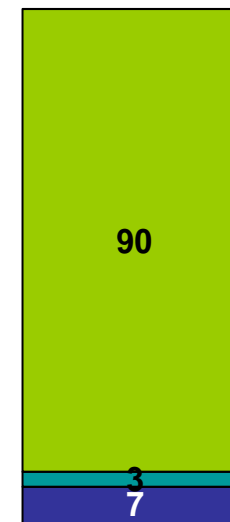
■ No Change ■ No ■ Yes

Increased Ability to Focus



■ No Change ■ No ■ Yes

Would Recommend Digital Performance Eyewear



■ Undecided ■ No ■ Yes

1st Qtr

Question Text:

Has your incidence of errors decreased?

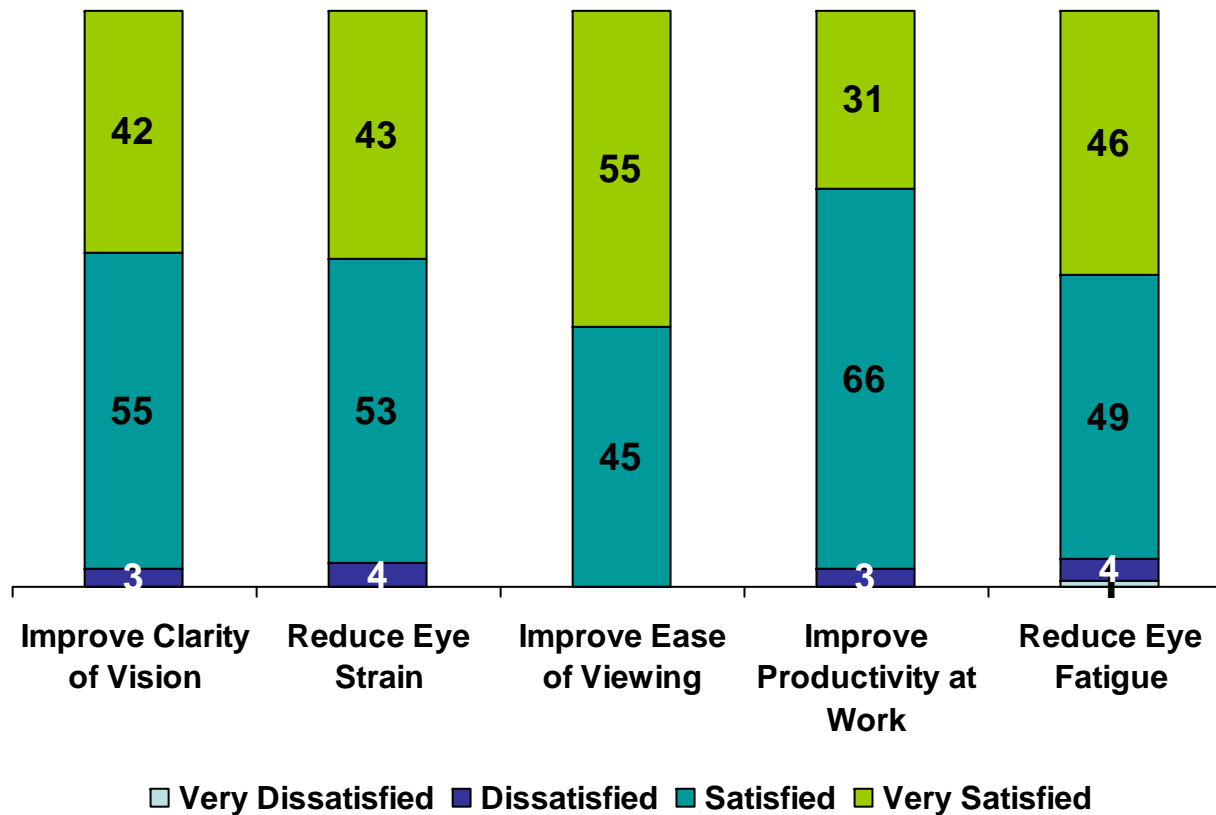
Have you noticed an increase in your ability to focus on tasks?

Would you recommend the GUNNAR Digital Performance Eyewear?



Across all measures, over 90% of patients were Satisfied or Very Satisfied with the performance of the GUNNAR eyewear.

