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Unintended Consequences By James L. Holly, MD Your Life Your Health The Examiner September 10, 2015

Part of healthy living and certainly a significant part of longevity is found in the making of sound judgments and right decisions. The problem with life-changing actions is that we often make decisions on the basis of inadequate information. In his book, *The Fifth Discipline*, Dr. Peter Senge addressed "dynamic complexity," which he defined as, "where cause and effect are subtle, and where the effects over time of interventions are not obvious." The cause of a stroke began thirty years before the catastrophic event. Effective treatment of the stroke would have been prevention: control of blood pressure, exercise, weight and not having started smoking years before the effect of the neglect of one's health was known. Because the cause did not hurt, it could be ignored until it was too late.

The following are elements of "dynamic complexity":

- "When the same action has dramatically different effects in the short run and the long run, there is dynamic complexity.
- "When an action has one set of consequences locally and a very different set of consequences in another part of the system, there is dynamic complexity.
- When obvious interventions produce non-obvious consequences, there is dynamic complexity."

While written about "systems thinking" in business, these principles also apply to our health and to healthcare delivery. When we are making life decisions, we often make them on the basis of immediate gratification without regard to the consequences of those choices over a long period of time. We do what "feels good," or what is "fun" now, without consideration of how it will affect our future.

Making healthy choices based on sound judgment requires that we look beyond the moment. We want to avoid high blood pressure, diabetes, or heart disease. That requires that we make decisions today which will make a difference in our lives twenty, thirty, or even forty years in the future. Once the effects of wrong choices come upon us, we can treat the problems but most often we can't cure them. And, while may people have diabetes due to no fault of their own, the best way to treat diabetes is still, "Don't get it!"

Unintended Consequences

One thing I have tried to teach my grandchildren and which I taught my children is the concept of "unintended consequences." Many lives are permanently damaged as the results of acts where no ill intent existed. Practical jokes and bravado challenges result in injury and even death when the only intent was to amuse or entertain.

Let me give you an example. When I was a child, friends from "down the road" visited one day. While the adults where in the house, the children played out side. One of the games was played by the older children laying on the ground and letting the younger children sit on their feet. The younger children were then thrown into the air. It was great fun and everyone laughed, until one of the younger children lost his balance, and in the fall, broke his wrist. As children, we were unable to think beyond the amusement to the potential risk, which was significant.

Several years ago, I arrived at one of SETMA's clinics early in the morning. I found a possum outside our building and caught it. I desperately wanted to tie it under our COO's desk. A possum can't really hurt you but it can "scare you to death." When my thoughts went to the potential consequences, I realized that I could not pull this prank because I could not control the outcome. I realized that while it was highly unlikely that it could "scare a person to death," but that if it did, there is no recourse to that. It is also possible, improbable, but possible to get an infection or other harm from the prank. Therefore, I had to enjoy the idea without the act. The contrast between these two events is the difference between a child's judgment and that of an adult.

Child Brain Development

The Insurance Institute for Highway Safety showed that teenagers are four times as likely to be involved in a car crash and three times more likely to die in one than adults. Recent studies have shown that these statistics may have to do with teenage brain development. A National Institutes of Health study proposed that the part of the brain that restrains risky behavior, including reckless driving, and thinking skills is not fully developed until the age of 25.

The psychiatrist leading the study said that this finding came as a surprise to him because he used to think that the brain was fully developed by the age of 18. The study used magnetic resonance imaging (MRI) to scan 2,000 people's brains every two years. It has been found that teenage brains have extra synapses in the areas where decision making and risk assessment take place. Most of these synapses are useless and even get in the way of one's judgment. Eventually, as teenagers become adults the synapses disappear, but the findings imply that many life choices are made before the brain's decision making center is fully developed.

Choices, decisions and judgments have consequences. If we are going to live well, we must be aware of the unintended consequences of our choices.

Don't Move Until You See It

One of my favorite movies is In Search of Bobby Fischer. The story is about a child chess prodigy. His mother wanted him to be kind and his father wanted him to have a competitive

instinct which "moves in for the kill" in a chess game. As the child played for the national chess championship, he and his competitor were alone in an auditorium and the families and others watched on closed circuit television.

At a critical moment his chess coach, played by Ben Kingsley, said, almost to himself, "It's there; it's six moves away, but it's there; don't move until you see it." The father eager for the win, anxiously said, "What's there?" The coach continued to say, "Don't move until you see it; don't move until you see it." The father was going berserk wanted to know "what is there?" Finally, Kingsley said, "He sees it!" The father shouts, "What does he see?"

At that point the chess genius does the most improbable thing; he reaches his hand across the board and offers it to his opponent. In chess that is the offer of a "draw," both players "winning." The opponent, not seeing what Kingsley's student saw, said, "What?" Our young prodigy said, "You have lost; let's share the prize." This dialogue followed:

"Draw? You've got to be kidding.

"I've lost?

"Look at the board.

"I have.

"Take the draw, and we'll share the championship. Take the draw.

"Move.

Two quick moves and the opponent "sees it." He knocks his king over, acknowledging his defeat.

The Lesson for Us - Don't Move Until You See It

The lesson for children and adults, a lesson which is too late for the disc jockeys and for the nurse, is "not to move until you see it." Don't make a life decision until you examine the potential outcomes which are not your intent but which are possible and which you cannot control once you take the first step. Before you act, take a moment to think about all of the consequences - those you intend are immediately obvious, but think about the things that "could" happen beyond what you intend.

In life and in health, just remember; don't tie the possum under the desk unless you can control all of the potential consequences.

[&]quot;You've lost. "You just don't know it.