

THOUGHTS ON
INNOVATION FROM
AN AEROSPACE
GROUPE

*Primum non
nocere*

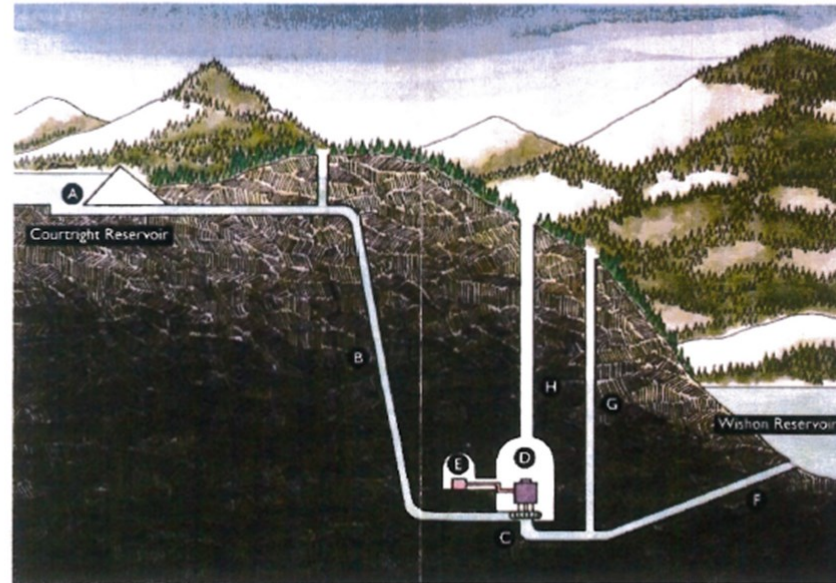
My Father's Plane.....



Love at first date...

Helms Pumped Storage Plant is in its 25th Operating Year

Location	Central California, about 50 miles east of the City of Fresno
Commission	June 30, 1984
Upper Reservoir	Courtright Lake 123,000 Acre Feet
Lower Reservoir	Lake Wishon 129,000 Acre Feet
Installed Capacity	Three units; 1,212 MW generating; 930 MW pumping
Average Energy	<100 GWh per year (natural in-flow)



A-Courtright, B-Supply Tunnel, C-Turbine, D-Generator, E-Transformer, F-Wishon, G-Surge Chamber, H-Elevator

The Value Equation

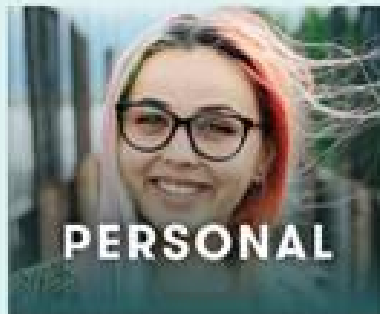
▶ Quality x Satisfaction = Value

▶ Cost

Sutter four key outcomes



Zero Harm



Patient Experience



Lives Touched



Total Cost of Care

Primum non nocere



The Oath of Hippocrates

L SWEAR by Apollo the physician, and Aesculapius, and Health, and All-heal, and all the gods and goddesses, that, according to my ability and judgment, I will keep this Oath and this stipulation — to reckon him who taught me this Art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required; to look upon his offspring in the same footing as my own brothers, and to teach them this art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction, I will impart a knowledge of the Art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others. ¶ I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to any one if asked, nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practise my Art. ¶ I will not cut persons labouring under the stone, but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption; and, further, from the seduction of females or males, of freemen and slaves. ¶ Whatever, in connexion with my professional practice, or not in connexion with it, I see or hear, in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this Oath unviolated, may it be granted to me to enjoy life and the practise of the art, respected by all men, in all times! But should I trespass and violate this Oath, may the reverse be my lot!

