Relationships of any sort consist of a series of mutual experiences amongst the parties over a period of time. Each party, consciously or unconsciously, assigns a positive or negative value to each experience and maintains a running weighted balance. A goal is to maintain a positive balance [think of a scale of justice] In Healthcare; a positive balance is the most positive outcome(s) for patient, family & friends, providers and payers. This is a complex multidimensional optimization/ maximization or minimization [of adverse events] challenge that may be computationally addressed using methods of linear or dynamic programming.

Each US healthcare scenario involves multiple parties including patient, providers/ practitioners, family and friends, private or public payers/ insurers and a suite of important care providers, healthcare technology experts and administrators. HCRM - Healthcare Relationship Management then involves a multiplicity of healthcare relationships for each patient-centered episode. Therefore, optimization of HCRM does not only involve paired relationships of one type, but rather requires optimization across set(s) of paired relationships for any particular episode.

Various healthcare organizations are involved in a revolutionary shift from fee based services to care models focused on outcomes. This transition is enabled by technology such as EHRs and HIEs led by initiatives and metrics facilitated by CMS and major insurers such as the BCBS companies.

To date, efforts seem to be largely unidimensional, that is, achieve the best patient [episodic] outcome for the smallest input [of funding]. Current language identifies the accumulation of patient experiences, associated with an episode, as a patient journey. Firstly a broader view would say that there are corollary journeys to be considered i.e. the family and friend’s journey, the provider’s journey, caretaker’s journey, insurer’s journey, referred specialist’s journey etc. A more comprehensive optimization would be to achieve maximization or minimization for each of these, as well as for the combinatorial for all of them.

One would probably proceed by first identifying each of the vertices of any one journey e.g. patient journey, optimizing each of those and for that particular journey and identifying the inter-relationships of each of those with functionally/ temporally related vertices, optimizing the first selected journey e.g. patient's experience and proceeding from there through each of the next sequentially selected journeys e.g. provider's journey, insurers journey etc. and then optimizing across all journeys to maximize or minimize the desired overall result/ outcome.

One could easily see that, where multiple interconnected episodes of various related illnesses e.g. heart failure and pulmonary problems and acute kidney disease are involved, the optimization problem expands across those various spheres as well.