

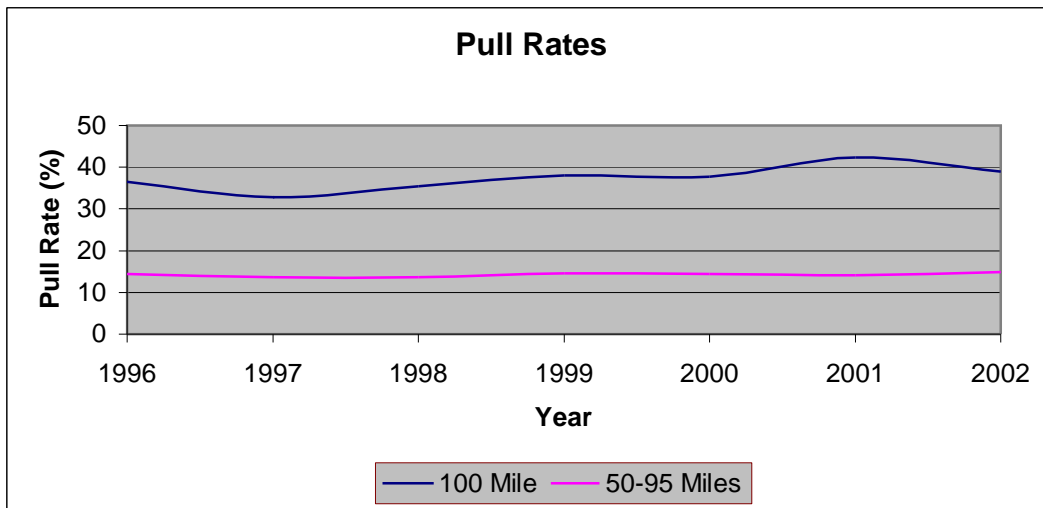
**Disclaimer: While the data comes from official AERC records – the analysis and conclusions below are not officially sanctioned by the AERC.**

### **Analysis Of Pulls From 1996 Through 2002**

**Introduction:** In a previous look at the 2002 ride season there was some interesting questions that arose – particularly regarding how the pulls were distributed for the 100 mile ride (one day) vs. the rides of endurance lesser distances. In order to address this issue the same data has been extracted from the AERC database for the years 1996 through 2001 and the data for the seven-year period 1996 through 2002 is given below. I've chosen to present this data graphically but the actual data (numbers) is available for anyone interested.

This analysis concentrated on the distribution of the pulls rather than the raw pull rates. This was done for two reasons. First the overall pull rate for a 100 is about 2.5 to 3 times greater than that for the shorter distance – hence you would the pull rates for each four categories (lame, metabolic, RO and other) would run higher. So little could be gleaned from just looking at the raw pull rates. Secondly, the more interesting question is why do people get pulled and is there a difference between the two distances as to why people get pulled. Hence the distribution of the pulls was calculated for this comparison.

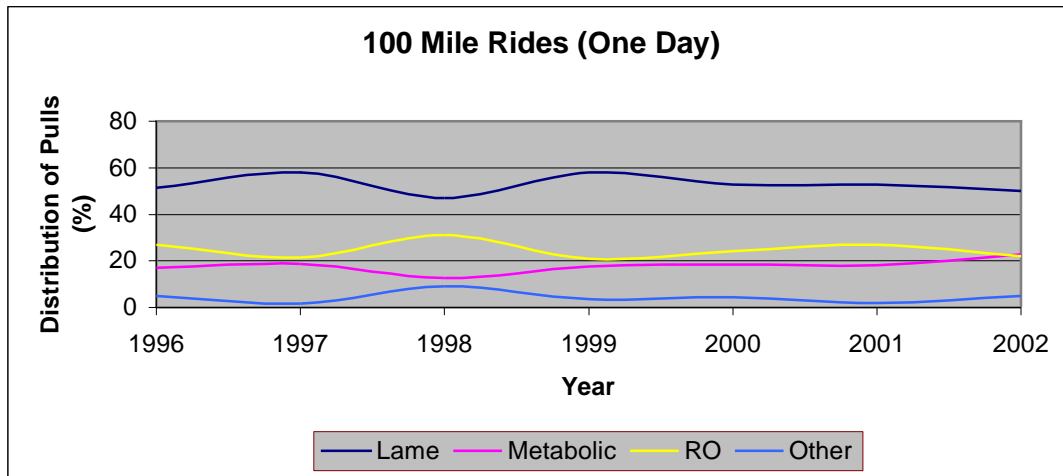
**Overall Pull Rate:** The chart below in Figure 1 is the pull rate in each of the two categories of rides. As can be seen the overall pull rate in the 50-95 mile rides has remained fairly constant over time at about 14%. There seems to be a trend of steady growth in the pull rates in the 100 mile distance since 1997, starting at 32.88% in 1997 and peaking at 42.39% on 2001. The 2002 pull rate was 39%.



