A-Kins Newsletter 2025

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A-Kins Analysts and Project Managers

www.a-kins-analysts.com

What do we do?
we are a specialty provider of
Healthcare Reform Consulting Services.

.....implementing projects for the complete physical, mental and social wellbeing of all
–Optimal Wellbeing.

Special points of interest:

- *For US Healthcare Population Distribution think in 15%s*
- *Take Care of the Outliers*
- *A Fine Balance of the budget is important*

Inside this issue:

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The Bell Curve

US Healthcare Population Distribution

The Bell Curve

The population of the world has been described by statisticians including Carl Friedrich Gauss's theorem in 1733, as being in the likeness of a normal population distribution curve. Gauss described, a central limit probability theorem that ends up in a binomial distribution like a "bell". The Gaussian bell curve.

The normal population distribution curve, that is, the bell curve, comes with certain statistical assumptions of the population being assessed. The bell curve population distribution assumes the mean, mode and median of the population in question are all equal in number, hence the central tendency and binomial distribution nature, mirror image of the bell curve, using the least square statistical method. The bell curve also describes the normal population distribution as being within three standard measures (standard deviations -SD) from the mean (+3SD and -3SD).

BELL CURVE: Expected and Observed

The name "normal population distribution curve" means the curve is the **EXPECTED** normal distribution of the population. The population observed can therefore be compared to the norm, and described as either fitting the norm, as a normal bell curve distribution, or as skewed, slanting to the right, or slanting to the left of the normal bell curve, when compared to the normal distribution. This can be called the **OBSERVED** distribution of the population.

The Bell Curve

Mean = Mode = Median

Mean: The average number in a distribution of population. *Usually calculated by dividing the total amount of population by how many times each population appears in the distribution (frequency).*

Mode: The most frequent number that appears in a distribution.

Median: The middle value of an arranged distribution (a distribution usually arranged in ascending order).

Three of the important bell curve normal distribution assumptions include:

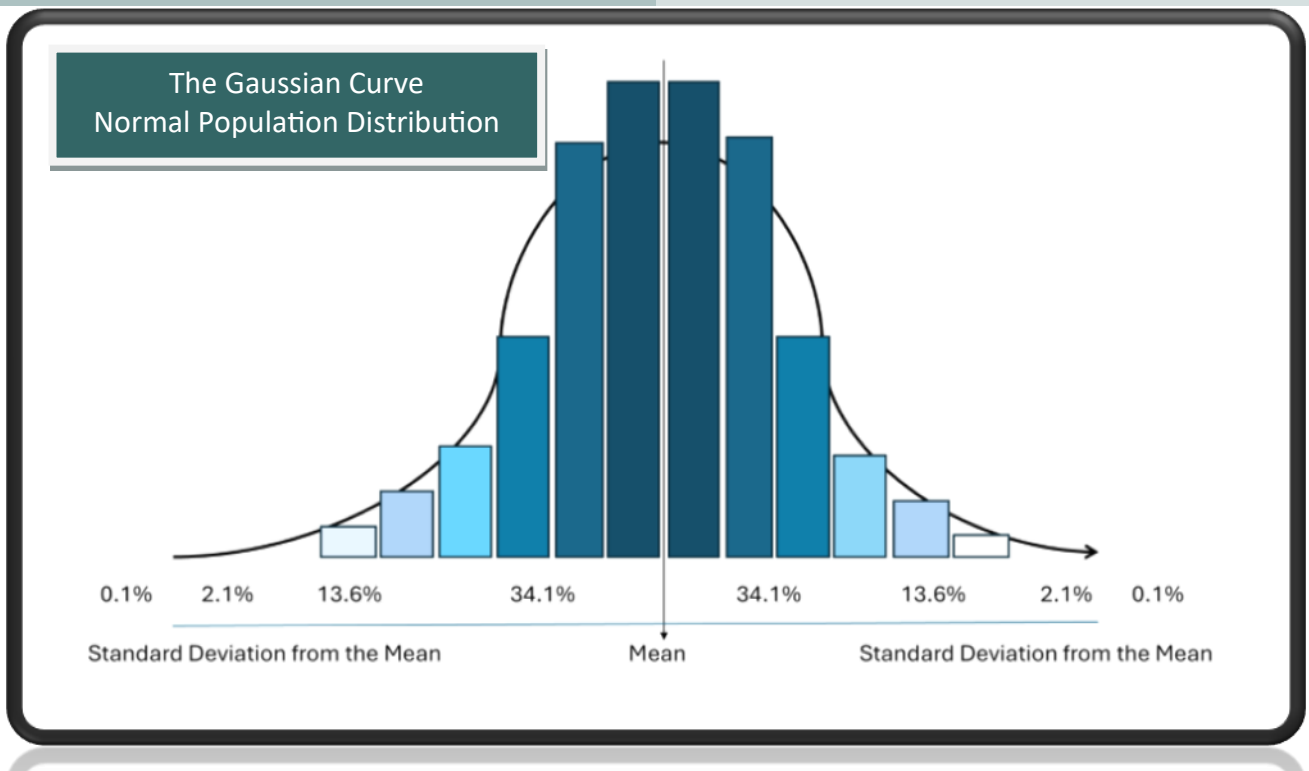
1. Normal Population Distribution is Expected