Satisfaction with Digital Performance Eyewear



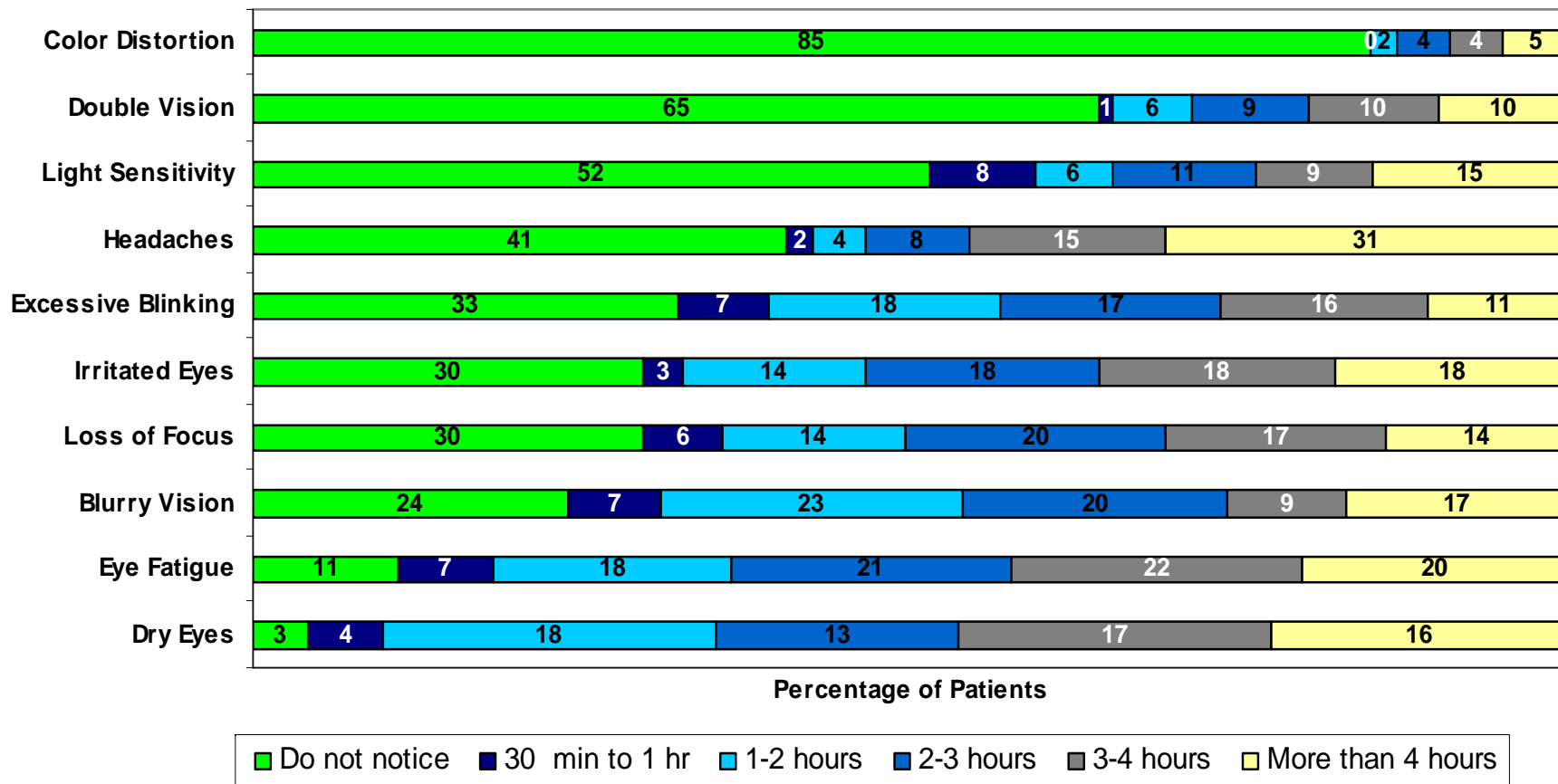


Section 1: Symptoms



Symptoms noticed appeared within 3 hours of starting work at the computer, leaving patients working with significant discomfort for half of their work day.

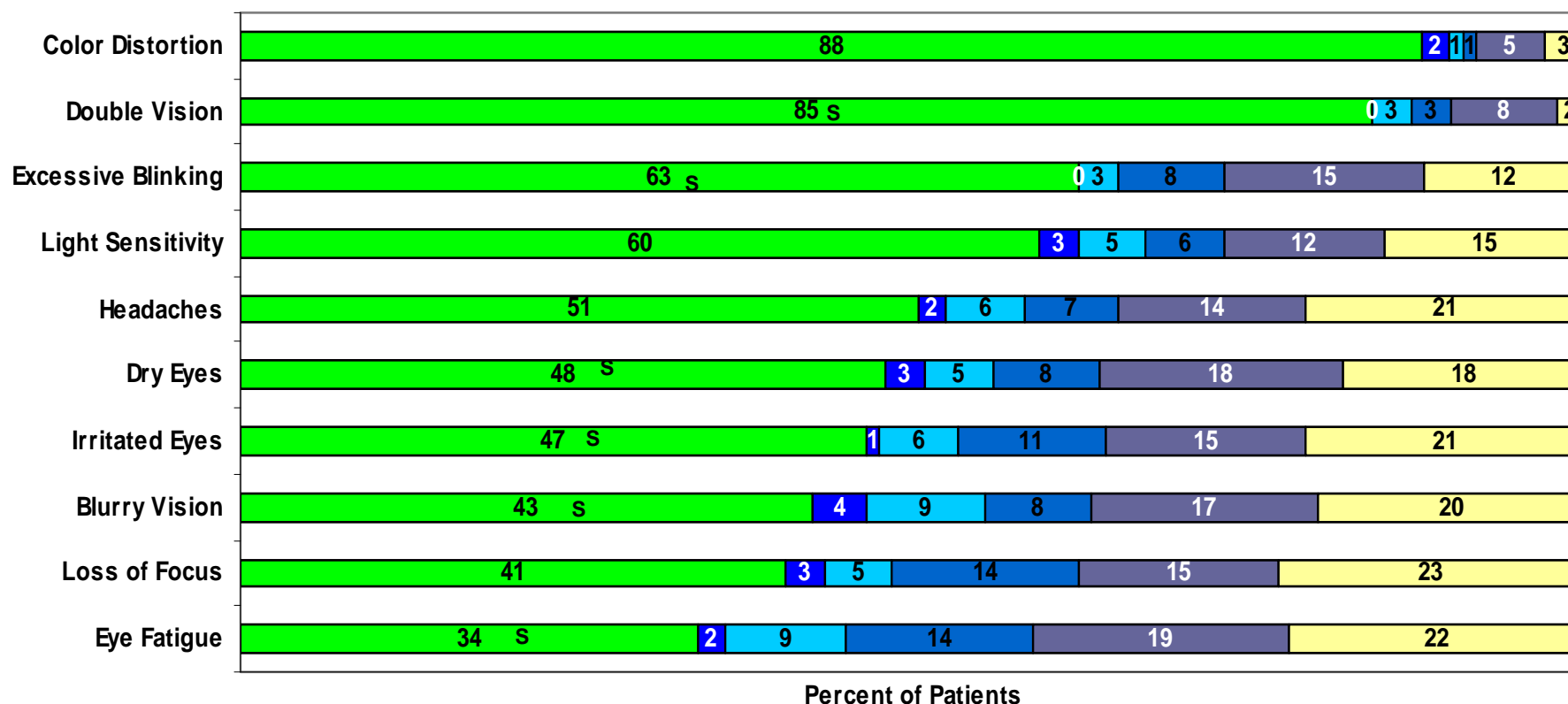
How Soon Symptoms are Noticed (Initial Visit)





Within one week, there was a significant increase in the percent who did not notice 6 of 10 symptoms assessed. Symptoms were also noticed later—3 or more hours after starting work.

