## Guiding Principles for Interoperability:

Build Upon Existing Infrastructure – A “Double-edged Sword”  
While provider organizations in particular have a vested interest in leveraging significant investments in existing infrastructure, it is important to recognize that our foundational EMR solutions are poorly architected and based in large part on outdated technologies. Furthermore, the current business model for healthcare solution vendors is in direct conflict with the desired outcomes of HIT transformation. More specifically, virtually none of the core EMR vendors are able to sustain a profitable business without achieving a high level of new sales within or beyond their current installed base. None of these vendors will modernize their wares without some promise of return on their investment. Because we are reaching a saturation point in the overall EMR market and because there will continue to be further consolidation across provider ranks as organized systems of care evolve, the market for new EMR solution sales will be minimal. Likewise, the traditional supply/demand principle that drives pricing across other markets does not apply in the healthcare software sector because of the high-cost of converting from one platform to another. Because so much work is required to modernize the current platforms, the vendors will have to either pass costs plus profits through to their installed base, or adopt entirely new business models that aren’t reliant on sales of new products and features.

From an engineering and economic development perspective, a better approach might be to enable an entirely new class of market solution called an Interoperable Clinical Data Repository (ICDR). Instead of building HIT standards at the Exchange level, what if we started building them at the Database Schema level on through the Application and Exchange layers? Doing so would enable a much more cost-effective approach that would enable modular features and functions to be delivered through a competitive marketplace. Because Database and Transport technologies tend to evolve more slowly than user-interface and medical-device technologies, this sort of model would enable evolution in HIT to occur much more rapidly through the use of interchangeable and disposable component parts revolving around very sophisticated databases, rules engines, and transport mechanisms. The MU provisions of HITECH have taught us that perpetuating the use of legacy technology only serves to stuff the pockets of profitable legacy vendors while holding back innovation. Even with all of the new concepts being promoted through this roadmap, I don’t see the necessary triggers to disrupt the stranglehold of core EMR vendors and truly promote Economic and Clinical Health.

## Individuals Are Empowered, Active Partners in Their Health and Health Care & Care Providers Partner with [Each Other and] Individuals to Deliver High Value Care:

These tenets are the heart and soul of patient-centered, value-based care. All of the Governance, Cultural / Regulatory Environments, and Technical Standards / Functions promoted through the Roadmap are essentially in support of these critical objectives. However, when you really put it all together, it reads more like “making the most of a fragmented and convoluted set of systems”. If we truly want to put patients at the center and ensure that any provider of their care is able to quickly see and understand their complete story, can we really ever get there with such loose coupling of systems and processes? Perhaps a single source of truth for each patient’s healthcare story is a more realistic option than expecting their story to magically come together through enforced interoperability. Why not require all healthcare systems to revolve around Personal Health Records that reside securely in a healthcare cloud (private or public) that a patient has regulated control over, similar to how we control our credit reports? Only then can we ensure near 100% completeness and accuracy of their health records.

With such a system in place, the exchanges of information between and among provider systems, payer systems, and PHRs could be tightly controlled through a single National Health Information Network (NHIN). In fact, why not leverage our investments in healthcare.gov and current NEIM developments to achieve such a network? This is surely how we would design a system if we were starting from scratch, and by trying instead to leverage current investments and appease political and market forces, we could very well end up having a Roadmap II discussion in 2020.

## Use Case Priorities

As I’m certain that my previous comments are too radical to be seriously considered, here are my recommended top 3 Use Cases for prioritization. The reality is that these are easily achieved even with our current outdated systems; so with a little extra muscle from the Feds, perhaps we can at least force care partners to cooperate and get this done in the very near-term.

1. The status of transitions of care should be available to sending and receiving providers to enable effective transitions and closure of all referral loops.
2. Providers and their support staff should be able to track all orders, including those leaving their own organization and EHR, to completion.
3. Providers should be alerted or have access to notifications that their attributed patients have had an ER visit, or an admission to or discharge from a hospital.