2. Mean = Median = Mode

3. Almost all of the population fit into +3 & -3 Standard Deviations from the Mean

The Bell curve is widely used in statistics and in many professions. Professions like economics, business management, marketing, finance, social media, sociology, politics, journalism, engineering, and healthcare use bell curve statistics to compare the observed versus expected population distribution and predict outcomes. The population is observed and compared to what is expected of the population, the norm.

In healthcare, when thinking of a particular population's health, one could create the expected popula-



tion bell curve distribution using known population age and disease mean, mode and median. Once the population normal curve is determined, one could compare this norm or EXPECTED population distribution to the OBSERVED distribution of disease, that is, the disease prevalence. One could also PREDICT what would happen if the disease changes course or the population distribution changes, while acknowledging particular assumptions for the particular population distribution in question.

Observe, Expect Predict

When what you Observed is approximately what you Expected you can Predict the Healthcare Population Distribution with Assumptions……..

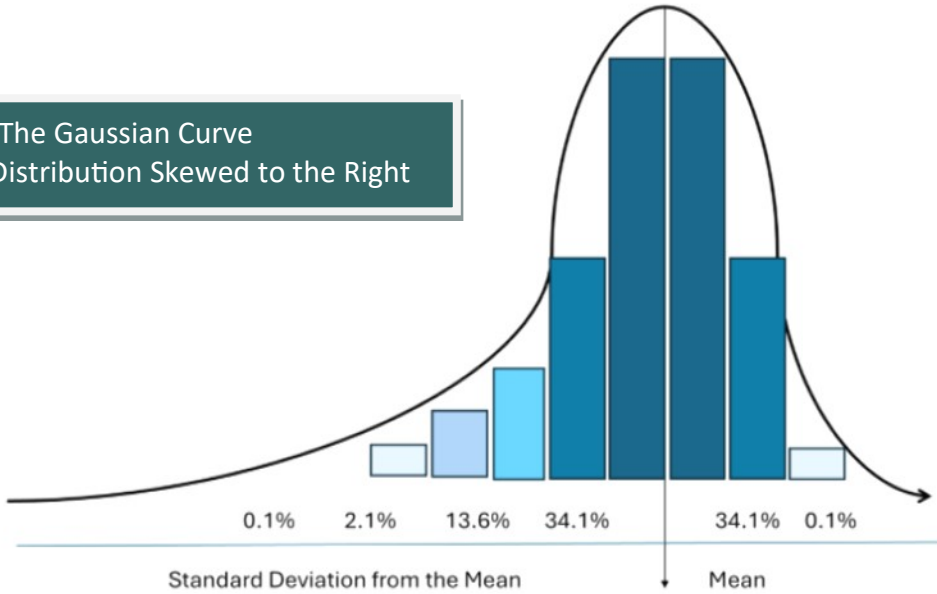
The Outliers

The bell curve has two outlier sections that are equal and opposite, for example, new life versus death, excellent health versus poor health, low versus high socio-economic healthcare, and for healthcare costs, expensive and cumbersome versus cheap and preventive health. A fine balance is important in healthcare when comparing population distribution.

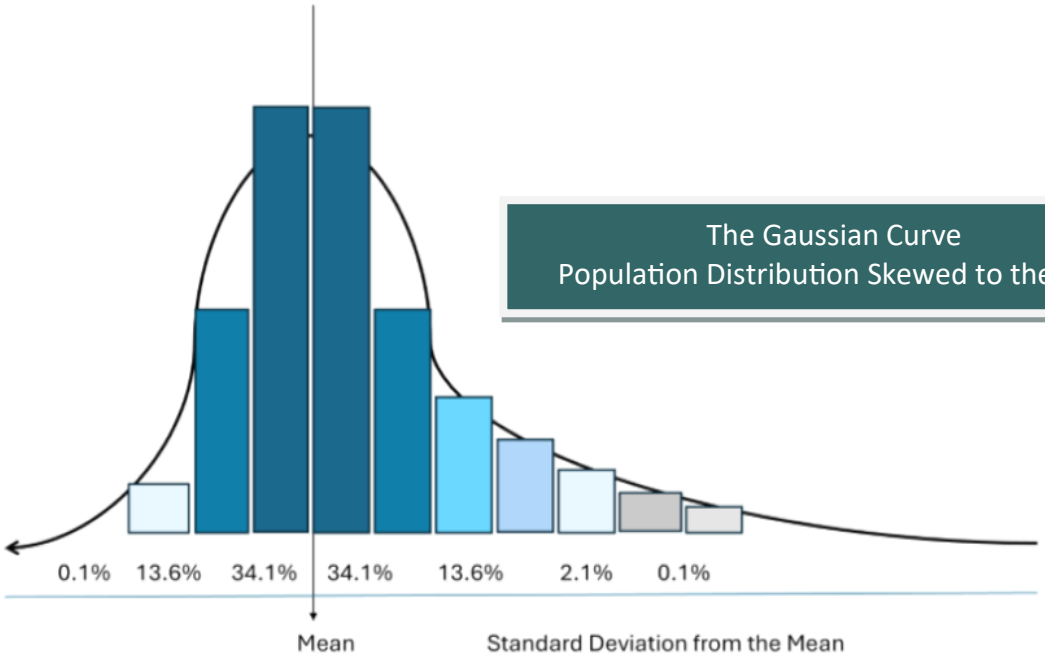
Think in 15%s

If each bell curve outlier section is approximately ~15% of the population (a point estimate of

