

# EVALUATING THE IMPACT OF DISEASE MANAGEMENT AT THE POPULATION LEVEL

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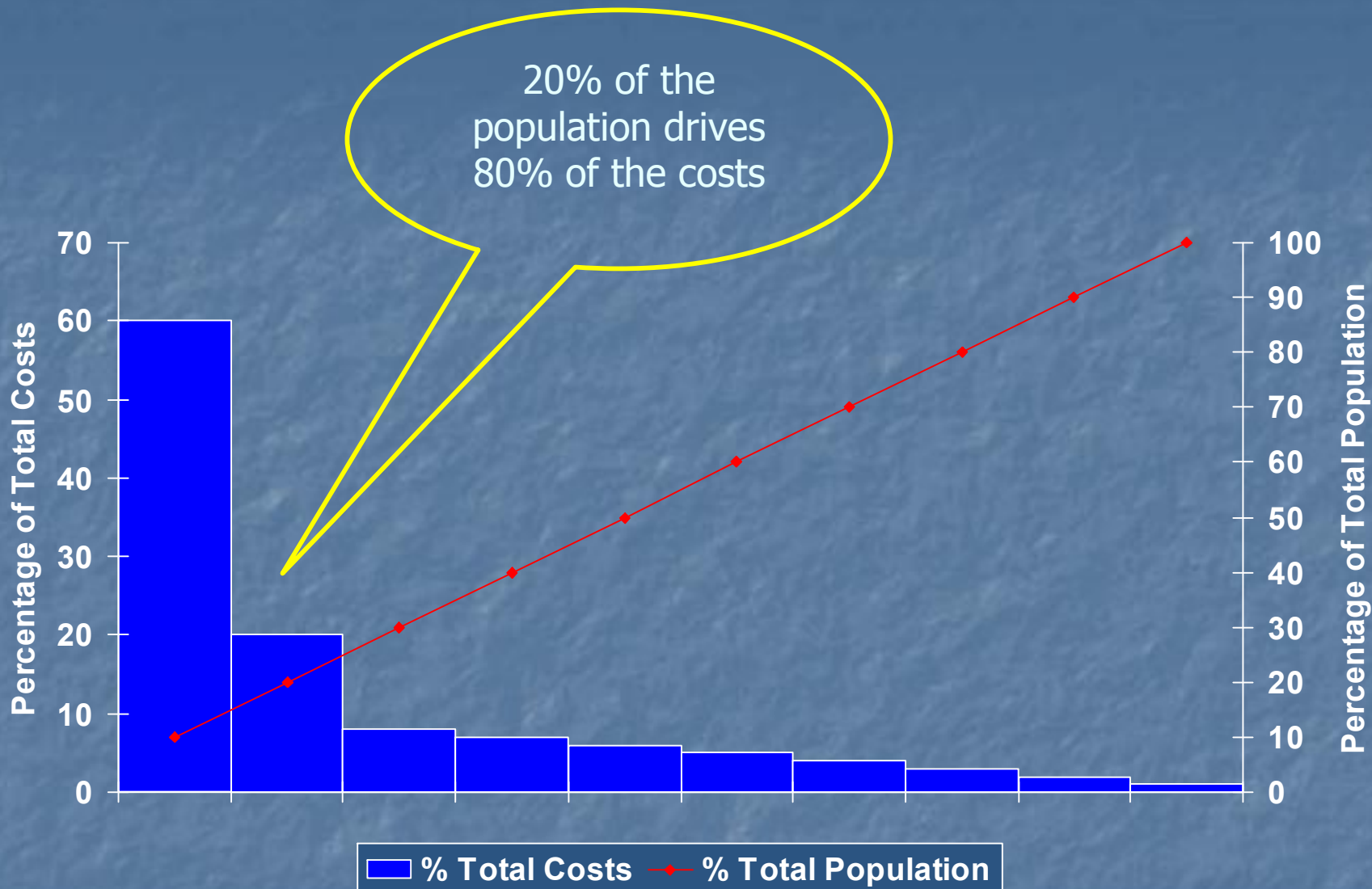


# The Conceptual Basis

If a DM program is effective at the population level, we should see:

