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FROM: Michael J. Critelli

SUBJECT: Value-Based Health Care

At your request, I am providing a paper which outlines the elements of value-based health care plan design. To make value-based health care work, there are implementation actions that would be needed to supplement the plan design.

Before presenting the fundamentals and implications of value-based health plan design, I must note that, while it can be a valuable tool in delivering cost-effective, high-quality universal health care, it must be combined with a commitment to driving healthy behaviors across our population, to insuring that all residents have convenient access to high-quality health care providers, to portable personal health records and systems and processes for more efficient health care delivery, and to improved outreach to underserved populations.

I would also suggest that, for the uninsured and underserved population that is in the low-income category, that lives in communities with inadequate access to healthy food, areas for exercise, primary care providers, and pharmacies, and that has major social and behavioral health issues, value-based health plan design also needs to be combined with major initiatives to address the community and individual challenges these populations face.

#### Fundamental principles of value-based health care design

The fundamental principles of value-based health care plan design are as follows:

- The purpose of health plans is to encourage behaviors that result in good uses of the health care system and to discourage behaviors that result in bad, inefficient, or marginal uses. Although health care is necessary for the treatment of disease, illness, or injury, not all health care is good.
- The purpose of health plans is to invest in health optimization and disease and injury prevention, not to maximize the reimbursement for medical treatment.
- Health plan designs can drive behaviors that can improve health, improve adherence to treatment plans for medical conditions, or improve the quality of care for illnesses, diseases, and injuries.
- The behaviors to be managed by health plan design include those of participants and providers.

- Value-based plan design will inevitably result in differentiated premiums, co-pays and deductibles, based on the patient or provider behaviors it wants to encourage or discourage. It would not have pre-existing condition exclusions, or differential premiums based on different states of health or pre-existing medical conditions.
- Fee structures encourage providers to deliver high-quality, cost-efficient service, and to get providers to encourage healthy participant behaviors. In value-based health plans, the fee structures do not reward for quantity and complexity of health care services, but for results. Fee-for-service models that uniformly reward doctors for all kinds of office visits are flawed.
- Implicit in the fee structure is the recognition that providers will be rewarded for activities other than face-to-face patient encounters. To the degree that providers deliver services over the telephone and through e-mail, these mechanisms will not be penalized, as long as they deliver results.
- Plan design requires fundamental decisions about what discretionary care for which the plan will pay, and which health care system designs and processes it wants to encourage.
- Plan design requires comprehensive and in-depth data collection and analysis. In a managed competition environment, or in an architecture in which pharmaceutical benefits are separated from medical plan benefits and are delivered by a separate provider, or in an environment in which participants might receive care both within and outside a provider network, the ability to aggregate all participant and population-level data is critical.
- Because value-based plan design is based on a principal of behavior direction and modification, implicit in it is a requirement that the plan design be modified frequently, at least no less frequent than annually. Multi-year plan designs that do not change from year to year can be inconsistent with value-based health plan design, although long-term commitment to investment in health as a philosophy is critical.
- Also inconsistent with value-based design are detailed statutory mandates, since these, as a practical matter, cannot be modified easily over time to reflect a changed understanding of medical efficacy or participant or provider behavioral response. Therefore, an expert body, similar to the Oregon Health Commission, should make judgments as to what is necessary and desirable health care.

### Good, Bad, and Marginally Beneficial Uses of the Health Care System

To define good and bad uses of the health care system, value-based health care plan design tries to categorize participant behavioral interactions as described below. However, I must note that the principles of value-based health care design do not ultimately resolve many difficult ethical and policy issues, such as the relative cost and benefit of paying for expensive treatments like cancer drugs that may only prolong life for a brief period of time or may improve quality of life, but not have any effect on prolonging it. Decisions on these kinds of issues must be made by the people of a state through thoughtful processes created by elected representatives.

