Supplementary Materials

The details of how the dominant window detector works

The dominant window is defined as the one that is currently active at the forefront of the computer screen. Handle to the window (usually shortened to HWND) is a unique identifier that Windows operating systems assign to each window. HWND allows programs to refer to dialog boxes or full windows, making a window available to be identified and controlled. The dominant window detector can get the title of the window through the HWND. The framework of the dominant window detector is shown in **Figure S1**. The dominant window detector checks the HWND of the dominant window every 1 ms; any change in the detected HWND indicates that the user has changed the dominant window. At the same time, the dominant window detector will record the information, including the window title, the time elapsed from a window being dominant to subordinate, the window dwell period, and the computer IP, finally transmitting these data to the database for storage and further analysis.

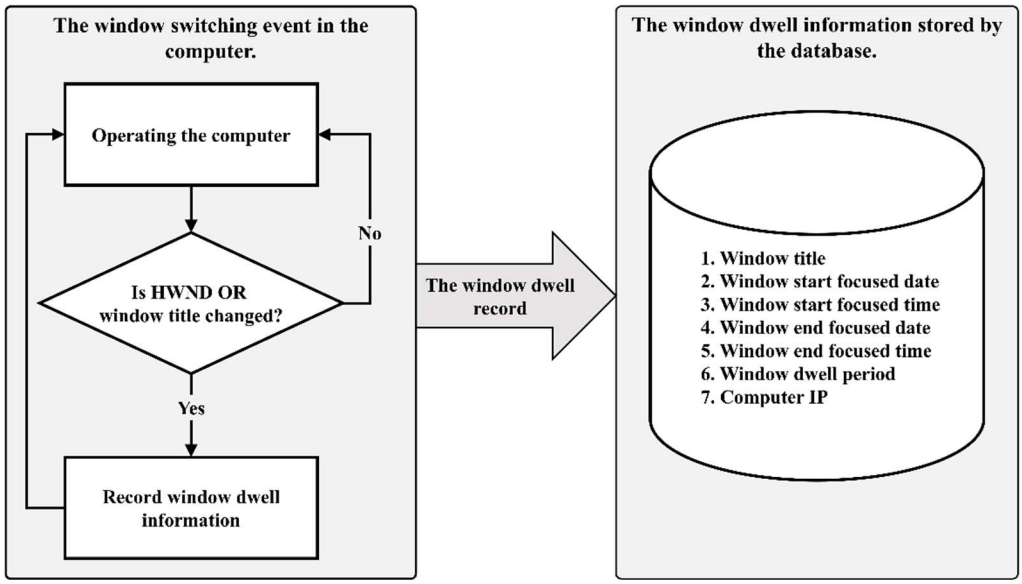


Figure S1. Framework of the dominant window detector (HWND= Handle to the window).

Supplementary Table

Table S1. The example of alert title and alert content in predefined pairs.

		Normal String	Regular Expression
1	Title	Notification of online health insurance open function!	^Notification of online health insurance open function(.*)$
	Message	Failed to open the online medication record, please check the card reader!	^ Failed to open the online medication record, please check the card reader(.*)$
2	Title	Alternative medication remind	^Alternative medication remind$
	Message	*[Drug A]* has been suspended. Do you want to use *[Drug B]* as an alternative option?	^(.*)has been suspended(.*)Do you want to use (.*)as an alternative option(.*)$

Table S2. Normality test result.

	Kolmogorov-Smirnov test [a]	Shapiro-Wilk normality test

	Statistic	df	Sig.	Statistic	df	Sig.
Alert Dwell Times	0.187	100	0.000	0.778	100	0.000
Number of alerts	0.390	100	0.000	0.277	100	0.000
Alert Message Length	0.210	100	0.000	0.770	100	0.000
Alert Dwell Time (Physician)	0.182	100	0.000	0.796	100	0.000
Alert Dwell Time (Nurse)	0.161	100	0.000	0.896	100	0.000
Alert Dwell Time (Other)	0.230	100	0.000	0.728	100	0.000

a. Lilliefors correction.

