To determine which graph best displays the distribution of the proportion of hits, allowing the baseball fan to describe the shape, center, and spread of the variable, we need to consider the following:

1. \*\*Shape\*\*: The graph should show the overall pattern of the data, whether it is symmetric, skewed, or has multiple modes.

2. \*\*Center\*\*: The graph should make it easy to identify a measure of central tendency, such as the mean or median.

3. \*\*Spread\*\*: The graph should illustrate the variability or dispersion of the data, such as the range or standard deviation.

Let's analyze each option:

- \*\*Option A\*\*: This is a bar chart where each bar represents a player's proportion of hits. While it shows individual values, it does not provide a clear view of the overall distribution, center, or spread of the data.

- \*\*Option B\*\*: This is a histogram with bins that group the proportions of hits. It provides a good view of the distribution's shape, showing how the data is distributed across different ranges of proportions. The center can be estimated by looking at where the highest bars are, and the spread can be seen by the range of the bins.

- \*\*Option C\*\*: This is a dot plot where each dot represents a player's proportion of hits. While it shows individual data points, it is less effective at showing the overall distribution shape compared to a histogram.

- \*\*Option D\*\*: This is another histogram, but it appears to have different bin widths or a different scale compared to Option B. It still provides a good view of the distribution, but the choice of bins might affect the clarity of the shape, center, and spread.

Given these considerations, \*\*Option B\*\* is the best choice because:

- It clearly shows the shape of the distribution through the histogram format.

- The center can be easily estimated by looking at the peak of the histogram.

- The spread is visible through the range of the bins.

Therefore, the correct answer is:

\*\*B\*\*