

Designing & Creating “Second Curve” Healthcare Systems

By Ted Ball, Martin D. Merry, M.D. and Liz Verlaan-Cole

Our existing healthcare systems, structures, processes and culture have been referred to as the “First Curve paradigm” of the health sector. From the perspective of organizational science, organizational designs in the “First Curve” of healthcare are rooted in the craft stage of system development and reflect early stage industrial designs. Today, healthcare delivery systems in both the United States and Canada are teetering on the brink of a “Second Curve” paradigm of development – a more evolved set of system, organizational and process designs that are required to satisfy the increasing demands of funders, service providers and customers in the knowledge economy. What is this shift from the First to Second Curve healthcare delivery systems, and how is the shift occurring?

Albert Einstein suggested that we cannot create solutions for today's problems if we remain embedded in the original thinking that generated them. He was talking about paradigms. First Curve assumptions and beliefs about how to

organize healthcare delivery are deeply embedded in our existing systems, structures, processes and culture. This paper provides a list of some of the assumptions, beliefs and realities that are embedded in our existing healthcare delivery system – and what each of these seem to be morphing towards in the very near future.

For the past 15-20 years, our clinician-centric craft model of medicine and our rigid bureaucratic service delivery systems with their industrial-age organizational practices have been faced with unrelenting incremental change. Today, public, governmental and service provider pressure is increasingly pushing for transformational, fundamental and deep change in our healthcare system.

In **Deep Change**, Robert Quinn says that deep change differs from incremental change in that it requires new ways of thinking and behaving. He says “it is change that is major in scope, discontinuous with the past and generally irreversible”. (continued on back page)

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FIRST CURVE – CURRENT REALITIES

SECOND CURVE – EMERGING VISION

Acute care is the “hub of the system”.	Primary health is the “hub of the system”.
The delivery system is designed to meet the needs of healthcare providers.	The delivery system is designed to be customer-driven – while incorporating the needs of all care-givers along the continuum.
The systems, structures and processes have evolved overtime and have been cobbled together with unaligned assumptions in each silo. Lack of alignment and perverse incentives produce chaos in the system.	Systems, structures and processes are aligned and intentionally designed to achieve the outcomes required. Organizational alignment produces synergy within organizations and across the delivery system.
System is fragmented. Patient fend for her or himself, moving from silo to silo.	System is seamless. Coordinates needs of complex patients, using case managers for those that are especially difficult.
Sickness-focused. Episodic/Individual.	Health status & outcomes-focused. Systemic/ Population-based.
The system is designed to provide care and services to individuals (a diabetic, for example),	The system is designed to meet the needs of defined populations (diabetics for example) while retaining responsiveness to individual needs.
Designed to facilitate freedom, independence and autonomy of professionals.	Designed to facilitate the best combination of independent and interdependent professionals.
Systems, structures and processes are designed to control and regulate the people working in the system.	Structures, systems and processes are designed to facilitate collaboration, co-ordination and teamwork.
Hierarchical, command & control systems/structures/ processes/culture creates toxic work environments.	Systems, structures and processes are designed to achieve the right balance of empowerment and accountability. High staff satisfaction rates.
“Accountability” means blame. Blame causes cover-up. Constant cover-ups means we don’t address design flaws in our systems, structures and processes.	“Accountability for Outcomes” is clear for every manager and Medical Chief. “Learning from our best mistakes” means continuous improvement.
Systems, structures and processes are designed to find out “who is to blame?”	Systems, structures and processes are designed to provide the support people need to achieve the outcomes for which they are accountable.
Information is centralized and hierarchical. Physician is supreme source of knowledge and dictator of therapy.	Information is dispersed. All caregivers and patients have direct access. Physician is integrator and facilitator of choices.
Medical record is fragmented and idiosyncratic to a particular silo. Individual caregivers work off entirely unconnected, often contradictory scripts.	Medical record is electronic and instantly updated and available for all relevant caregivers, all caregivers read from precisely the same script.
Tight centralized control and influence over the delivery system by unaccountable public servants.	Assumption that people are competent when accountabilities are clear and the supports required are in place
Assumption that performance problems result from lazy, unmotivated and uncaring people that need to be carefully monitored and controlled.	Knowledge that poorly designed systems, structures and processes leave people feeling powerless and uncaring. 93% of time performance issues are system design issues.
Designed to encourage political behaviour/power games.	Designed to produce collaborative behaviour and teamwork.
Behaviours characterized by fear and anxiety. Little trust.	Behaviours characterized by creativity and innovation. Lots of trust – and a real sense of purpose.
Bosses are “in control” of “sub-ordinates”.	Leaders are in stewardship (“in service”) to those around them.
Solutions to problems translates to retraining or censoring people.	Solution to problems translates to redesigning systems and providing people with the learning support they need.