Value-based health care plan designs also do not resolve difficult issues in which there is no expert consensus. For example, there are disagreements on whether antibiotics should be sustained for a long period of time for Lyme disease patients. There is an emerging body of medical opinion that cholesterol-lowering drugs should be given to children as young as 8. In both of these cases, there is no broad-based consensus. Value-based design works best when these disputes are resolved and a consensus emerges.

Value-based health plan design is also adaptable to the emerging concept of personalized medicine. I would expect that value-based plan designs will require genetic or other screenings to determine the likely efficacy of particular therapies, as those screenings get approved.

Value-based health plan design would implicitly group health care events and medical treatments in six categories:

- Necessary and desirable
- Discretionary
- Necessary, but avoidable
- Necessary, but inefficiently delivered
- Marginally beneficial
- Unnecessary and negative.

This categorization is one which I have created. There are others that could be used as well. For example, Marjorie Ginsburg, Executive Director of Sacramento Healthcare Decisions, a nonprofit, nonpartisan organization, published a white paper for the New America Foundation Healthy Policy Program in November, 2007. In that paper, she attempts to address prioritization, for purposes of benefit design, by answering two questions:

- Does the proposed treatment have value in terms of being proven effective and of sufficient worth relative to costs?
- Should the proposed treatment have priority over other uses of health care dollars?

With respect to the second question, Ms. Ginsburg cites a priority grouping for clinical care in Sweden which was presented at the Ninth Futures Forum of the World Health Organization in 2006. Sweden has five priority groupings:

- 1a and 1b: Care of life-threatening acute diseases and diseases that, if left untreated, will lead to permanent disability or premature death (1a) and Care of severe chronic diseases and care of people with reduced autonomy;
- 2: Individual disease prevention in contacts with medical services, and rehabilitation services as defined in Sweden's Health and Medical Services Act
- 3: Care of less severe acute and chronic diseases
- 4: Borderline cases
- 5: Care for reasons other than disease or injury

She goes on to illustrate examples that might be dropped from basic coverage, such as infertility treatment or Viagra treatment for erectile dysfunction.

She also discusses the Oregon Health Plan, which created a Health Services Commission that was tasked to define what should be in basic coverage and what was not required to be provided to the state's Medicaid population. Two examples of treatments dropped from basic coverage were treatments for low back pain that had no neurological origin, and cancer treatments that had limited likelihood of effectiveness in prolonging life.

Not every treatment for every condition can be categorized easily into the first five categories. There appears to be a well-established consensus as to what is unnecessary. The question of what is excessively negative has medical treatments which can be clearly defined as harmful, either in advance or in hindsight. At the same time, there are treatments with known and quantifiable benefits that also have known and potentially quantifiable negative side effects for some portion of the population.

Where the line is crossed to define when too large a portion of the population experiences negative side effects is a judgment with which value-based health plan design can work, but value-based health plan design tools cannot help make the judgment. For example, there has been recent publicity about the number of adverse events reported relative to the HPV vaccine Gardasil. Whether the number of adverse events, which was reported to be over 7,800, according to the CDC, is excessive relative to the broad-based benefits of the vaccine is a policy question, not a plan design question.

I would suggest that Ms. Ginsburg's paper also points to models in Sweden, Oregon, Muskegon, Michigan, and the University of Michigan CHAT (Choosing Healthplans All Together) initiative that describe processes for getting robust community and public input as to what will be considered basic health care that will be incented through a value-based health plan and what will be considered "discretionary" or "marginal" under my categorization system.

In my categorization, situations in which a medical condition is one in which care should be given, but in which treatment is either experimental or unproven would fit into the category of being either of "marginal benefit" or, if the risks and side-effects are substantial and the benefits are speculative, then it might fit into the "unnecessary and negative" category.