How Soon Symptoms are Noticed (Second Visit)



■ Do not notice
 ■ 30 min to 1 hr
 ■ 1-2 hours
 ■ 2-3 hours
 ■ 3-4 hours
 ■ More than 4 hours

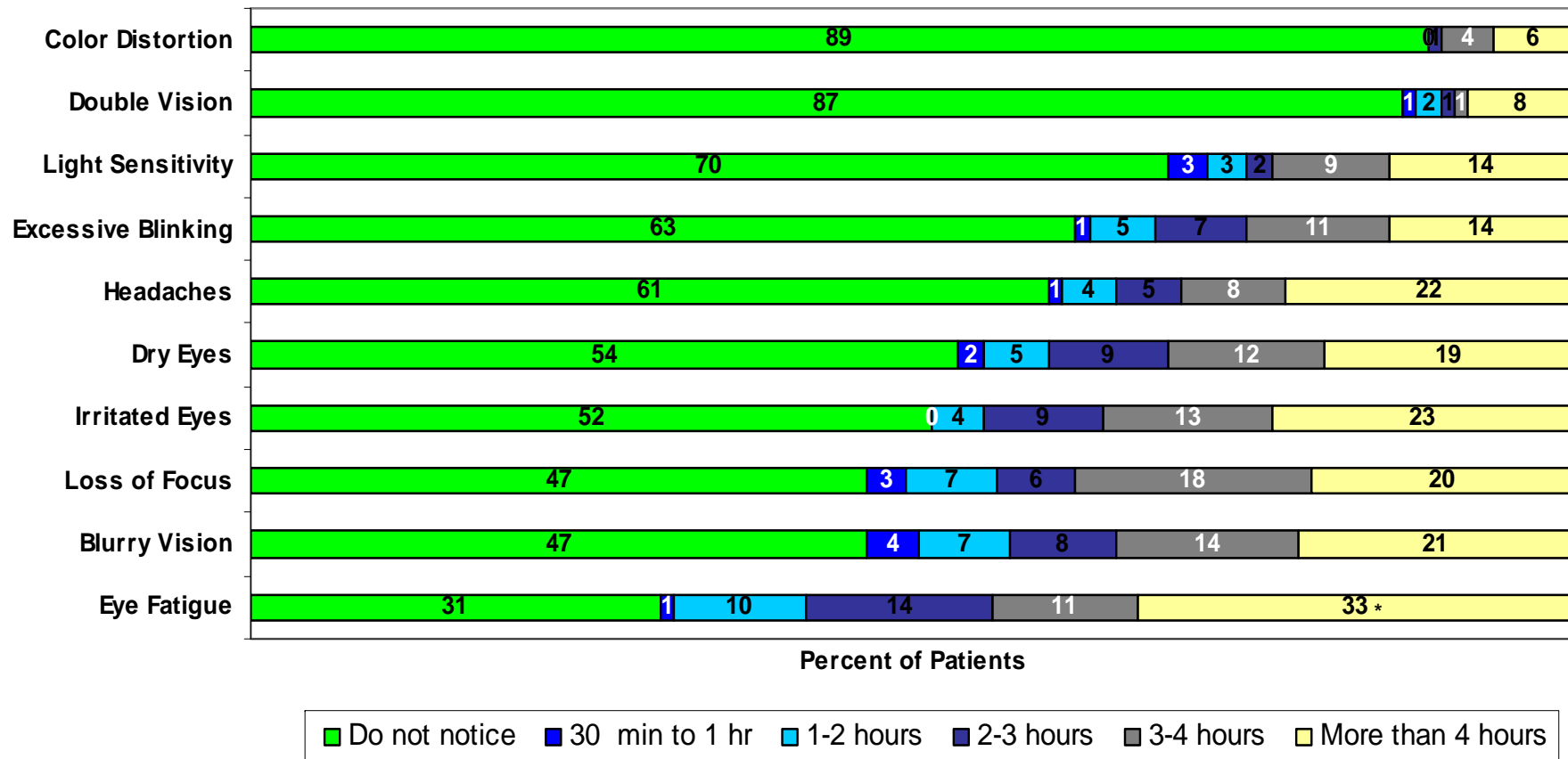
S: Significantly higher than Second Visit

Question Text:
How soon after starting your computer work do you notice...



And, though there were no significant changes in the percent who no longer notice symptoms at the Exit visit, patients appeared to be able to work longer before symptoms are noticed.

How Soon Symptoms are Noticed (Exit Visit)