Table S3. The example of less frequent alert categories with longer alert dwell times.

#	Title & Message content (Categories)	Number of alerts								Dwell time (Secs)			
		Total (100%)	Professional group			Dwell time				MED	Mean	MIN	MAX
			PHY	NU	OTH	<1	1~10	10~100	>100				
73	[Payment number]/[Clinical number] This is not an NHI payment patient. Don't need to access the health insurance card.	2541	29 1.1%	2479 97.6%	33 1.3%	267 10.5%	1544 60.8%	648 25.5%	82 3.2%	2.946	16	0.023	872.00
79	TOCC fill According to the decision from the epidemic prevention team [ICD-Code], the body temperature must be measured. Please ask about the travel and contact history in the epidemic area of the patient or accompanying family member, and fill it in the TOCC.	2172	2096 96.5%	18 0.8%	58 2.7%	204 9.4%	1906 87.8%	60 2.8%	2 0.1%	1.597	2.87	0.065	377.21
86	Remind! Do you want to print out the drawing form for all patients?	1871	609 32.5%	1243 66.4%	19 1.0%	108 5.8%	1677 89.6%	78 4.2%	8 0.4%	1.693	4.89	0.074	976.13
90	Remind!! You can't write the card before finishing the consultation!!	1541	91 5.9%	1378 89.4%	72 4.7%	139 9.0%	1173 76.1%	220 14.3%	9 0.6%	2.309	7.34	0.067	555.01
92	Remind! Please confirm whether the refillable prescriptions for patients with chronic illnesses [Dose] and [Period] are correct. Yes (Y): Confirm correct. No (N): Go back and modify.	1508	1313 87.1%	172 11.4%	23 1.5%	150 9.9%	1301 86.3%	55 3.6%	2 0.1%	1.598	2.98	0.050	163.44

Note: PHY = Physician; NU = Nurse; OTH = Other; MED =Median; MIN = Minimum; MAX = Maximum.

Table S4. The example of alert categories with highly clinically relevant.

#	Title & Message content (Categories)	Number of alerts								Dwell time (Secs)			
		Total (100%)	Professional group			Dwell time				MED	Mean	MIN	MAX
			PHY	NU	OTH	<1	1~10	10~100	>100				
10	Remind! [Drug A] was prescribed by another physician to [YYYYMMDD] and still has [N] days of medication remaining. Do you want to continue prescribing?	45,780	39,953 87.3%	515 1.1%	5312 11.6%	13,594 10.5%	30,892 60.8%	1222 25.5%	72 3.2%	1.338	2.7	0.018	600.54
25	Remind! Drug interaction!	12,037	11,477	310	250	1490	10,351	189	7	1.441	2.14	0.022	290.58

	[Drug A] and [Drug B]: [DDI description]		95.3%	2.6%	2.1%	9.4%	87.8 %	2.8%	0.1%				
53	Drug allergy records	5188	4066	211	911	899	4184	102	3	1.220	2.29	0.025	196.47
	[Drug allergy description]		78.4%	4.1%	17.6%	5.8%	89.6 %	4.2%	0.4%				
57	Remind Hello, Dr. [Physician Name]: This patient is allergic to NSAIDs. If you need to relieve pain and reduce fever, it is recommended to change to Acetaminophen. Thank you for your cooperation!	4286	2808 65.5%	140 3.3%	1338 31.2%	745 9.0%	3468 76.1 %	70 14.3%	3 0.6%	1.423	2.41	0.022	552.79
69	Remind [Drug Name] The pregnancy category is [Category]. Are you sure to use it?	2775	2240 80.7%	485 17.5%	50 1.8%	511 9.9%	2217 86.3 %	42 3.6%	5 0.1%	1.351	2.97	0.049	1773.48

Note: PHY = Physician; NU = Nurse; OTH = Other; MED =Median; MIN = Minimum; MAX = Maximum.