The Gaussian Curve
Population Distribution Skewed to the Right



The Gaussian Curve
Population Distribution Skewed to the Left

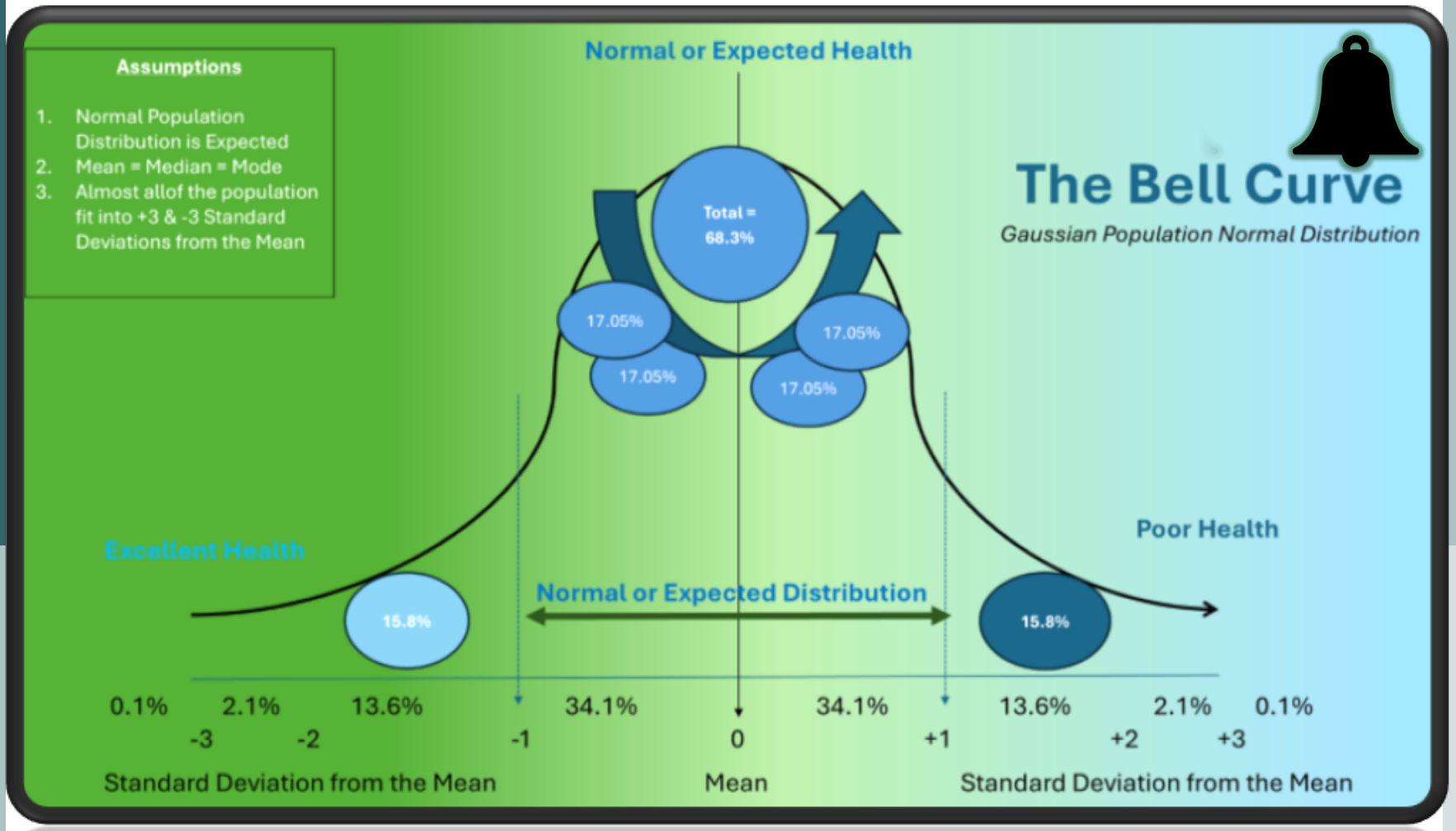


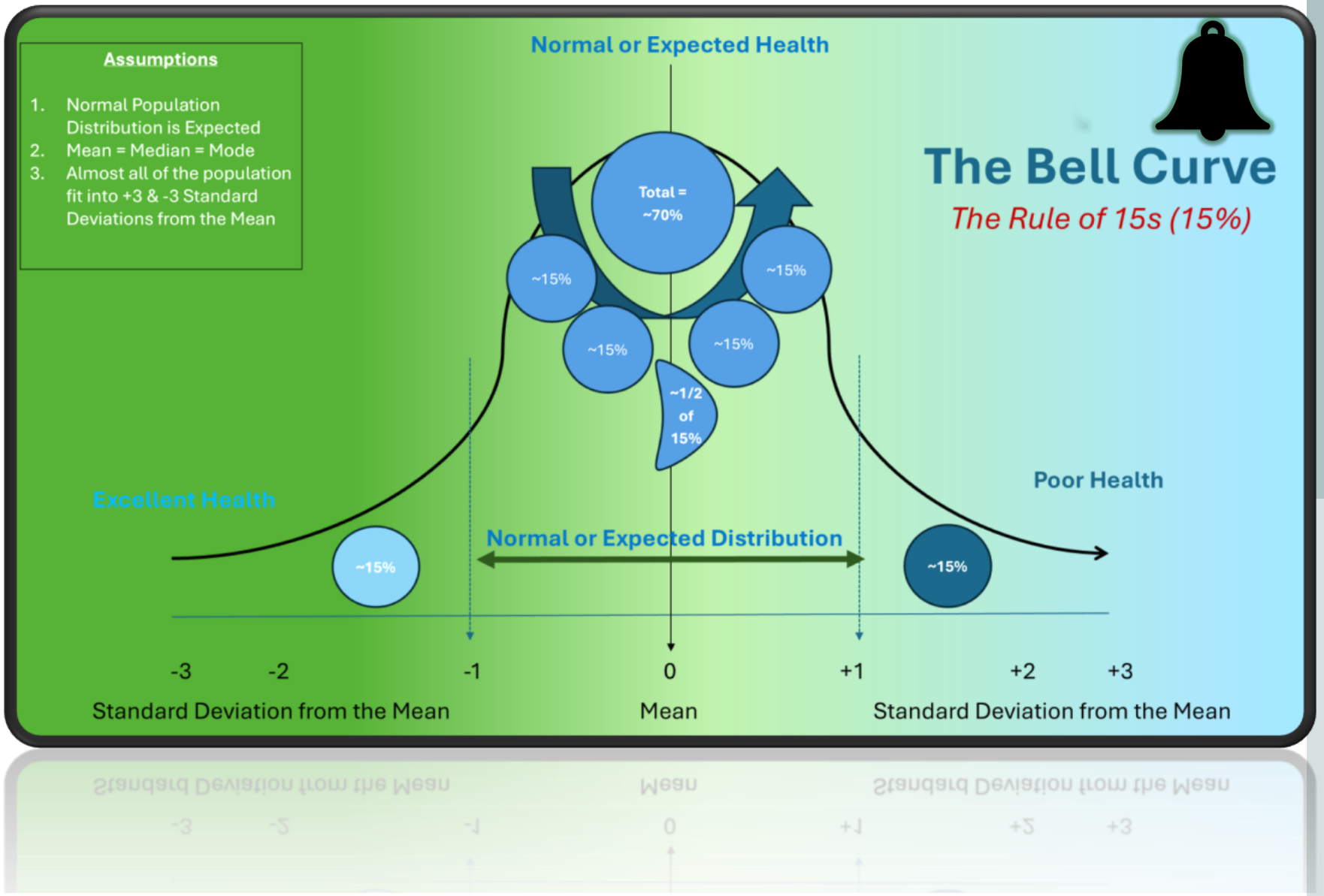
17.05%), in the mirror image binomial distribution, that is, ~15% of the population is expected to be in the excellent health section and another ~15% in the poor health section. That leaves approximately ~70% (a point estimate of 68.3%) in the normal distribution or expected section, depending on where the mean, mode and median for that particular population lies, slanting or skewed to the right or left. The ~70% normal distribution is also usually binomial, having a mirror split image, and so can be split into two ~34.1%s or four and a half (4.5 X) 15%s.