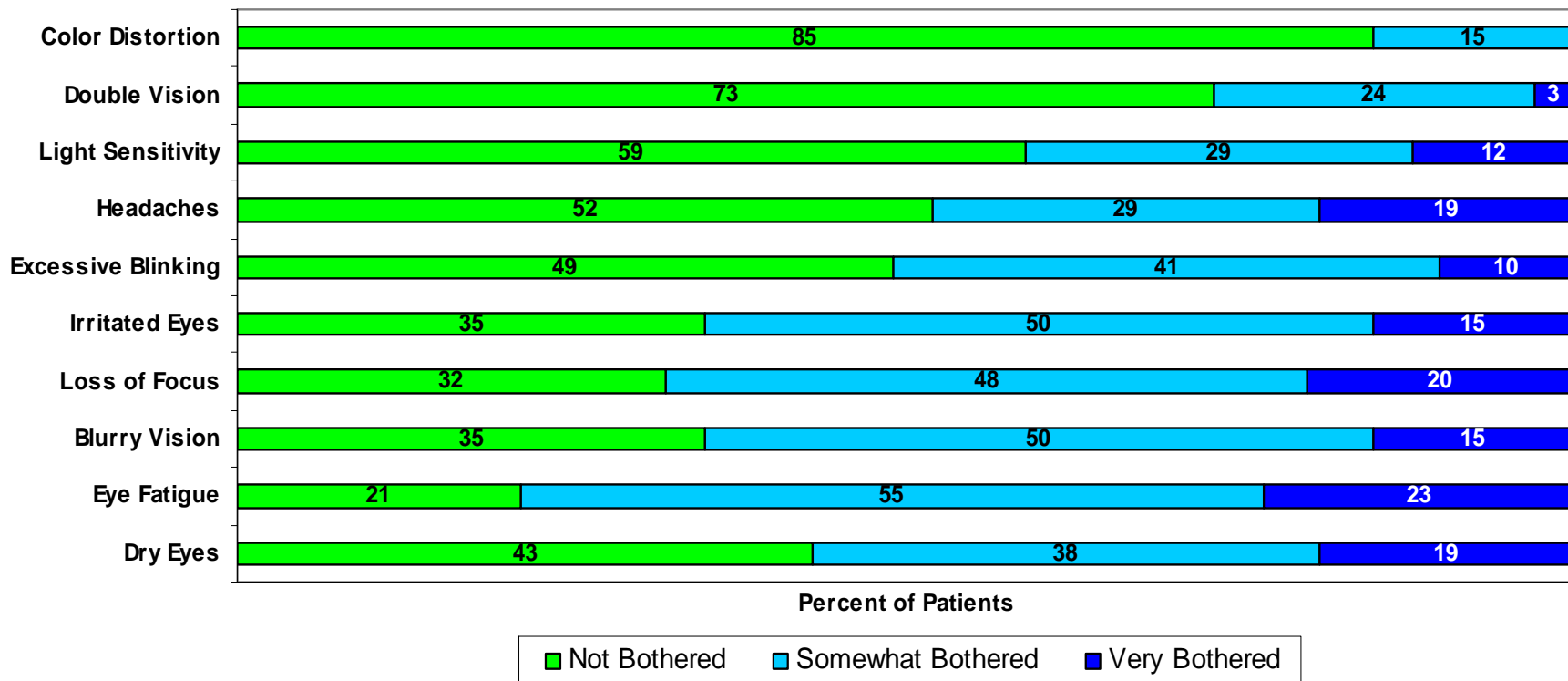
Question Text:
 How soon after starting your computer work do you notice...

* Directional Improvement from Second Visit



Initially, 1 in 5 patients were “Very Bothered” by headaches, loss of focus, eye fatigue, and dry eyes. Color distortion and Double Vision were not an issue for most patients.

Severity of Symptoms (Initial Visit)



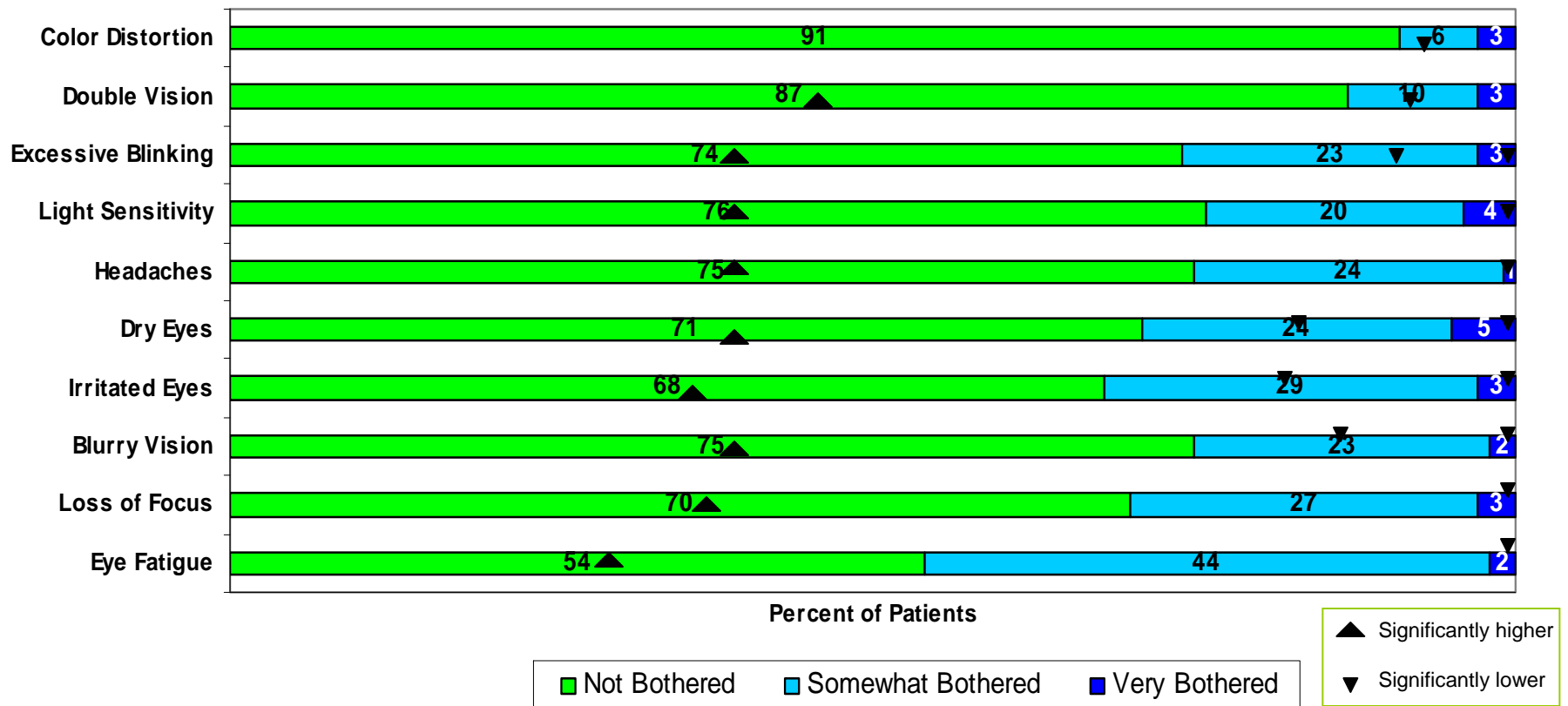
Question Text:

How much are you bothered by these symptoms? [10-pt. scale where 10=Extremely Bothered and 0= Not Bothered at All]
Not Bothered defined as ratings of 0, 1, 2 on the 10-pt. scale; Very Bothered is defined as ratings of 8, 9, and 10.



