You have an order for Staphicillin 125mg lm qid. You have a 5ml vial containing 1g of Staphicillin in powder form. The directions read: “add 1.5ml diluent to yield 2ml reconstituted solution.” How much Staphicillin will you give per dose?

1. Write down the given information
   - 125mg per dose
   - 5ml vial contains 1g (5ml is the capacity of the vial and is not needed in this calculation)
   - 1.5ml diluent yields 2ml solution

   Note: you will give the patient the solution of Staphicillin, not the powder form. Therefore, 4.5ml diluent is irrelevant. The important value is 2ml solution.

2. You need to calculate the amount of Staphicillin (in ml) to give per dose. Therefore, start the dimensional analysis with ml. The problem states that 1gram of Staphicillin will yield 2ml of solution, which is expressed in ratio form as:

   \[
   \frac{2\text{ml}}{1\text{g}}
   \]

3. You must get rid of grams to leave only ml in the final answer. Therefore, the next calculation will involve using 125mg. To cross-cancel mg with g, convert the g to mg.

   \[
   \frac{2\text{ml}}{1\text{g}} \times \frac{1\text{g}}{1,000\text{mg}} \times \frac{125\text{mg}}{\text{dose}}
   \]

4. The final answer will contain \( \frac{\text{ml}}{\text{dose}} \), which are the desired units. You can now perform multiplication.

   \[
   \frac{250}{1,000} = \frac{0.25\text{ml}}{\text{dose}}
   \]