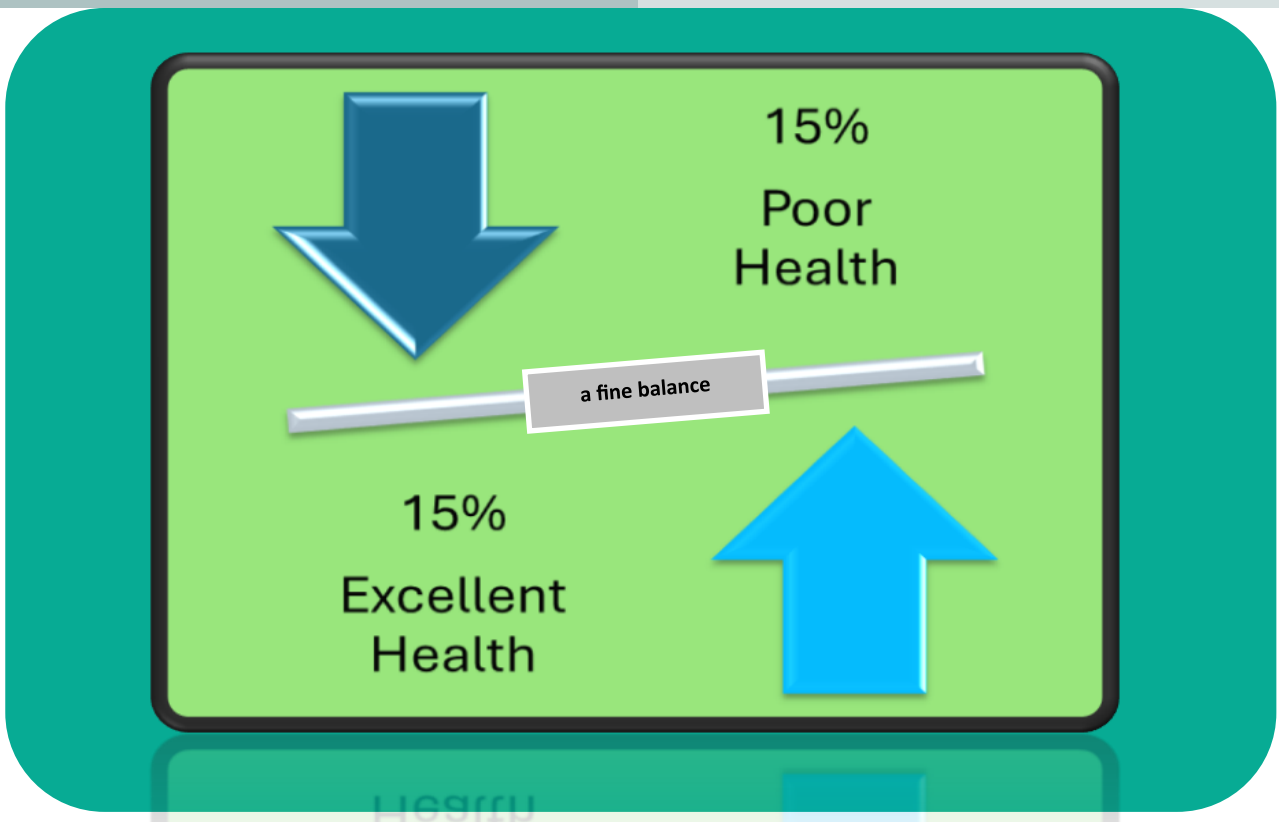
Think in 15%s

- -15% = Excellent Health Outlier
- Normal or Expected Distribution = 4.5 X 15%s
- +15% = Poor Health Outlier

Therefore, for a normal bell population curve distribution, most of the population, 99.9% is expected to fit into the normal curve distribution. However, when you think in ~15%s you will have approximately six and a half (6.5 X) 15%s and a total of ~97.5% fitting or approximately ~15%, ~70% and ~15%, a total of ~100%, depending on where the mean, mode and median of that population lies. This helps give a visual overview of the population distribution and help with intervention decision making.