Overall Pull Rates  
Figure 1

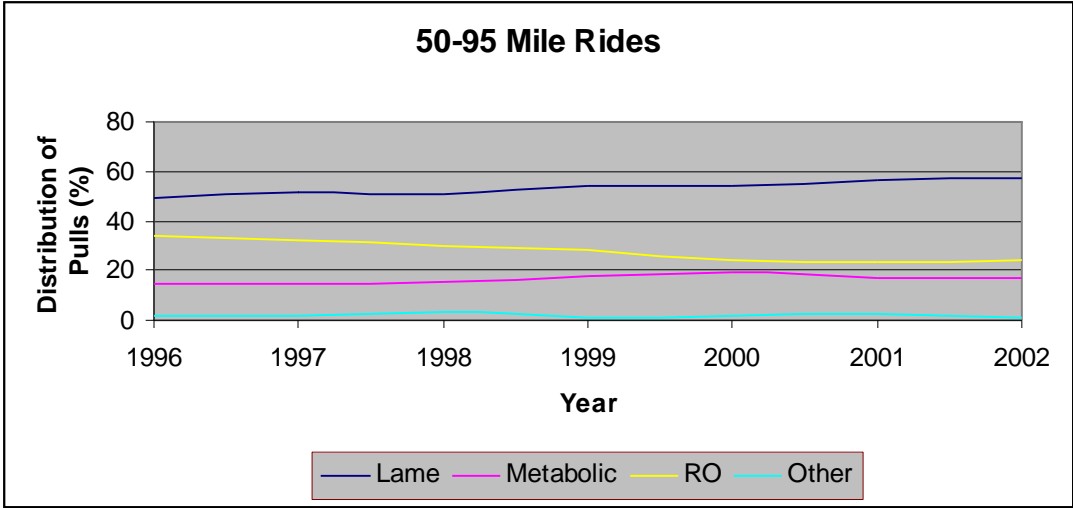
**Distribution of Pulls:** The percentage distribution of the pulls is the percentage a particular type compared to the total number of pulls. Namely it is the measure of the probability of a specific type of pull in the set of pulls. Different demands in the type of stress on the horse would more likely show up in these probabilities than in the raw probability of a pull.

In Figure 2 below the distribution of the pulls for the one-day 100 mile ride is given. The most likely pull is from lameness. The second is RO followed by metabolic and then other. It should be noted that in 1998 there was a big peak in RO and a drop in both lameness and metabolic. One has to wonder if this is more of a reporting issue – the true reason for the RO pull (M or L) was not determined. As can be seen better for a chart below from 1999 on there is a downward trend in lameness and a upward trend in metabolic as the reason for the pulls.



