

Supplementary Box S1: Interview Topic Guide

Interview Topic Guide

Explain overview of interview (general questions about the practice then more focused discussion using chart-stimulated recall), take consent.

- How long have you been a GP/ worked in this practice?
- How many sessions?
- How many patients?
- Can you briefly describe a typical day in practice? And atypical (*sessions with patients/home visits/other activity out of the surgery/meetings with other staff/updating electronic health records/prescribing*)
- How much of your time you spend in each task that you mentioned?
- What do you think about the way that your clinical time is distributed?

Explain that we are borrowing the term operational failures from nursing/ hospital literature. Give example of thermometer probe going missing, having to search for ECG machine in a hospital setting etc. 10% of time. In the hospital literature, OFs are problems in materials, equipment and information.

- If you think about your most recent session in practice (this morning or yesterday) can you tell me of any issues that stopped you from getting through a task or a consultation as quickly as you wanted?
- Have there been any notable problems that interfered with your ability to complete a specific task recently? How did you respond to this (i.e. called other staff member, worked around it, left task and completed it later, left task and didn't complete it, delegated task to another,.....)
- Do interruptions in the practice interfere with your ability to get through your work?
- How often do you experience problems interfering with your work in a typical day? (*prompts: differences between days and times/why do they believe that these differences occur or not in different days/times*)
- Why do you think problems arise within your practice? Or with the interface between your practice and the community?
- How do these issues effect you, your day, your consultations, your patients?
- How have OFs been overcome in the past? What difference has this made?
- Have you ever discussed with your colleagues/ do they also experience these issues?
- What do you think is the best way to address such interruptions or problems that prevent you from doing your job effectively?

Thank you, almost reached the end of the interview. Before we finish I would like to ask you a couple more questions.

- From your perspective, what is your initial reaction to this concept of operational failure
- Is there anything else that you would like to say about operational failures in general practice

Supplementary Box S2

BOX 2

What is Systems Engineering?

A systems engineering approach considers the layout of a complex system, defining all the elements and interconnections, to assess and optimise the system's function. In systems engineering, a range of techniques are used to organise structure, create and evaluate alternative designs, analyse and predict where appropriate, assess possible threats to and opportunities for people and other systems, integrate all the individual elements and deliver a system that is fit for its intended purpose. [20]

What are Hollnagel's Safety II concepts?

Hollnagel's Safety II approach attempts to understand a system's ability to succeed under varying conditions. A Safety-II approach assumes that everyday performance variability provides the adaptations that are needed to respond to suboptimal conditions, and hence is the reason why things go right. Humans are consequently seen as a resource necessary for system flexibility and resilience. [21]