#### Necessary and desirable care

Necessary and desirable care is care that, under an optimal health care system, should be delivered to plan participants. Included in this category would be all preventive care that is routinely recommended, starting with pre-natal care for expectant mothers. Obviously, any care necessary for treatment of diseases or illnesses is necessary to the degree that it prevents a medical condition from worsening. Defining "necessary and desirable" care, as noted above, becomes very difficult when the benefit of the care is uncertain and the cost of delivering the care is extremely high, such as the use of expensive drugs to treat

cancers that, based on existing clinical trials, have not been definitively proven to be effective.

However, there are many categories of care in which there are clear boundaries between what is necessary and desirable, and what is not. Value-based health plan design helps drive behaviors that work within the clear boundaries, such as driving individuals with diabetes to attend to the various diagnostic and treatment programs that are well-established for managing diabetics.

### Discretionary care

Discretionary care fits into four categories:

- Care for a medical condition that might correct itself without care or with less aggressive care;
- Care for a medical condition with which some individuals might choose to live;
- Care for a medical condition for which there are multiple treatment options with a wide range of costs; and
- End-of-life care.

In the first category are treatments for minor infectious diseases that are primarily addressed by a person's immune system, but that have recovery accelerated by antibiotics. There are three levels of discretion: whether to get examined by a medical professional, whether the medical professional prescribes an antibiotic, and whether the antibiotic is the broadest spectrum and strongest medication available.

In the second category would be treatment for conditions such as pain or allergic reactions. Individuals can live with these conditions, choose an over-the-counter medication, or go to a health care professional and get a range of treatments ranging from prescription medication for certain kinds of pain or allergy conditions to surgery to address the root cause of the pain.

Also in the second category are some kinds of vision care treatments. Some vision care treatments are necessary and desirable, such as diagnostic examinations for glaucoma and cataracts or other medical conditions that can lead to blindness or other infectious diseases that affect the rest of the body. Similarly, vision care is necessary and desirable for a diabetic because blindness can result from inadequately or improperly managed diabetes.

On the other hand, vision care that is undertaken to adjust a prescription for lenses or glasses might fit into a category of discretionary treatment. Lasik surgery to eliminate a need for glasses or contact lenses also might fit into the discretionary care category, and, in many plans, is excluded.

Also in the second category are fertility treatments, which, although encouraging births might be good public policy, are not in the same category as treatment for infectious,

contagious diseases or other necessary and desirable treatments to treat injuries or to prevent or treat chronic metabolic diseases.

In the third category would be a condition such as prostate cancer for which there are four treatment options: surgery, radiation, hormonal therapy, or watchful waiting. This is the kind of condition in which there is no obviously superior treatment option, but in which there is a wide range of cost implications for the treatment options selected.

End-of-life care is a particular kind of discretionary treatment for which decisions can either be made through specific advance directives executed by the patient or decisions made by an individual who has been given a power of attorney by the patient, or by health care professionals in consultation with lawyers and hospital ethics officers and administrators.

#### Necessary but Avoidable Care

This is care that results from an individual's failure to adhere to a medically-necessary treatment program. A good example of this is the emergency care or hospitalization for a patient with a chronic disease who has failed to adhere to the treatment plan.

One could look at all medical conditions that result from lifestyle choices, such as cancers that result from chronic smoking, Type 2 diabetes that results from obesity, or treatment resulting from alcohol or drug abuse as avoidable as well.

#### Necessary, but inefficiently delivered, care

In this category, I would include medical conditions that are appropriately treated by the health care professional to whom they are presented, but that could have been managed by a less expensive and resource-intensive form of health care. For example, any non-urgent care delivered in an emergency department would fit into this category, as well as any care that could have been delivered remotely instead of face-to-face, delivered by a nurse instead of a doctor, or delivered by a primary care physician instead of a specialist.

#### Marginally beneficial care.

Marginally beneficial care is care that is effective for some part of the population that receives it, but that is delivered to many people who do not need it. For example, there are many marginally beneficial diagnostic tests that are ordered for many individuals when there is a low probability that something useful will be discovered from them.

