Table 1. Measures which can be used to develop a profile of work and communication patterns pre and post an intervention

Measures of work and communication which can be generated from WOMBAT datasets	Examples from published studies using WOMBAT	Examples of research questions which can be addressed
Proportion of total observation time spent in particular categories of tasks	Hospital physicians were found to spend the greatest proportion of their time (33%) in professional communication[11]. ICU nurses spent 39% in professional communication [15]. Nurses spent an average of 16.9% of their time in medication tasks[10].	Provides an indication of whether clinicians shift to spend more or less time in particular broad categories of work following an intervention or between different groups. It can answer questions such as do nurses spend less time in direct care following an intervention compared to baseline. The proportion of time will be influenced by both frequency and length of task time.
The average or median length of time spent in an individual task	Pharmacists on wards with CPOE spent on average 43.7 seconds per task compared to 1 minute and 16 seconds for wards without CPOE[12]. When not interrupted emergency physicians spent an average of 3 minutes and 10 seconds on each direct care task[13].	This measure indicates whether particular types of tasks may have become more efficient, i.e. nurses spend less time per task following an intervention. It also provides a measure of the rapidity of task changing by clinicians.
Number of tasks completed in specific time periods	27% of all tasks completed by pharmacists on a hospital ward with an electronic medication system was medication chart review[12].	This measure indicates how frequently specific tasks are conducted and should be considered in relation to the length of these individual tasks. For example, documentation tasks generally take longer per task than other tasks but occur less frequently.
Proportion of time spent undertaking specific types of tasks in specific locations	75.1% of ward doctors' work was spent on the ward[11].	This answers questions about what work is done where. For example, the proportion of time spent in professional communication at the nurses' work station.
Proportion of time spent with other health professionals, patients or alone	8% of nurses' time was spent in communication with a doctor[9]. 83% of hospital pharmacists' time on a ward with CPOE was spent alone compared to 73% for pharmacists on wards without CPOE [12].	This answers questions about how much collaborative work is undertaken, with whom and where.

Measures of work and communication which can be generated from WOMBAT datasets	Examples from published studies using WOMBAT	Examples of research questions which can be addressed
Proportion of tasks completed using specific information tools	6% of doctors' tasks on a hospital ward involved the telephone[11].	This answers questions about the role of specific information sources such as paper medical records, computers etc. in completing specific types of tasks.
Rate of interruptions to work per hour	Emergency physicians were interrupted on average 6.6 times per hour and 11% of all tasks were interrupted[13]. Physicians in an ICU were interrupted 3.8 times per hour while ICU nurses were interrupted 3.3 times per hour [15]. The greatest proportion of all interruptions to nurses on wards occurred when they were undertaking medication tasks[9].	This measure assesses the interruptive nature of work and has important safety implications given the established relationship between errors and interruptions [19]. Examination of the types of tasks being interrupted assists in determining the extent to which interruptions increase risk.
Proportion of tasks conducted in parallel	Hospital doctors spent 20% of their time multi-tasking[11].	Addresses questions about the complexity of work and by examination of the types of tasks involved in multi-tasking can provide insights into whether this type of work pattern might introduce increased risk of error.

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