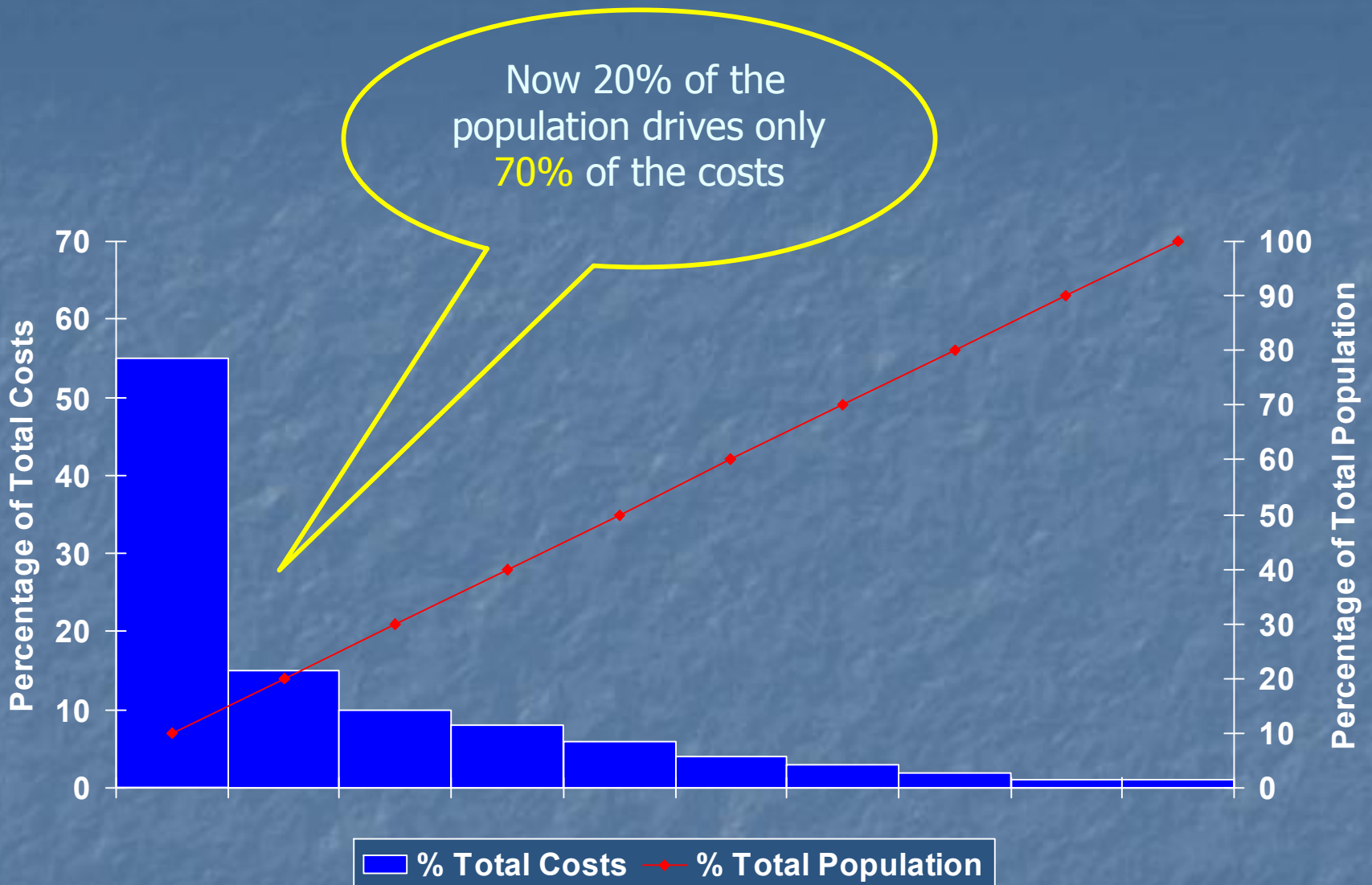
1. A decrease in the relative costs of the highest-risk (top 20%) of the population, and
2. a decrease in the number of DM “suitables” within that top 20%