There are also many experimental treatments that will produce some benefit for some people, but are not statistically better in results than alternative treatments.

### Unnecessary and/or Bad Care

Health plans should not reimburse for unnecessary or poor quality care. The Center for Medicare and Medicaid Services has taken a step in this direction by announcing that it will not reimburse providers for certain events that, in its opinion, should never happen in a high-quality health care system. Value-based health care should be designed to reward high-quality care and to reduce or eliminate reimbursement for poor quality care.

### How does consumer-directed health care fit into this framework?

Plan designs can encourage individuals to behave in a healthy fashion to eliminate all except necessary and desirable uses of the health care system. Consumer-directed health plan designs are based on this principal, except that they need to be modified not to reward individuals for foregoing preventive care, early diagnosis and treatment of medical conditions that get worse if untreated, or adherence to chronic disease treatment plans. To the degree that individuals are rewarded for doing health risk assessments, adhering to diets and exercise programs, avoiding smoking, engaging in safe lifestyles, and taking good care of their teeth, these are behaviors for which individuals could be given annual financial rewards. I would also to this any active participation in a pre-natal program for expectant mothers, since such programs tend to reduce the incidence of premature births and other pregnancy-related complications.

### Necessary and Desirable Treatments

Plan designs should encourage the use of all kinds of necessary and desirable care, particularly care that involves interventions at an earlier stage of disease or illness, such as preventive screenings and immunizations. For some populations, the design might require free screenings or immunizations. In other cases, individuals may need a financial incentive to get the screenings. In still others, a modest co-pay might work.

Plan designers need to test what works to maximize participation in appropriate screenings and immunizations. For participants with metabolic chronic diseases, there needs to be a plan design that encourages adherence, and discourages non-adherence. This suggests that maintenance drugs may either be free of charge or at such a low co-pay that their costs do not become a deterrent to continued use. Additionally, the remaining parts of the treatment should be at a sufficiently low co-pay that the participant stays on the treatment plan.

Value-based health plan designs should also make necessary and desirable care more likely to happen and more effective when it does happen. Two behaviors which the Plan should are the selection of a primary care and the completion of a health risk assessment by every participant. These behaviors make all care better.

## Discretionary Treatments

The key plan design principle for discretionary care is that the individual should have a cost-sharing arrangement that insures that he or she will make an intelligent, informed decision about whether to take the discretionary treatment. In other words, some level of co-pays is essential in helping individuals make good choices.

The most difficult discretionary treatment cases are those involving individuals with minor infectious diseases. These conditions often can clear up because the individual's immune system enables him or her to overcome the condition. Whether someone visits a physician or nurse is heavily dependent on the willingness to let the immune system take its course, or is inclined to seek a diagnosis and a prescription that will speed up recovery. For this kind of encounter, the plan design would have a co-pay that forces the individual to decide whether the visit is necessary.

Value-based health plan design would also have co-pays for treatments for medical conditions with which an individual could live without treatment or with a less aggressive treatment program. For example, one of the areas that results in billions of dollars of medical spending is treatment for back pain. To some degree, healthy behaviors that result in lower weight and greater muscular flexibility reduce the incidence of back pain. But for the remainder of the population, the statistical probability is that the individual will have a condition with no diagnostic linkage between the condition and a workable medical treatment, or a condition that has a range of treatment options between conservative and aggressive. In these cases, the plan design would probably require a staged approach that prefers a conservative treatment prior to the use of a more aggressive treatment.

For medical conditions that have the potential for a range of treatments from conservative and low-cost to aggressive, a value-based health plan design would have some incentive for inducing the individual to get objective, expert advice before making a decision on a treatment option.

For example, in the case of behavioral health treatment under the Pitney Bowes Medical Plan, as is the case for many self-insured plans, the participant is given a strong incentive to use up to 10 visits free of charge to an Employee Assistance Plan counselor, which often results in a less aggressive use of the most expensive behavioral health treatment options for individuals for which those options do not deliver any marginal benefit.