By the second visit, there was a significant increase in the percent of patients who were not bothered by most symptoms, and a significant decrease in the proportion who were “Very Bothered”.

Severity of Symptoms (Second Visit)



Question Text:

How much are you bothered by these symptoms? [10-pt. scale where 10=Extremely Bothered and 0= Not Bothered at All]
 Not Bothered defined as ratings of 0, 1, 2 on the 10-pt. scale; Very Bothered is defined as ratings of 8, 9, and 10.



From the Second to Exit visits, there was an increase in the percentage “Not Bothered” for six symptoms, and a decline in the percent “Somewhat Bothered” for five symptoms.

Severity of Symptoms (Exit Visit)



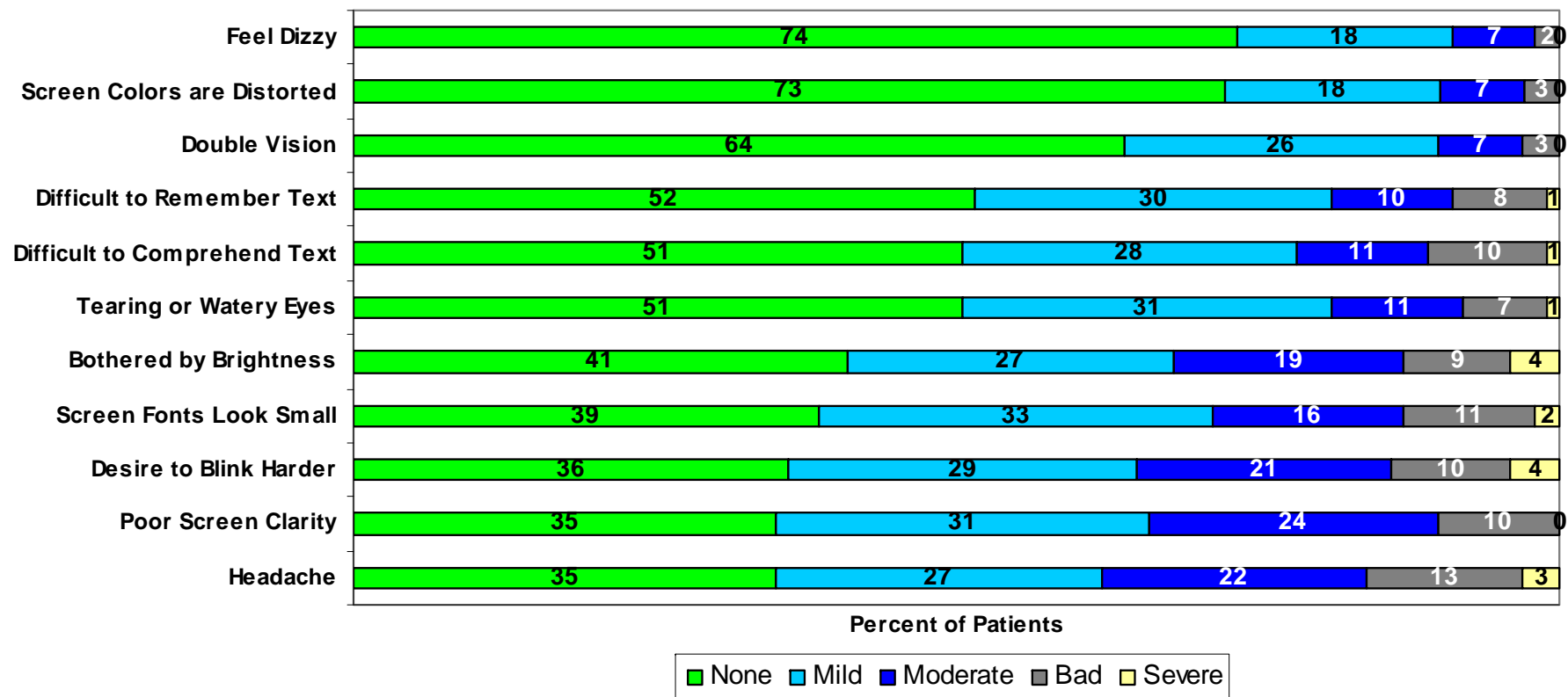
Question Text:

How much are you bothered by these symptoms? [10-pt. scale where 10=Extremely Bothered and 0= Not Bothered at All]
 Not Bothered defined as ratings of 0, 1, 2 on the 10-pt. scale; Very Bothered is defined as ratings of 8, 9, and 10.



Ratings on the Digital Sensation scale at the Initial visit indicated that a significant proportion of patients described their symptoms as “mild” or “moderate”. For many symptoms, more than 10% indicate their symptoms were “bad” or “severe.”

Digital Sensation Ratings (Initial)