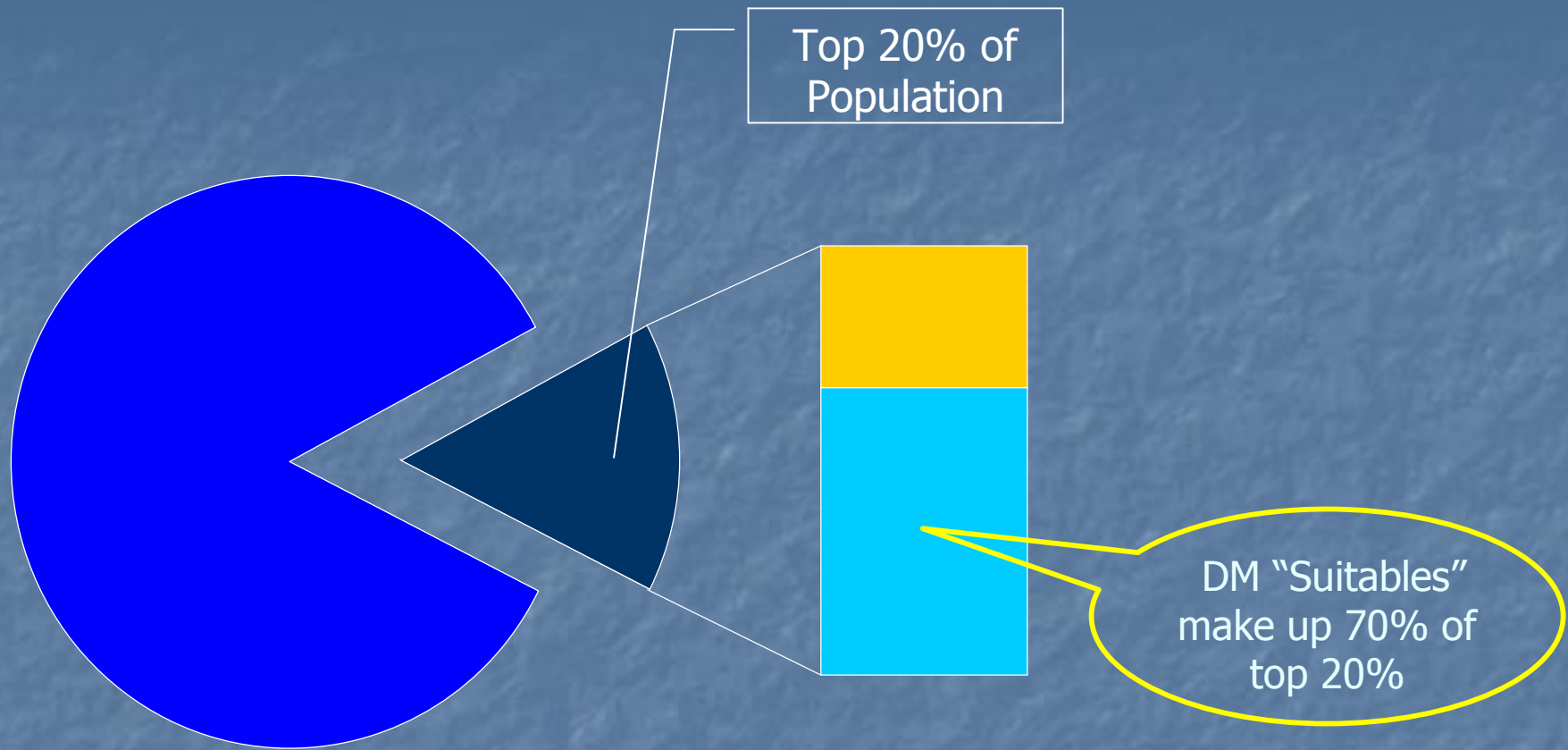
**FIG 1. Hypothetical distribution of costs across the population before DM implementation**



