| **#** | **Time period** | **Unit of analysis** | **Type of effort required** | **Willingness to exert effort to adopt and use the technology** | **Cause** | **Effect** | **Source** |
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| 1 | Present | Individual |  | Physicians are overburdened |  |  | CDE1\_A1\_DI, Pos. 42 |
| 2 | Present | Organizational | Blockchain works well for a zero-trust architecture, but in practice, all involved parties (VRS providers) having to maintain their nodes is challenging and requires a certain degree of expertise | Blockchain was too much of a bother |  | [See Ex\_FacilCon#2] | ETC1\_DI, Pos. 14-24 |
| 3 | Future | Individual |  | Patients will not be willing to pay to hold all their clinical data on their own | Patients expect the government and whole healthcare ecosystem to do these things for them |  | CS2\_A2\_DI, Pos. 16 |
| 4 | Present | Individual |  | Sharing data with other stakeholders is added work for physicians |  |  | CS2\_A2\_DI, Pos. 18 |
| 5 | Present | Individual |  | The introduction of new technologies into physician’s workflow is of large burden | “They spend literally more than 50% of their time, you know, as trained medical doctors inputting data into a computer on a keyboard, versus seeing patients [quote].” | [See Ex\_ExEff#6] | CS2\_A2\_DI, Pos. 22-24 |
| 6 | Present | Individual |  | Burnout of physicians | [See Ex\_ExEff#5] | Impacts the quality of the relationship between the doctor and their patient | CS2\_A2\_DI, Pos. 22-24 |
| 7 | Present | Individual | New fancy applications are not simple and easy to use |  |  |  | CS2\_A2\_DI, Pos. 24 |
| 8 | Present | Individual |  | Are not willing to pay to hold their healthcare data | Patients view healthcare as an entitlement |  | CS2\_A2\_DI, Pos. 44 |
| 9 | Present | Individual | Healthcare data is often in a not very usable format for patients |  | Patients are not as sophisticated as a medically trained physician or nurse |  | CS2\_A2\_DI, Pos. 44 |
| 10 | Present | Individual | A certain population demographics, i.e., seniors, people from rural areas without internet connection, does not have access to digital technology |  |  | Cannot adopt and use the technology even if they are the most tech-savvy | PV2\_CDE3\_DI, Pos. 68 |
| 11 | Present | Individual | Often health IT is very cumbersome to use |  | [See Ex\_TechPerf#27] |  | PV1\_DI, Pos. 28 |
| 12 | Present | Individual |  | Physicians are burned out |  | Do not think about using some new technology, i.e., it is not top of mind | M1\_DI, Pos. 24 |
| 13 | Present | Individual, organizational |  | The solution does not solve a problem painful enough to influence stakeholders to change | “Pain drives change [quote].” | Need to understand the different lenses of pain | M1\_DI, Pos. 34 |
| 14 | Present | Individual |  | Physicians are burned out/exhausted |  | [See Ex\_ExEff#15] | M1\_DI, Pos. 36 |
| 15 | Present | Individual |  | They spend their time in a way that they believe is most impactful to their business or their family or what is important to them |  | An innovation requires education and physicians do not have time for this | M1\_DI, Pos. 36 |
| 16 | Present | Individual |  | Need to win the support of people who need to use the EMR system |  |  | HITV1\_DI, Pos. 16-18 |
| 17 | Present | Individual | Physicians do not want to adopt and use anything that takes longer than what they do today by e.g., putting more restriction in place |  | Physicians are driven by metrics, e.g., the number of clicks it takes to perform a task |  | HITV1\_DI, Pos. 22 |
| 18 | Present | Individual |  | Older physicians feel everything has changed | Digitalization of healthcare |  | PV2\_CDE3\_DI, Pos. 30 |
| 19 | Present | Individual | Engaging in information exchange can be tough to do e.g., having to do multiple additional clicks to treat a patient |  |  | Many physicians try to find workarounds | FA1\_DI, Pos. 10 |
| 20 | Present | Individual |  | Physicians do not want to look at a second screen next to Epic | Physicians are overstretched and stressed | [Technology needs to integrate with the existing workflow and the existing technologies] | CDE1\_A1\_DI, Pos. 46 |