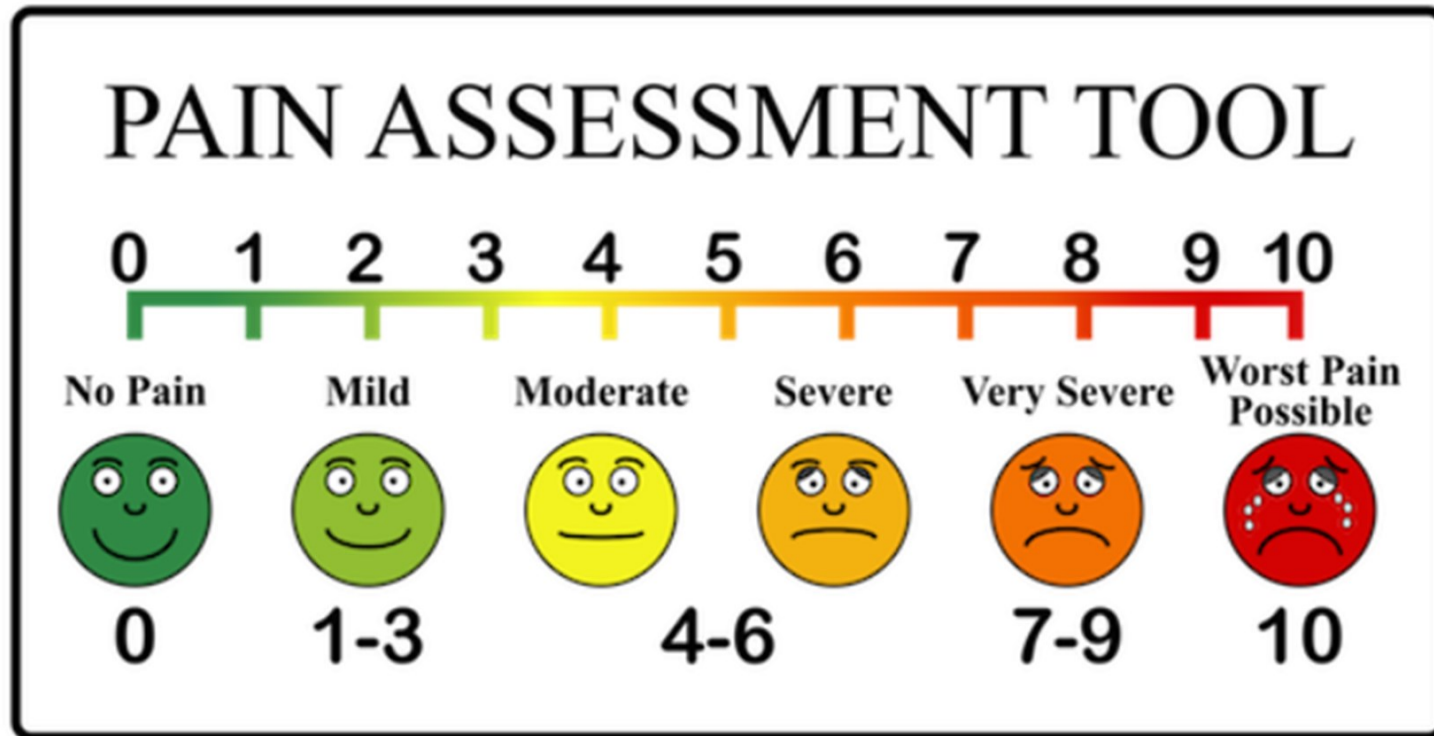
From The Genuine Works of Hippocrates translated from the Greek by Francis Adams, Surgeon, volume 2, London, 1849

The above oath attributed to Hippocrates (460-370 B.C.) is an early code of ethics establishing those high principles of conduct which have characterized the art of medicine. We can apply the teachings of this Greek physician to modern practice with but slight modifications. ¶ It is suggested that the student consult the monograph entitled The Doctor's Oath, by W. H. S. Jones, Cambridge University Press, 1924.