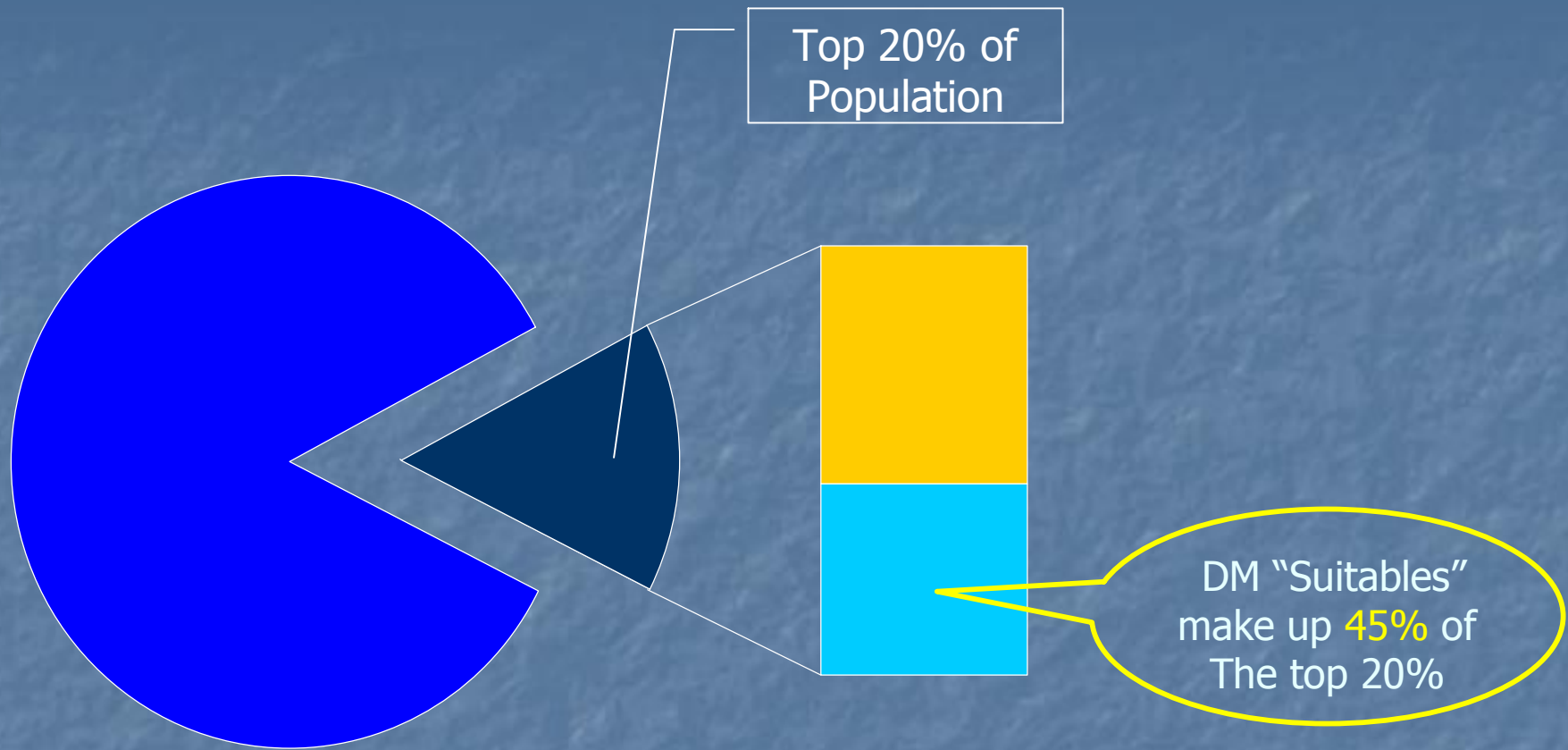


**FIG 2. Hypothetical distribution of costs across the population after program year 1**





**FIG 3. Hypothetical baseline distribution of DM "Suitables" in the top 20% of the population driving 80% of the costs.**



**FIG 4. Hypothetical distribution of DM "Suitables" in the top 20% **after** Program year 1.**



# What about Regression to the Mean?

- With RTM, there would be little or no change at the highest and lowest percentiles because of “migration.”
- If the program was effective at the population level, there would be only a decrease in the highest percentiles (with a possible slight increase of those unmanaged lower risk members).



# Controlling for Turnover

- The population's turnover-rate is an important factor to control for. We look at this via:
- Changes in disease *Prevalence* from baseline to end of each program year.
- Changes in disease *Incidence*



# Additional Possibilities

- Plan administrators can estimate the impact of their medical management strategies by the “percentage of the population intervened upon”:
- If we know that  $X\%$  of the population receives the intervention, and it results in a  $Y\%$  decrease in the top tier’s contribution to total costs, an economic model can be developed to estimate the level needed to maximize savings potential.