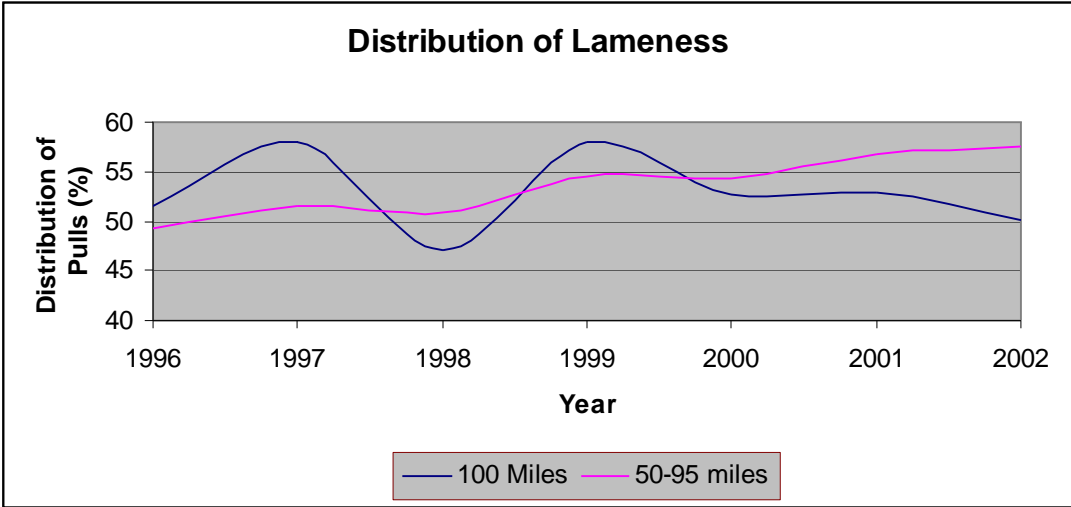
Distribution of Pulls for 100 (one day) Rides  
Figure 2

Figure 3 below is the same chart except for the 50-95 mile distance. The interesting thing to note here is the downward trend in RO pulls for this distance. This will clearer in the following chart. There also seems to be an upward trend in the lameness pulls. Is it because people are riding faster or because the RO pulls should have been lameness? Except for a bump in 2000 the metabolic pulls appear constant.



Distribution of Pulls for 50-95 Mile Rides  
Figure 3

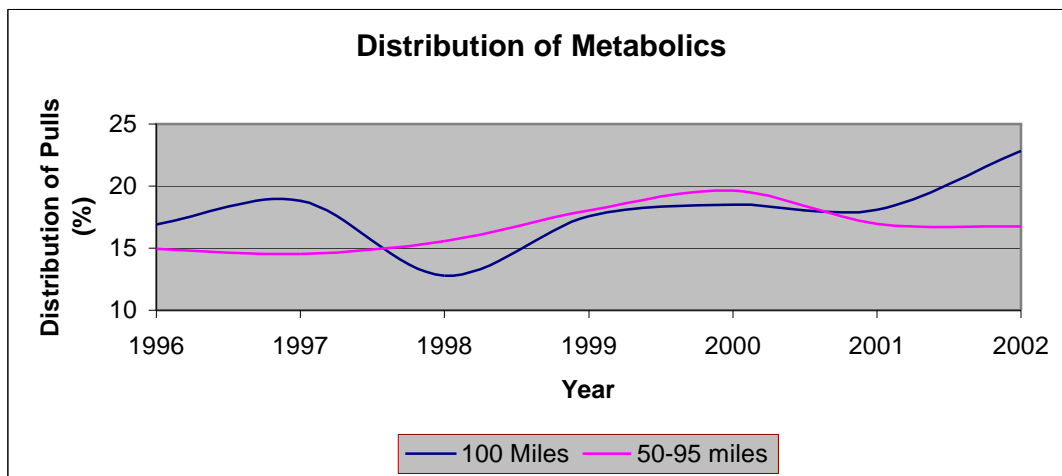
In Figure 4 below the distribution of lameness pulls are compared. The upward trend in lameness in the shorter distance is clear from this chart. For the longer distance it has had some peaks and valleys. From 2000 on there seems to be an actual trend downward – but it's too early to tell if that is an actual trend or a continuation of the fluctuations. In the shorter distances the pulls for lameness have gone from 49.26% to 57.12%. One other reason for this growth is that in the earlier years many pulls that should have been lameness or ROL may have shown up in the RO category. This is why we need good accurate reason for pulls.



Distribution of Lameness Pulls  
Figure 4

In Figure 5 the distributions for metabolic pulls are compared. The last two years shows what seems to be an upward trend in the metabolic pulls in the 100. During the years 1998 through 2000 there was a dramatic increase in the metabolic pulls for the shorter distances. It went from 15.57% in 1998 to 19.63% in 2000. At this point it has leveled off at back down to about 16.5%. However, as discussed below this could be an artifact that arose from the misuse of Rider Option.

