| **#** | **Time period** | **Implication order** | **Implication description** | **Cause** | **Effect** | **Source** |
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| 1 | Present | Second-order | Lack of employee satisfaction | Customers falling back on non-electronic mediums |  | PY1\_DI, Pos. 49 |
| 2 | Present | Second-order | Lack of customer satisfaction | Repetition of mundane manual tasks |  | PY1\_DI, Pos. 49 |
| 3 | Present | First-order | Cannot provide better care to people | Prolonged implementation | The organization is stuck with the legacy system that takes longer to get things done | PY1\_DI, Pos. 71 |
| 4 | Present | First-order | They do not pay claims properly or in time | Payers are stuck with the old technology | Put customer through a lot of heartaches | PY1\_DI, Pos. 75 |
| 5 | Past | Second-order | [Managerial implication]: CEO had to get involved | Non-usage of a system that is at an organization's disposal |  | PY1\_DI, Pos. 27 |
| 6 | Present | First-order | Degradation of patient care | Lack of data about a certain patient | Higher mortality etc. | CDE1\_A1\_DI, Pos. 52 |
| 7 | Present | Second-order | Loss in profit | Lack of data about revenue, i.e., how much health plans reimburse providers for vs. how much they spend on care |  | CDE1\_A1\_DI, Pos. 52 |
| 8 | Present | Second-order | Billing for hospitals is delayed |  | Their receivables are pushed out for months | CS2\_A2\_DI, Pos. 42 |
| 9 | Present | First-order | The hospital is prevented from performing its core tasks | System is not 100% reliable |  | CS2\_A2\_DI, Pos. 42 |
| 10 | Present | First-order | Worse patient outcomes |  |  | PV1\_DI, Pos. 44 |
| 11 | Present | Second-order | Contraction in competent physician care | There is a shortage of doctors, the doctors that the system has are leaving and quitting and dying by suicide, there are not enough people to care for the patients, and an enormous amount of the physicians’ emotional and mental energy is being taken towards often uncompensated administrative tasks, i.e., called pajama time | Patients will be dying more frequently, there’s going to be more death, more permanent disability, less access to physician talent | PV3\_ETC2\_DI, Pos. 49 |
| 12 | Present | Second-order | Burnout |  |  | M1\_DI, Pos. 48 |
| 13 | Present | Second-order | Mistrust |  |  | M1\_DI, Pos. 48 |
| 14 | Present | Second-order | Uncertainty |  |  | M1\_DI, Pos. 48 |
| 15 | Present | Second-order | Unsuccessful implementation is very subjective: Did you run out of money, but the idea was still good, did you run out of time/are you off schedule, was the scope off, did the project die |  | Just because any of the first three are unsuccessful, does not necessarily mean that the implementation is unsuccessful | M1\_DI, Pos. 48 |
| 16 | Present | Second-order | Discredit the leader who was pushing for the project |  | Negative impact on their career | M1\_DI, Pos. 48 |
| 17 | Present | First-order | Negative impact on population health |  |  | M2\_DI, Pos. 55 |
| 18 | Present | First-order | Project is rolled back / simplified | Leadership gives up |  | HITV1\_DI, Pos. 34 |
| 19 | Present | First-order | Project is stopped | Leadership gives up |  | HITV1\_DI, Pos. 34 |
| 20 | Present | First-order | Negative impact on patients |  |  | HITV1\_DI, Pos. 34 |
| 21 | Present | Second-order | Snowball effect on downstream processes | Physician skips a step or does not want to use the system | Billing process is screwed up | HITV1\_DI, Pos. 34 |
| 22 | Present | Second-order | Loss in trust across the HC system: Patients trusting providers to keep their data safe, providers trusting payers to not use the collected data against them, payers trusting each other to share data, public health trusting patients to be able to access the data that they maintain about them | “(…) trust builds slowly, and it’s lost in an instant [quote].” |  | PV2\_HINE3\_DI, Pos. 65-67 |
| 23 | Present | Second-order | Waste in money |  |  | PV2\_CDE3\_DI, Pos. 65 |
| 24 | Present | Second-order | Loss in windows of opportunity in the political space | “If you don’t get things done quickly, you know, if you don’t strike while the iron is hot, you might not have another chance [quote].” |  | PV2\_CDE3\_DI, Pos. 65 |
| 25 | Present | Second-order | Timing in terms of that it will step back progress and momentum |  | It may set back things several years | FA1\_DI, Pos. 52 |
| 26 | Present | Second-order | Loss in faith and commitment to the initiative | “And then you’re kind of left with this orphan project because it was a great idea, you hit failure, and now everybody kind of went their separate ways, right? Like the band broke up. And it’s really hard to get the band back together at that point afterwards [quote]”. | People move on to do other things, going separate ways | FA1\_DI, Pos. 52 |
| 27 |  |  | One cannot get additional financial commitment to advance the work |  | It will take much longer to get the work done | FA1\_DI, Pos. 52 |
| 28 | Present | Second-order | Something else fills that vacuum that is a worse outcome |  | Things take turn for the worst | FA1\_DI, Pos. 52 |
| 29 | Present | First-order | People, i.e., citizens lose their programs if the program fail that they were depending on and are now no longer available |  |  | FA1\_DI, Pos. 52 |
| 30 | Present | Second-order | People lose their job |  |  | FA1\_DI, Pos. 52 |