Thalidomide



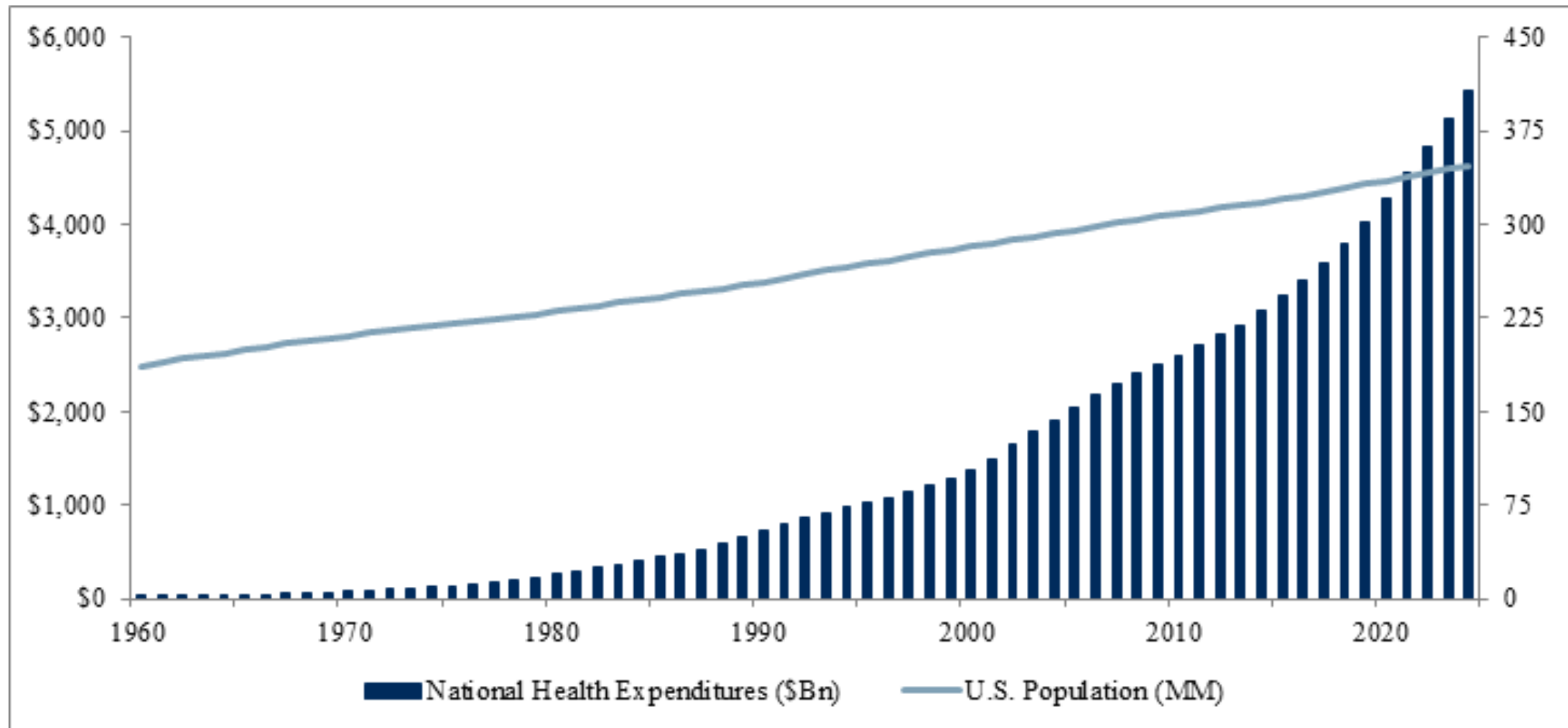
The Opioid Epidemic



Medical Waste



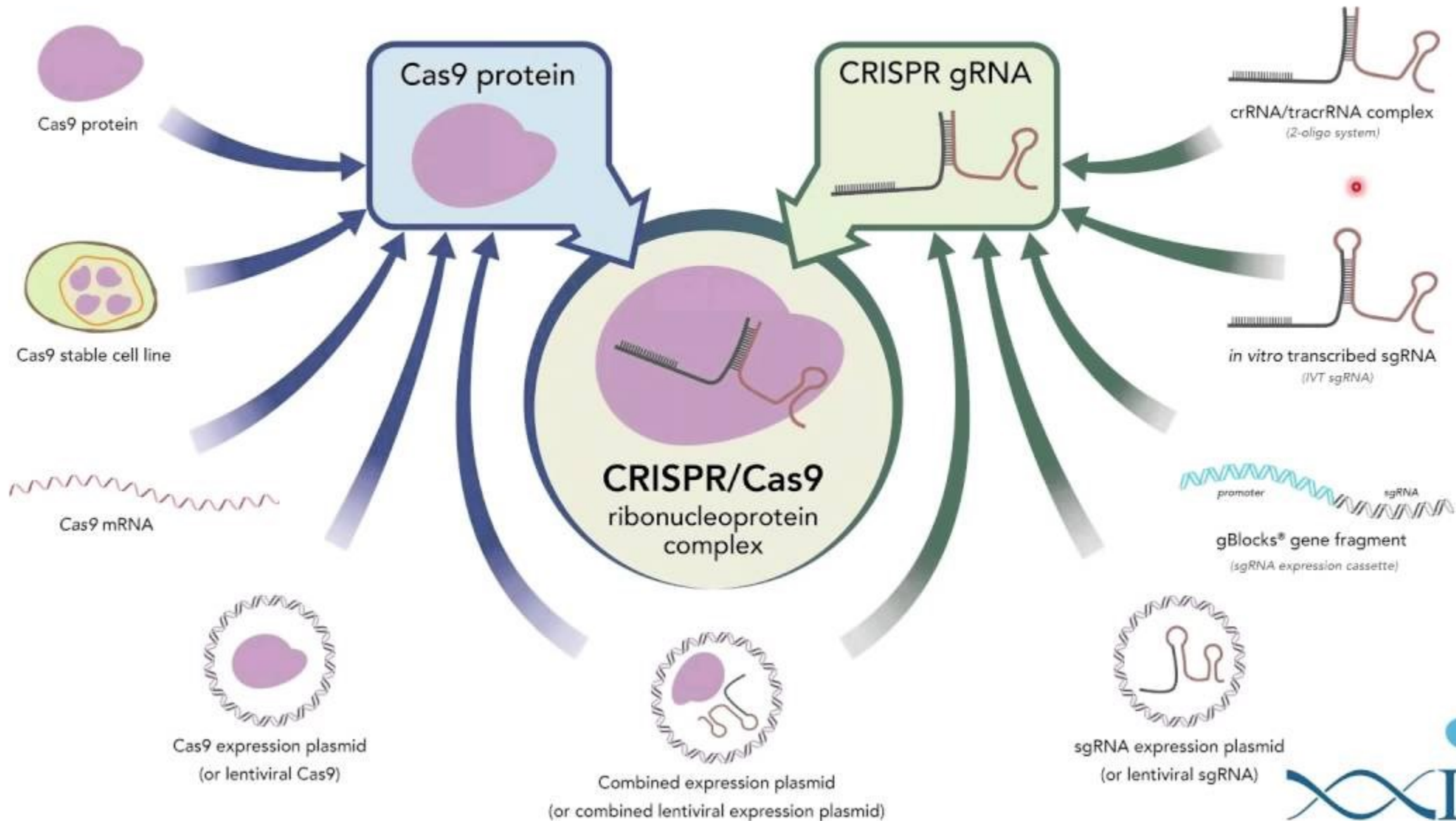
Medical Cost



Sequencing the Human Genome



Implementing CRISPR/Cas9 gene editing



Primum non nocere



Primum non nocere
First, do no harm !

“The greatest danger the world is facing from health professionals is the pressure to investigate, prescribe and intervene in non existing or futile clinical disorders and diseases”

Primum non nocere , has now distorted

Now it seems to suggest

“We can do as much harm, as long as it is scientific”



Thank you

What thoughts do you have for me