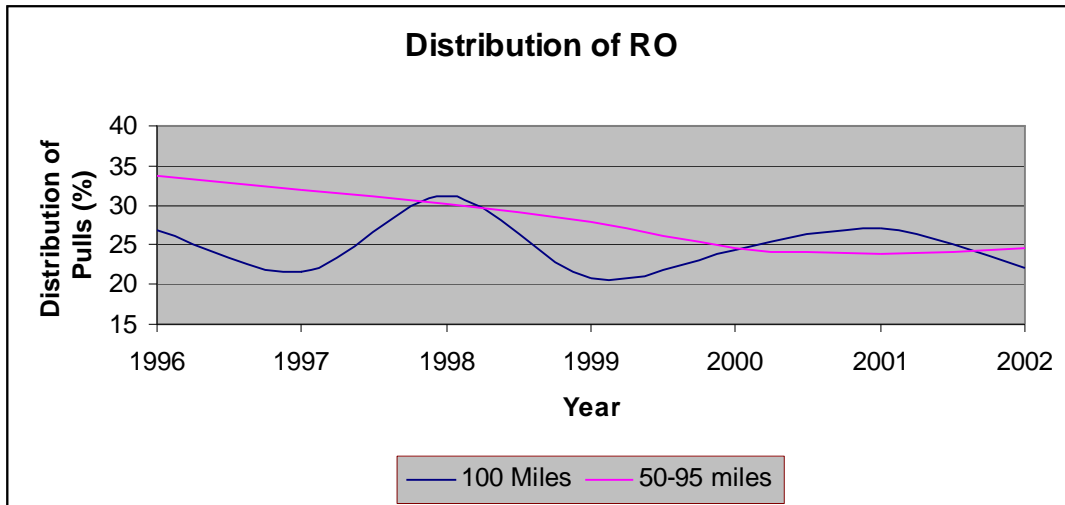
As far the 100's one would wonder if the results in 2001 and 2002 are not "indicative" that most 100 mile rides are now high profile rides? In 2001 the pulls for metabolic reasons were 18.08% of the pulls, climbing to 22.82% of the pulls in 2002.



Distribution of Metabolic Pulls  
Figure 5

In Figure 6 the distributions for rider option pulls are compared. It is quite clear that the 50 mile riders in the period of 1996 to 2000 were not in shape – they couldn't even ride 50 miles and had to pull because they were tired. A large percentage got tired and pulled as an RO. In truth this is probably showing exactly the fact that many people see a stigma in being pulled and many of these pulls should have been for either metabolic or lameness. It is no coincidence that this decline in RO as a reason for pulls correlates to a steady increase in lameness and a similar but not as dramatic growth spurt in metabolic pulls. So I suspect that some (but maybe not all) of the other trends (up to the 2000 season) for the 50-95 mile distance arise from an improper use of RO.

For the 100 mile Rides you don't see the trend, you see what looks like normal fluctuations. I would suspect that any trends you see in the other pulls in the 100 mile distance are real and not an artifact of improper pull code.



Distribution of Rider Option Pulls  
Figure 6

**What Does This Say:** First from Figure 1 it looks as if there is an overall upward trend in the pull rate for the 100 mile distance of about 10% increase over 5 years (1997 to 2001). The increase was about linear at about 2% a year during that period.

The good news is it looks like the pull rate for the 50's has remained flat – this is in spite of the fact that we have picked up over 2000 additional starts in these distances in the period of this study. That would be indicative of a less experience riders but it doesn't show up in the pull rates.

While the total pulls are flat for the 50-95 mile distance, there is an upward trend in more of these pulls being from lameness. This went up almost linearly by 8% over the 7 year period. However, the RO pulls in this category went down about the same amount in the same period. Hence the question is was this increase in pulls from lameness from actual lameness or from the misuse of the RO pull being phased out?

The thing that is the most interesting is what appears to be a developing trend. Looking at the last two years (2001 and 2002) where there no longer looks to be an RO misuse issue, a rider pulled in a 100 mile ride would be less likely to be pulled for lameness than one in the shorter distance (52.9% to 56.85% and 50.12% to 57.63%) and a rider in a 100 mile ride would be more likely to be pulled for metabolic problems than a rider in the shorter distances (18.08% to 16.97% and 22.82% to 16.76%). . What does this say about the stresses of the 100 vs. the shorter rides, preparation of the horses, feeding of the horses, the trail, the speed, etc.?