EXPECTED: Health Economics

In Health economics one takes advantage of the binomial nature of the bell curve, that is the mirror image of the curve, to pay the bills. As explained in prior newsletters, a fine balance where the healthy pay for the poor in health, always pays the bills, creating a fine balance in preventive healthcare.

(A) Payment Plan: -15% pay for +15%

The outliers can pay for each other, those with excellent health (~15%) could have preventive healthcare and pay for those with poor health (~15%).

Health Economics

.....a fine balance in budget

- The healthy pay for = the ill
- The rich pay for = the poor
- The children pay for = the elderly

In United States (US), there is however a problem when only the outliers come to play for the government and neither of the outliers pay. For example, in US, the excellent healthcare could be children under 18 years also known as children health insurance care (CHIP), and the poor healthcare could be the adults over 64years also known as Medicare. In order for there to be a fine balance, the preventive health plan should pay something to balance the poor health. The Health Insurance market has the remaining ~70%.

The outliers can pay for each other, those in ~15% high socioeconomic areas assumed to have excellent health could have preventive healthcare and pay for those in ~15% low socioeconomic areas assumed to have poor health. In Africa, this is used widely. Here the rich pay for the health of the poor amongst them, while paying for their own health needs.

In the US however, there is a problem. The two outliers do not balance each other out. Those in high socioeconomic areas ~15% have market healthcare insurance, while those in low-socioeconomic areas ~15% depend on the government for their healthcare insurance, Medicaid. The middle-class areas ~70% are also in the healthcare market insurance. Hence, ~85% are in the healthcare insurance market.

(B) Payment Plan: +70% pay for +15% and -15%

In the normal distribution of the bell curve, 34.1% of the population have average health and 34.1% of the population have good health. A total of four and a half (4.5 X) 15%s (~70%), pay for ~15% poor health outlier made up of non-paying senior citizens (Medicare) and ~15% excellent health outlier made up of non-paying children (CHIP). There is always surplus in this community, ~70% versus ~30%.

Unethical

it is unethical to do nothing about the healthcare of the Outlier distribution +15% who are usually poor, with low socioeconomic status and are assumed to have poor health or are elderly

This is mainly in Europe where they use the all-or-none-system. Europe finds paying for "ALL" cheaper than paying for expensive emergency visits and end-of-life care of those without healthcare insurance.

In the US, there is however a problem since the health insurance market has ~70% and the government has only ~15% CHIP and ~15% Medicare outliers, and neither of the outliers pay. There is no balance here, and even a very rich government finds this expensive to sustain.

