

# Mortal Outcomes When Opportunity Knocks

## **WORDS ARE TENACIOUS THINGS BUT NOT IN THEIR MEANING OR INTERPRETATION.**

Consider the noun, opportunity, derived from the Latin meaning 'toward the harbor'. It has been in the active English vocabulary for a long time and is currently defined as an occasion or a time that is either favorable or appropriate, even seasonable. It can be transformed into a useful adjective, opportune, as descriptive of something which, again, is suitable.

Opportune, as an adjective, conveys the sense of appropriateness or suitability; and tacitly, it describes occasions that are propitious, felicitous as well as timely. Thus, to hold a wedding would be regarded, properly, as opportune.

A happy opportunity describes a joyous birthday party to which you had been formally invited; opportunism, on the other hand, describes the same party, but your admittance is more likely through gate-crashing. And opportunistic may be additionally defined as a tendency to adapt one's behavior to circumstance rather than to a moral principle.

And opportunism, derived from the same ancient root, now brings a special nuance to the word, suggesting that the achievement of a favorable status is brought about, not by an intersection of favorable pathways – a benign happenstance – but rather through conscious connivance.

And so now we confront the adjective, opportunistic, a word that has a profound meaning in the world of contemporary epidemiology and medicine. Until the advent of reason-based medicine in the middle decades of the 20th Century, the desperately ill rarely survived in the absence of antibiotics and access to the range of interventions collectively called intensive care. These newer, life-saving interventions include chemotherapies to suppress cancers, body irradiation, heroic surgical procedures and the use of steroids thus collectively creating a new category of patients still living but now intensely fragile and increasingly vulnerable to otherwise non-invasive germs, by virtue of their suppressed and therefore inadequate immune systems.

To understand this sea-change in the nature of medical practice, we begin with a biological reality: Except for vulnerable children living in pathogen-free bubbles we all live in a world contaminated by an immense variety of microscopic organisms including viruses, bacteria and fungi, all in measureless numbers.

These microscopic organisms have prospered in the extremes of global existence, from the ice-masses of Antarctica to the volcanic eruptions in the depths of the Pacific Ocean and all intervening terrains. And they inhabit everything we touch or eat. But under normal circumstances they are not endowed with invasive properties—and so there is a happy coexistence between the vast majority of micro-organisms and humanity.

Medicine's great achievements in the last half-century, however, has now created a paradox: Countless humans are now kept alive by these achievements; but simultaneously, they are now living with continuing impairments particularly in their capacity to ward off the depredations of surrounding germs; and thus these patients become newly vulnerable to organisms that would otherwise be harmless. And so, in recent decades, an entirely new category of disease has arisen, illnesses called

opportunistic infection, representing those organism-caused ailments the consequence of relatively innocent micro-organisms exploiting humans with deficient immunological defenses.

In the past, chronic diseases have pursued their relentless courses uninterrupted by medicines or other interventions. Seneca, the great Roman orator who lived in an era when medicine exerted little influence upon the trajectory of human disease, made the following observation: "If prolonged, it (the illness) cannot be severe, and if severe it cannot be prolonged." Accordingly and until the 20th Century, chronicity (the prolongation of disease) was rare; and if present, confined to such non-mortal afflictions as arthritis.

Medicine now has the audacity to interfere with the natural flow of pathologic events, and the results are twofold: Vast numbers of people are now living longer; but many of them are also companion to opportunistic infections, something that the Roman physicians of Seneca's era never encountered. In the competitive microbiological world, there are no free lunches.

Opportunity is a wondrous word. It denotes a world of great possibilities. America, for example, is called the fabled land of opportunity and the word has come to define those who take advantage of fleeting opportunities, whether they be courageous pioneers, clever inventors or, alternatively, assertive entrepreneurs, used-car salesmen, even pirates. Ultimately, I suppose, nothing is truly safe. Without locks and other safeguards, certainly Fort Knox is vulnerable. And in our increasingly complex Darwinian world, even germs may now display opportunism.

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## **Disclosure of Financial Interests**

The author and their spouse/significant other have no financial interests to disclose.

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