Finally, for treatments like vision care or fertility treatment, the right answer might be a medical plan which offers both types of treatments, but at a higher upfront premium.

## Necessary but Avoidable

When a participant fails to adhere to a chronic disease treatment plan, and ends up in an emergency department or a hospital, or when an individual fails to get a cancer screening



until a cancer has reached a later stage, the medical treatment rendered in both cases is necessary to treat someone or to prolong someone's life, but the treatment was avoidable.

We would not suggest that necessary, but avoidable, care be withheld or punished through premium increases. However, through use of incentives, the behaviors that would enable the avoidance of these conditions, should be encouraged.

#### Necessary, but Inefficiently Delivered

Among other things, value-based health plan designs should encourage the adoption of technologies and processes that reduce the cost of delivering care, such as interoperable electronic health records, or the use of electronic prescriptions. There are many examples of this in the context of property and casualty insurance, but this principle needs to be designed into health plans.

Similarly, value-based plan design would look at risk-adjusted outcomes and reward or punish outliers from population-level norms, such as an overuse of certain kinds of discretionary diagnostic testing like MRI's. The work Dr. John Wennberg of Dartmouth has done gives us a good roadmap to understand health care practice differences that have no apparent benefit in delivering better outcomes.

#### Marginally Beneficial

Marginal benefit cases involve individuals who get diagnostic tests or preventive screenings that have a low likelihood of detecting a medical condition, or who take a drug or undergo a treatment that has a marginal likelihood of efficacy.

Value-based health plan designs discourage marginally beneficial uses of the health care system.

#### Unnecessary and negative care

Any care that produces predictable negative outcomes would fit into this category. For example, as we might recall from the movie The Verdict, the administration of an anesthetic too soon after the patient has eaten a meal is a medical event that should not enable reimbursement.

Infections contracted during a hospital stay also would qualify as negative care.

A poorly-done surgical procedure is negative care.

A diagnostic test in which the provider fails to interpret the test correctly is negative care.

CMS has grouped a number of examples, like these, of what might be considered medical malpractice into what it has called "never" events, that is, events that should not happen in an optimal health care system, and should never be reimbursed.

### **What Does Value-Based Health Plan Design Mean for Provider Network Design?**

One of the threshold questions relative to value-based health care design is whether it is designed to give plan participants incentives to use certain providers and not to use others. There are several ways to discriminate in favor of, or against, providers:

- The Plan could review data and conclude that certain providers consistently produce better results on a risk-adjusted basis and should be favored with higher reimbursement rates and/or plan participant incentives.
- The Plan could certify that providers consistently follow evidence-based medicine guidelines and reward them with high reimbursement rates and/or plan participant incentives.
- The Plan could favor specialty care providers or centers of excellence for certain acute or chronic medical conditions and use higher reimbursement rates and plan participant incentives to drive participants to these centers of excellence. For example, as opposed to reimbursing plan participants equally for use of any cancer care center in Connecticut, the Plan could identify a center of excellence for the state and incent everyone to use that center.
- The Plan could also have a pre-authorization for some providers and no pre-authorization for others.

I believe that all of these approaches have merit, and we have used the first three at Pitney Bowes in our health plan design. However, to implement them has implications far beyond plan design principles. The decision to favor specialty care and/or centers of excellence would change the architecture of the state's certificate of need licensing system. It would assume that many patients would have to travel to a center of excellence outside their local community to receive care that affords them the best level of reimbursement.

Similarly, the decision to reward some providers more than others either because of results or adherence to evidence-based medicine principles would create a burden on plan participants to decide in many instances whether to stay with the provider they currently use or to switch to a provider that is rated more highly. While we want to reward better providers, we must recognize that these providers cannot necessarily absorb everyone who might want to switch to them, and that those who cannot or will not switch may have a higher challenge of being able to afford their health plan. The Plan may need to structure a reimbursement system that does not cause the Plan Participant to bear the burden of finding the best providers when there is already or is potentially a shortage of best providers relative to patient demand.