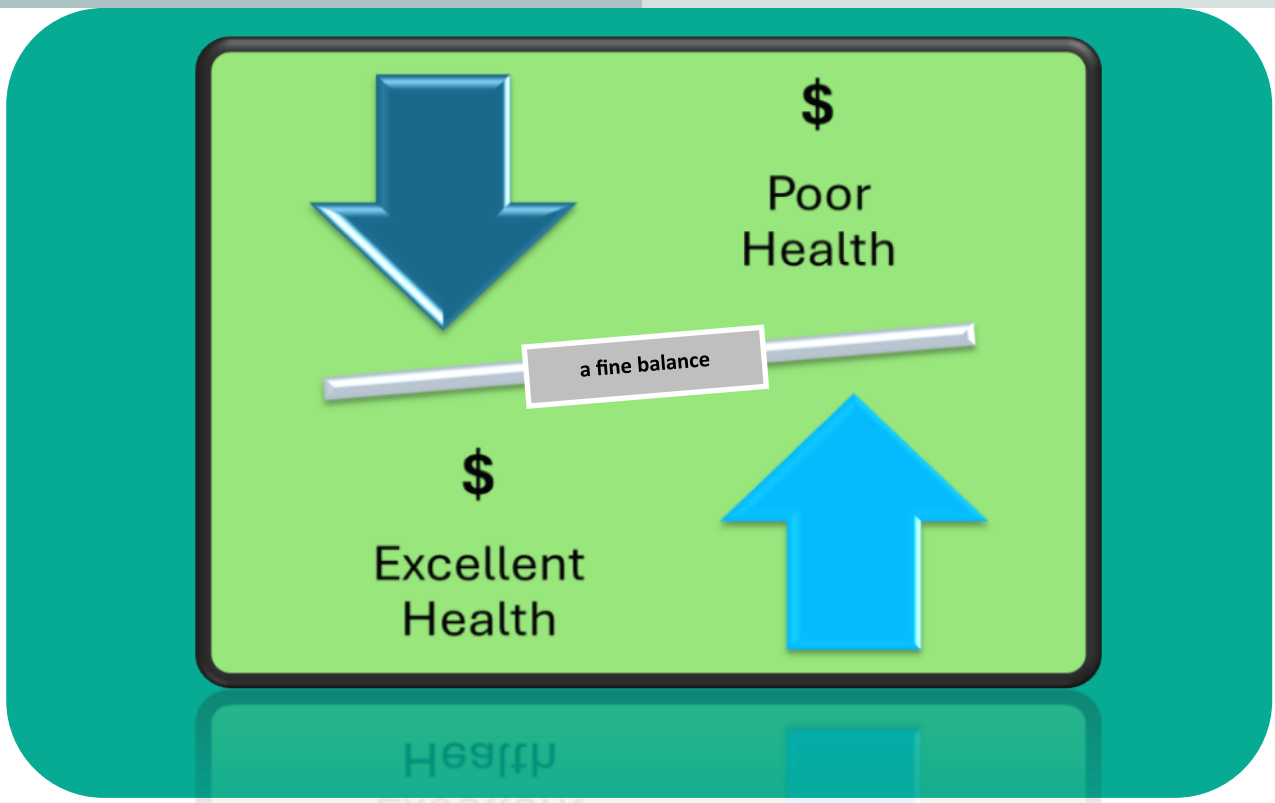
The US healthcare market, however, has 85% paying population distribution ranging from excellent healthcare (~15%), very good healthcare (~34.1%) to good healthcare (~34.1%) in the healthcare insurance market. This maximized profit model of the US healthcare insurance market is not balanced and so, not sustainable.

(C) Payment Plan: -15% pay for +15% or +85% pay for +15%

Here there is some form of corporate tax paid by ~15% high socioeconomic areas with good health, with an intent to balance off ~15% low socioeconomic areas with poor health.

Or

The other alternative is to take from the ~85% guaranteed profit from the excellent healthcare (~15%), very good healthcare (~34.1%) and



good healthcare (~34.1%) and pay for government programs for the children, senior citizens, and the poor. This is like paying forward to Medicare and Medicaid till you need it in the future. Something like social security of healthcare insurance. This is sustainable and guaranteed.

OBSERVED: Current US Healthcare System -the US Government pays for +15%

Currently in the US, the Government takes care of healthcare insurance for non-paying children, the elderly, and the poor. These are all the major forms of ~15% outliers, made up of the poor healthcare section of the bell curve, except for the children who are assumed to be healthy but still taken care of by the government, with no means of reimbursement or balancing the healthcare budget.

The current US healthcare system is too expensive for the government, but good business for the healthcare market. The current US healthcare insurance market, getting away with a total of ~85% healthcare insurance funds annually, divided into ~15% healthy rich with excellent health and ~70% very good and good health individuals, ready to pay a fee for their healthcare. The market does not need to balance up any budget, with the elderly, poor in health or low socio-economic areas, because the government takes on that burden, maximizing the ~85% profit for the healthcare insurance market. Here the government is working for the market and not for the people.

Finally it is UNETHICAL to do nothing about +15% who are usually poor, with low socioeconomic status and assumed to have poor health or are elderly. It is unethical to stand by and watch people within the ~15% poor health population distribution die!

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Write to Editors

Author: A-Kins Analysts and Project Managers

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