Mental Demand
How mentally demanding was the case with use of *The Harriet Lane Handbook*?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

Very Low   Very High

Physical Demand
How physically demanding was the case with use of *The Harriet Lane Handbook*?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

Very Low   Very High

Temporal Demand
How hurried or rushed was the pace of the case with use of *The Harriet Lane Handbook*?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

Very Low   Very High

Performance
How successful were you in accomplishing what you were asked to do?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

Perfect   Failure

Effort
How hard did you have to work to accomplish your level of performance?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

Very Low   Very High

Frustration
How insecure, discouraged, irritated, stressed, and annoyed were you?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

Very Low   Very High

Supplementary Figure 1. NASA-TLX provided after case performed without ECDS tool.[32]

Condition _____+App___

Mental Demand
How mentally demanding was the case with use of the app?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

Very Low   Very High

Physical Demand
How physically demanding was the case with use of the app?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

Very Low   Very High

Temporal Demand
How hurried or rushed was the pace of the case with use of the app?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

Very Low   Very High

Performance
How successful were you in accomplishing what you were asked to do?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

Perfect   Failure

Effort
How hard did you have to work to accomplish your level of performance?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

Very Low   Very High

Frustration
How insecure, discouraged, irritated, stressed, and annoyed were you?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

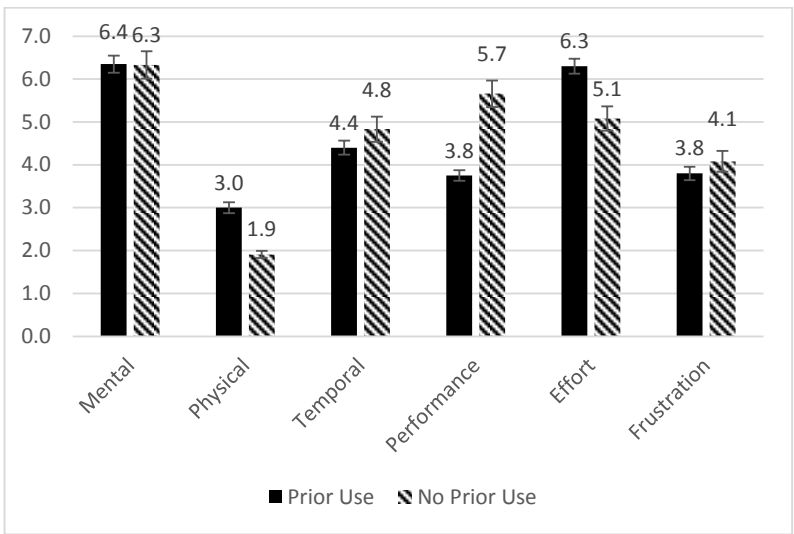Very Low   Very High

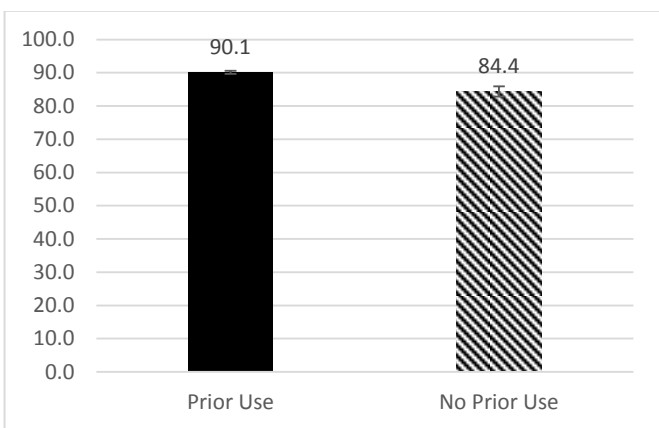Supplementary Figure 2. NASA-TLX provided after case performed with use of ECDS tool.[32]

System Usability Scale (SUS)

	Strongly disagree				Strongly agree

1. I think that I would like to use this app frequently

	1	2	3	4	5

2. I found this app unnecessarily complex

	1	2	3	4	5

3. I thought this app was easy to use

	1	2	3	4	5

4. I think that I would need the support of a technical person to be able to use this app

	1	2	3	4	5

5. I found the various app functions were well integrated

	1	2	3	4	5

6. I thought there was too much inconsistency within this app

	1	2	3	4	5

7. I imagine that most people would learn to use this app very quickly

	1	2	3	4	5

8. I found this app very awkward to use

	1	2	3	4	5

9. I felt very confident using the app

	1	2	3	4	5

10. I needed to learn a lot of things before I could get going with the app

	1	2	3	4	5

Supplementary Figure 3. System Usability Scale.[36]

Supplementary Figure 4. NASA-TLX scores with and without prior use of PedsGuide on the case where ECDS was used. Bars indicate standard error.

Supplementary Figure 5. Score on SUS with and without prior use of PedsGuide. Bars indicate standard error.