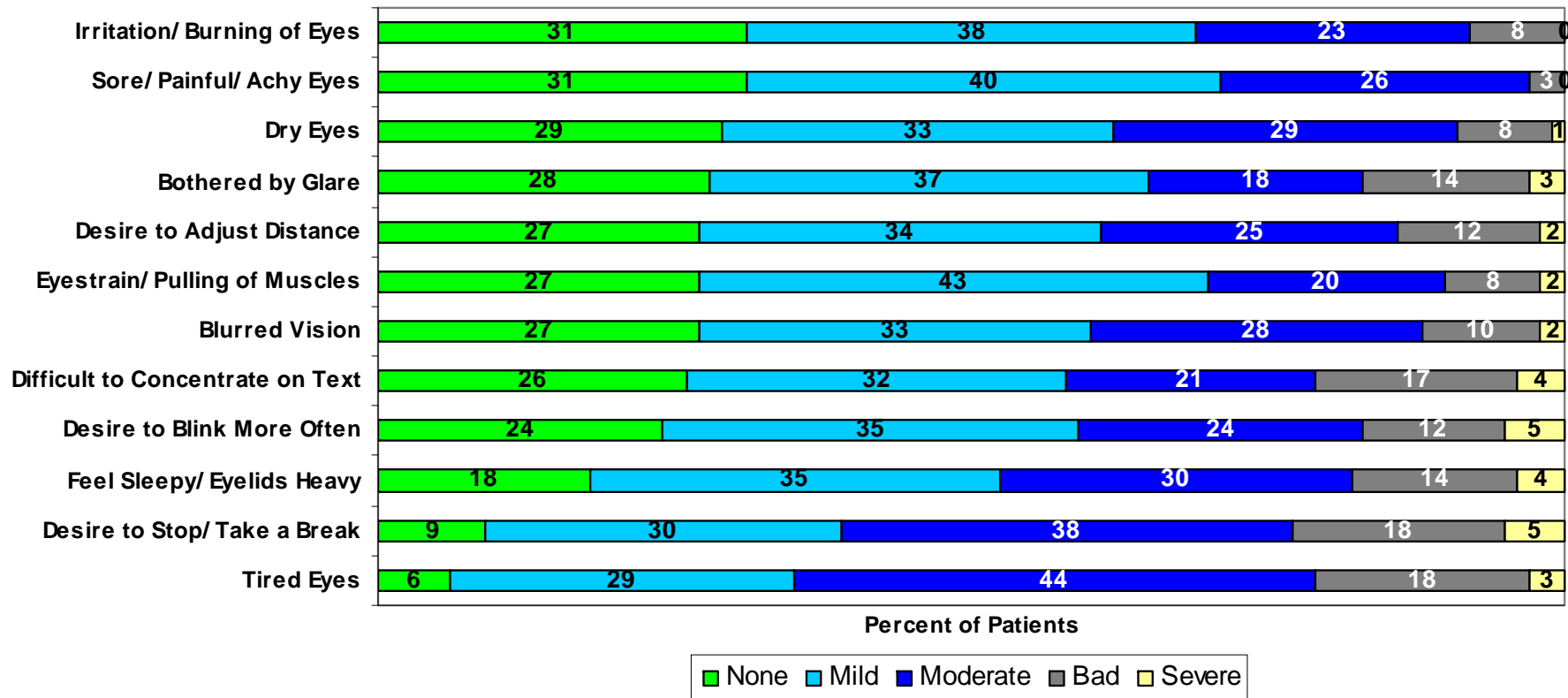
Question Text:

For each of these symptoms, circle the word that best represents the severity of each item during computer use.



Tired eyes, a desire to stop or take a break, and feeling sleepy/heavy eyelids affected more than 75% of patients at their initial visit.

Digital Sensation Ratings (Initial)



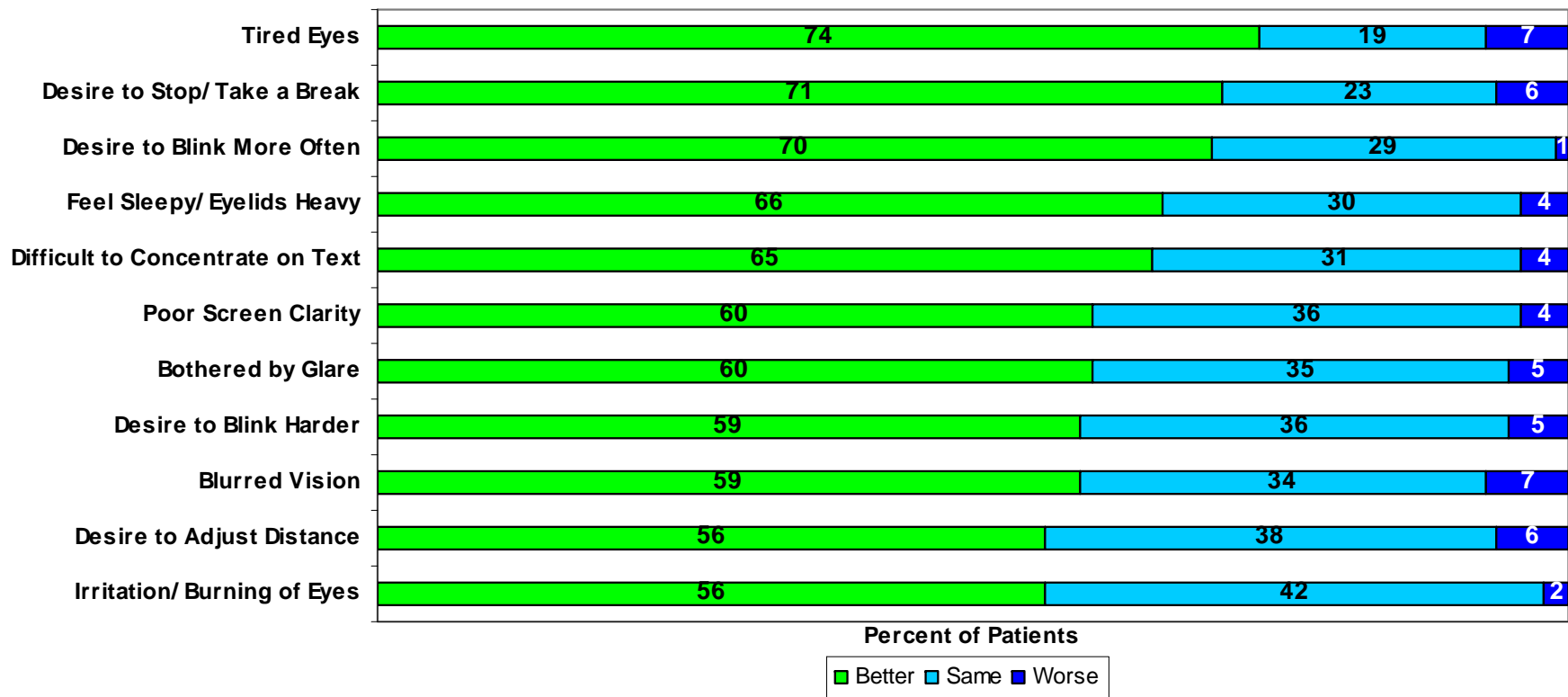
Question Text:

For each of these symptoms, circle the word that best represents the severity of each item during computer use.