### **Implications of these categorizations for health care plan design**

A value-based health plan design would have the following attributes:

- It would not only reimburse for necessary and desirable care, but, particularly with respect to preventive care, it might even offer financial incentives to encourage everyone who should get preventive care to get it. As noted above, it would create incentives for foundational behaviors that make all care effective, including the selection of primary care providers and the completion of a health risk assessment.
- It would alter co-payments for discretionary care to drive individuals to make intelligent decisions about whether to receive the discretionary care.
- It would have co-payments for necessary, but avoidable, care to insure that individuals would take steps in future situations to obviate the need for such care.
- It would not cover marginally beneficial care.
- It would give a plan participant an incentive to seek the most efficient way of receiving care, and it would reimburse providers for being efficient in care delivery.
- It would not reimburse for unnecessary or bad care, and would differentiate in reimbursement rates between regularly high-quality and low-quality providers.

These are the main elements of value-based health plan design, and the implications of that design for health care plans.

### **Practical Issues with Respect to Currently Uninsured or Underinsured Populations**

Although I am recommending the value-based health plan design become the standard for all health plans regulated by the state, we must recognize that there are three separate health insurance challenges:

- Underinsured plan participants in large and small business sponsored health plans;
- Uninsured middle and high income individuals; and
- Uninsured low-income “underclass” individuals.

These are three different challenges, and each has to be addressed separately:

#### **The Underinsured**

The definition of an “underinsured” individual is someone who, but for limited financial means, would choose a more comprehensive or richer benefit plan. There are individuals who choose high deductible, low premium, high out-of-pocket cost plans because they are healthy and they do not want to spend more on health insurance. But there are many individuals, particularly working primary earners for families, who cannot afford the benefit that most suits them.

We can attempt to expand the universe of subsidized individuals to reduce or eliminate the underinsured population, but, along with considering that option, we should consider the best option for insuring that high deductible, low premium, high out-of-pocket cost plans have a foundation of preventive care coverage, as well as other attributes of value-based health that will reduce their long-term costs and bring down the cost of the richer versions of these plans sufficiently to enable more of the underinsured to afford the plan they need.

#### Uninsured middle and high-income individuals

This pool of individuals is geographically dispersed, likely to be adequately employed, and able to afford health plans if the cost of those plans is reduced. The combination of an insurance exchange, or connector, a larger purchasing pool, and the imposition of value-based health plan design principles on participating health insurers has the potential to bring costs down sufficiently to reduce this population significantly.

#### Uninsured low-income, “underclass” individuals

This is a population which most likely has many of its individuals eligible for Medicaid SAGA, or SCHIP, but not enrolled in these programs. This population is also most likely to have the following characteristics:

- Geographically concentrated in economically depressed areas that have poor availability of healthy food, inadequate areas for exercise and fitness, inadequate primary care coverage, no pharmacies, and possibly high levels of environmental contamination;
- Individuals that have overwhelmingly high percentage of individuals with combinations of mental and physical health problems that include substance abuse, multiple chronic and complex diseases, clinical depression;
- Individuals that may have been and continue to be victims of domestic or other kinds of violence; and
- Individuals that not only are low income, but are without assets or support systems, and are disproportionately homeless.

To the degree that taxpayer-supported services are available to them, such as community health centers, dental clinics, and other social services, they probably also have transportation, cultural, language, bureaucratic and psychological obstacles to taking advantage of them.

While value-based health care plan design principles should be employed in the Medicaid, SCHIP, SAGA and other programs available to these individuals, a comprehensive one-stop-shopping solution that manages each of these individuals to a capability to manage their own mental and physical health, combined with initiatives to improve the communities in which they live, is required.