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FIRST CURVE – CURRENT REALITIES

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The system requires compliance from people.	The system seeks commitment from people.
Goal is to maximize resources for your silo.	Goal is to allocate resources appropriately within the system.
Huge resources are consumed in reimbursing inefficient systems. 30% of all work is unnecessary rework.	Huge resources are freed up for innovation and quality improvement. People & resources are leveraged.
Traditional budgeting processes are political, inflexible, linear and absorb up to 30% of senior executive's time, and 20% of middle managers efforts.	Strategic budgeting allocates resources based on evidence to achieve the outcomes and targets set by management and approved by the Board. Management time on the budget process cut by 50%.
Resources are allocated centrally based on politics in silos.	Evidence-based allocation of resources. Strategic budgeting.
Assumption: "First, do no harm." Provider intentions impeccable.	Assumption: Humans are inherently fallible. Harm occurs despite providers' best intentions.
Reality: Human error generates harm with threat of punishment as a deterrent.	Reality: System accepts human error as inevitable. Designs error proofing.
Mistakes are inevitable, but to be avoided; move on quickly if they occur. These are "undiscussables".	Mistakes are our most valuable source of learning. Learning from our "best mistakes".
Hospital accidents are common. Medical error, death and injury headlines are regular, predictable occurrences.	Hospital accidents are rare, with medical error death equivalent to airline and nuclear power plant performance.
Complexity makes it easy to do things wrong, hard to do things right (Institute of Medicine).	Well-designed workplace systems, structures and processes make it easy to do things right and hard to do things wrong.
Ultimate definition of quality endlessly debated, thus avoiding adequate measurement, management and improvement.	Consensus exists regarding a variety of key measures – including access to care, clinical outcomes, functionality, satisfaction and value received.
Quality can be improved by responding to each event and dealing with the "problem people". There is a silo for quality.	Quality is achieved by designing error proofing at the interface of people and processes. Everyone is in charge of quality.
Quality capability is seen almost solely in terms of professional skills – with virtual blindness to the importance of support systems.	Understands that carefully designed quality infrastructure is absolutely essential to reduce risk and optimize skills of professionals.
Quality improvement efforts are undertaken by silos in charge of quality monitoring.	Quality emanates from the careful design of clinical and operating processes and the coordinated skills of caregivers, patients and community stakeholders.
When major TQM/CQI efforts are undertaken with vigor, the existing system can reach 3 to 4 Sigma on quality. (3.5% to 7.5% error rates)	Transformed organizations, systems, people can reach 6 Sigma and beyond – to a 3rd curve of healthcare system design. (3.4 defects per million and better)
CEOs manage an organization within a network of healthcare services. Managers in silos talk past each other. Despite the rhetoric of co-operation, the rewards and incentives are for "winners" and "losers" and for those who play politics.	CEOs participate in facilitating a network of healthcare delivery organizations and provide strategic management and leadership to their own organizations. Silo managers integrate their planning and system design efforts. They are rewarded for achieving integration and for excellence in management.
Governance represents the self-interests of the organization.	Governance represents the "owners": the citizens/ community.
The system is designed to be complicated.	The system's complexities and self-organizing potential is realized in a natural <i>complex adaptive system</i> .

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Incremental changes in our First Curve health system have been limited in scope and reversible – just in case the change does not work out.

The Second Curve cannot be achieved until and unless the delivery system and the organizational component parts are intentionally designed with entirely new assumptions.

While the “normal” stages of change include denial, resistance, exploration and commitment, hundreds of organizations are now emerging from a decade of being stuck in the denial and resistance stages. These emerging Second Curve healthcare organizations are now engaged in redesigning their core systems and processes – based on these new assumptions.

Today, issues around patient safety, adverse events and leveraged use of resources are creating extraordinary pressure for change externally. Internally, staff satisfaction rates and a desire “to do better” are adding to those external pressures to fundamentally transform the system.

Ian Morrison’s *“The Second Curve: Managing the Velocity of Change”* contrasts 20th century healthcare delivery systems (the First Curve) with an entirely new (Second Curve) healthcare paradigm that is still very much in its infancy in Canada and United States. The Second Curve is emerging and still unfolding.

Nevertheless, glimpses of the Second Curve are already present in a number of Canadian and American healthcare organizations – organizations that are achieving real improvements in a whole range of areas: quality, patient safety, integration, customer and staff satisfaction, etc.

The question is: what can your organization do to move further towards the Second Curve?

Organizations determined to achieve Second Curve outcomes need to think about how they would redesign their core and support systems, structures and processes – based on this very different set of assumptions and realities.

You can use the list of First Curve vs. Second Curve assumptions, beliefs and realities to provoke your organization’s thinking about the future. Is your organization, and are your local LHIN partners ready to shift to the Second Curve?

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