Wearing the GUNNAR Digital Performance Eyewear while using the computer improved patient perceptions of their symptoms for the symptoms that bother patients most.

Digital Sensation Ratings (Change from Initial to Second Visit)

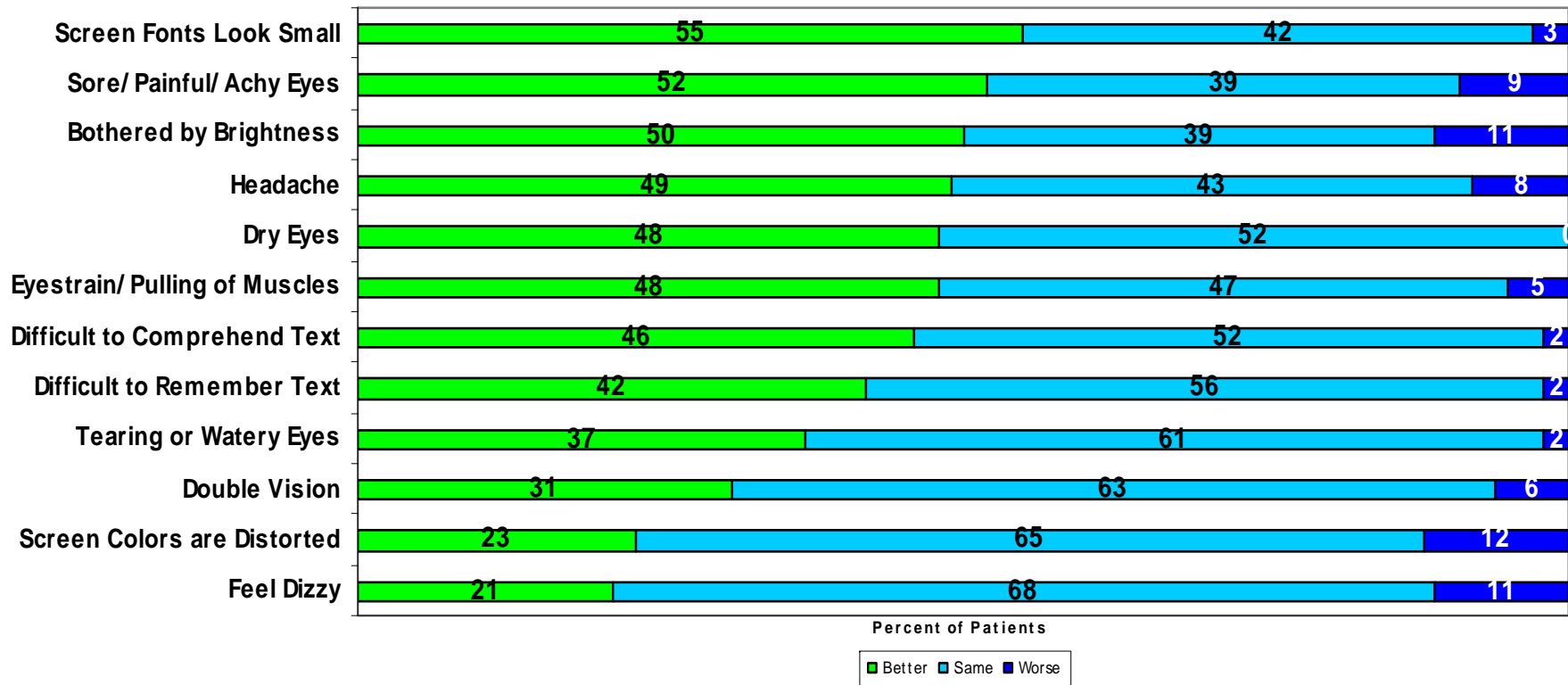


Question Text:

For each of these symptoms, circle the word that best represents the severity of each item during computer use while wearing your GUNNAR Optiks glasses. "Better" includes patients who described their symptom as 'less severe' at this visit; "Worse" includes those whose rating was 'more severe'.



Digital Sensation Ratings (Change from Initial to Second Visit)



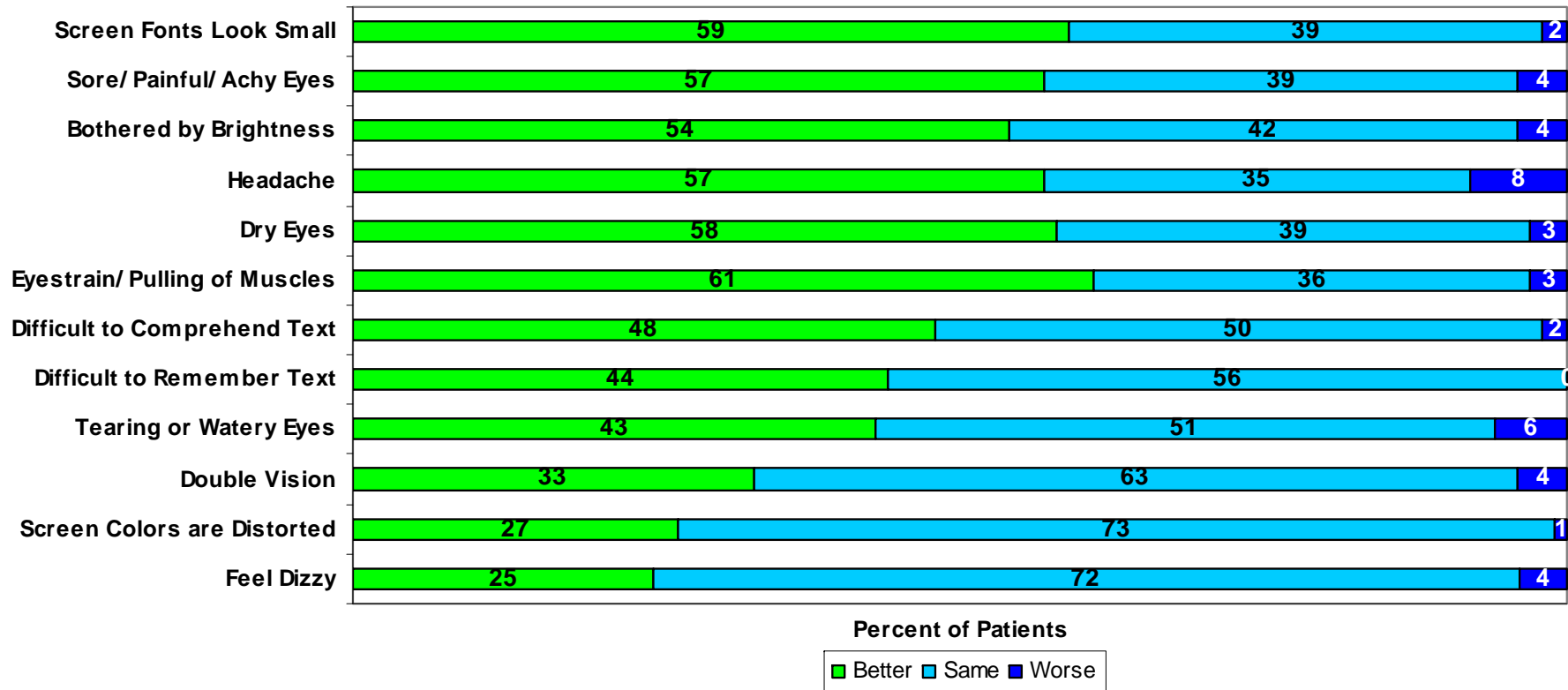
Question Text:

For each of these symptoms, circle the word that best represents the severity of each item during computer use while wearing your GUNNAR Optiks glasses. "Better" includes patients who described their symptom as 'less severe' at this visit; "Worse" includes those whose rating was 'more severe'.



Most improvements in the Digital Sensation ratings were noticed between the Initial and Second visit, with no significant improvement beyond that point.

Digital Sensation Ratings (Change from Initial to Exit Visit)

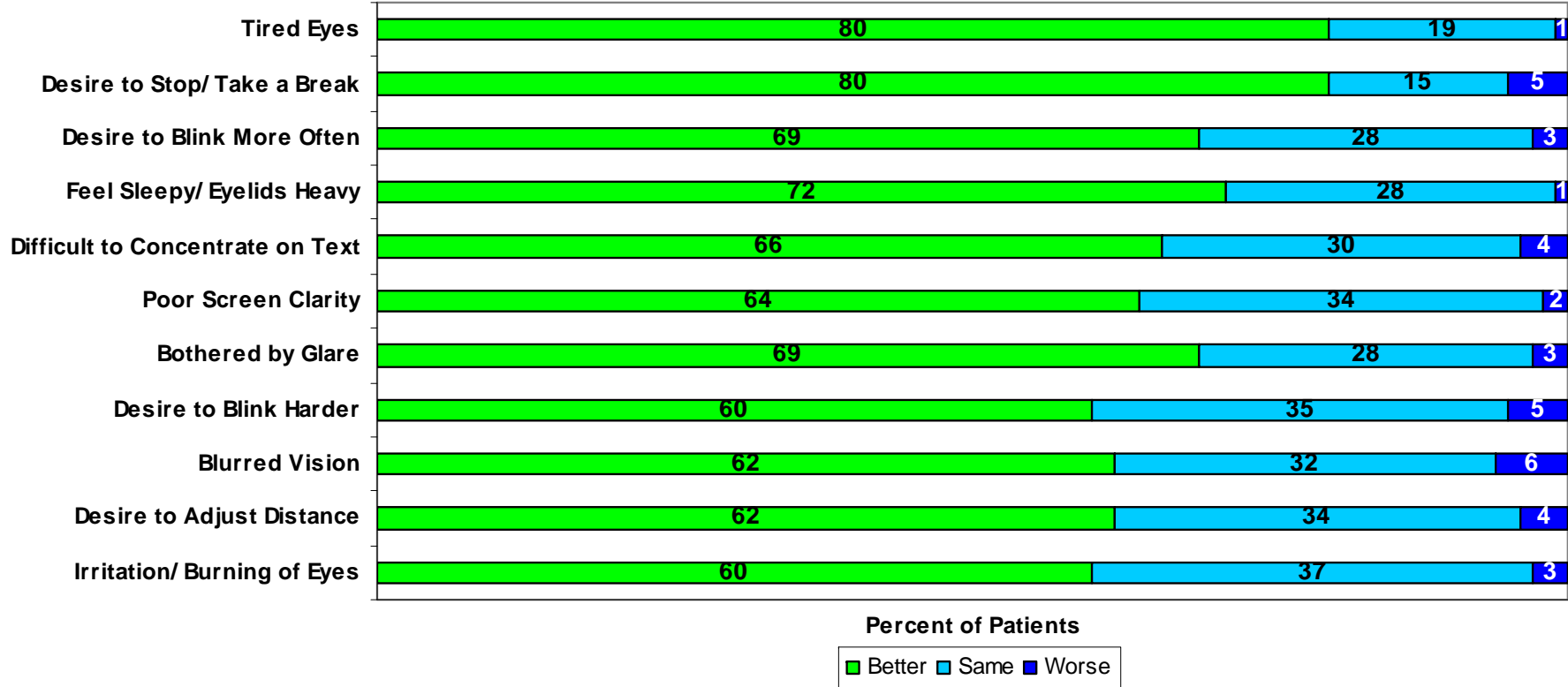


Question Text:

For each of these symptoms, circle the word that best represents the severity of each item during computer use while wearing your GUNNAR Optiks glasses. "Better" includes patients who described their symptom as 'less severe' at this visit; "Worse" includes those whose rating was 'more severe'.



Digital Sensation Ratings (Change from Initial to Exit Visit)



Question Text:

For each of these symptoms, circle the word that best represents the severity of each item during computer use while wearing your GUNNAR Optiks glasses. "Better" includes patients who described their symptom as 'less severe' at this visit; "Worse" includes those whose rating was 'more severe'.