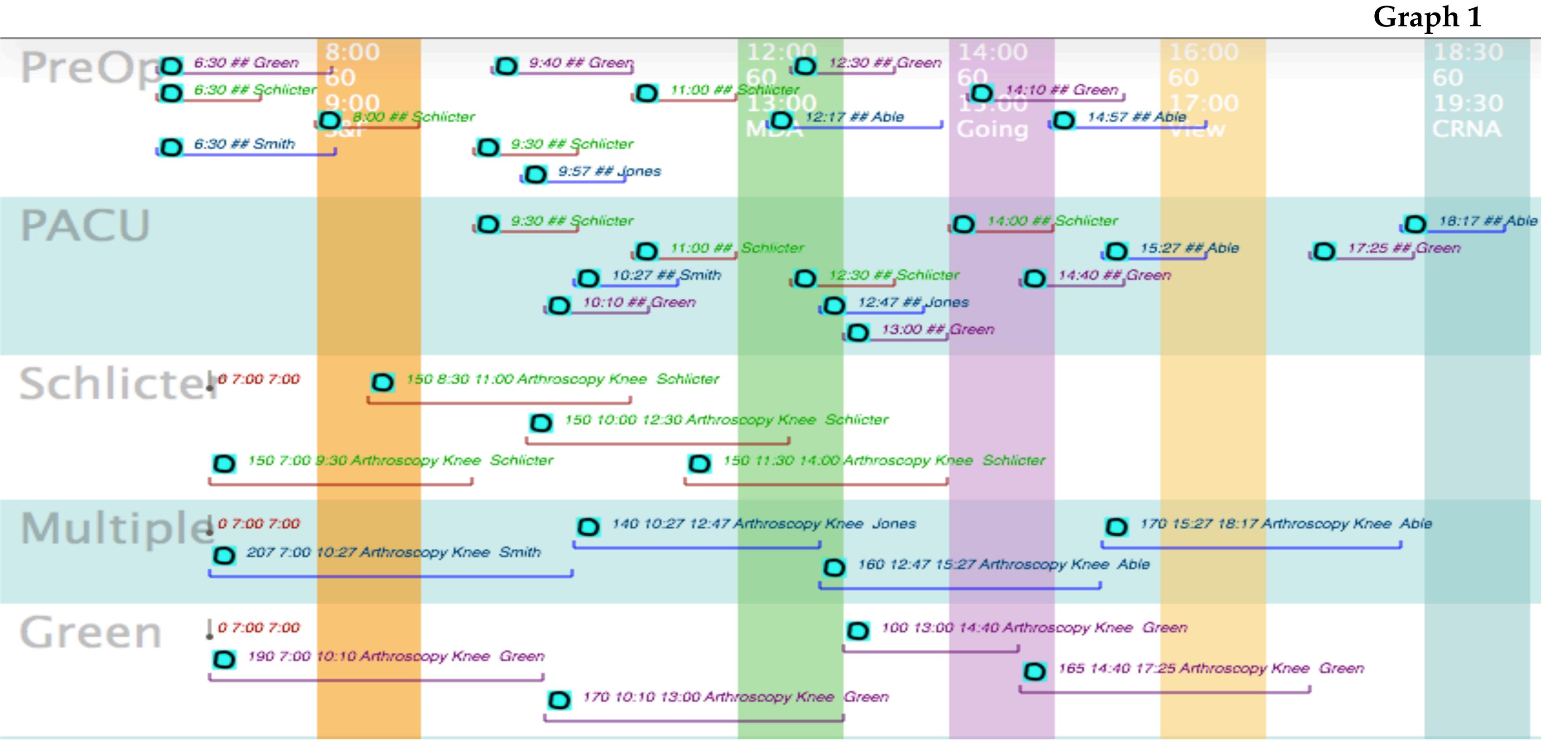
A progression of techniques...

Clarifying the Definition, Purpose, and

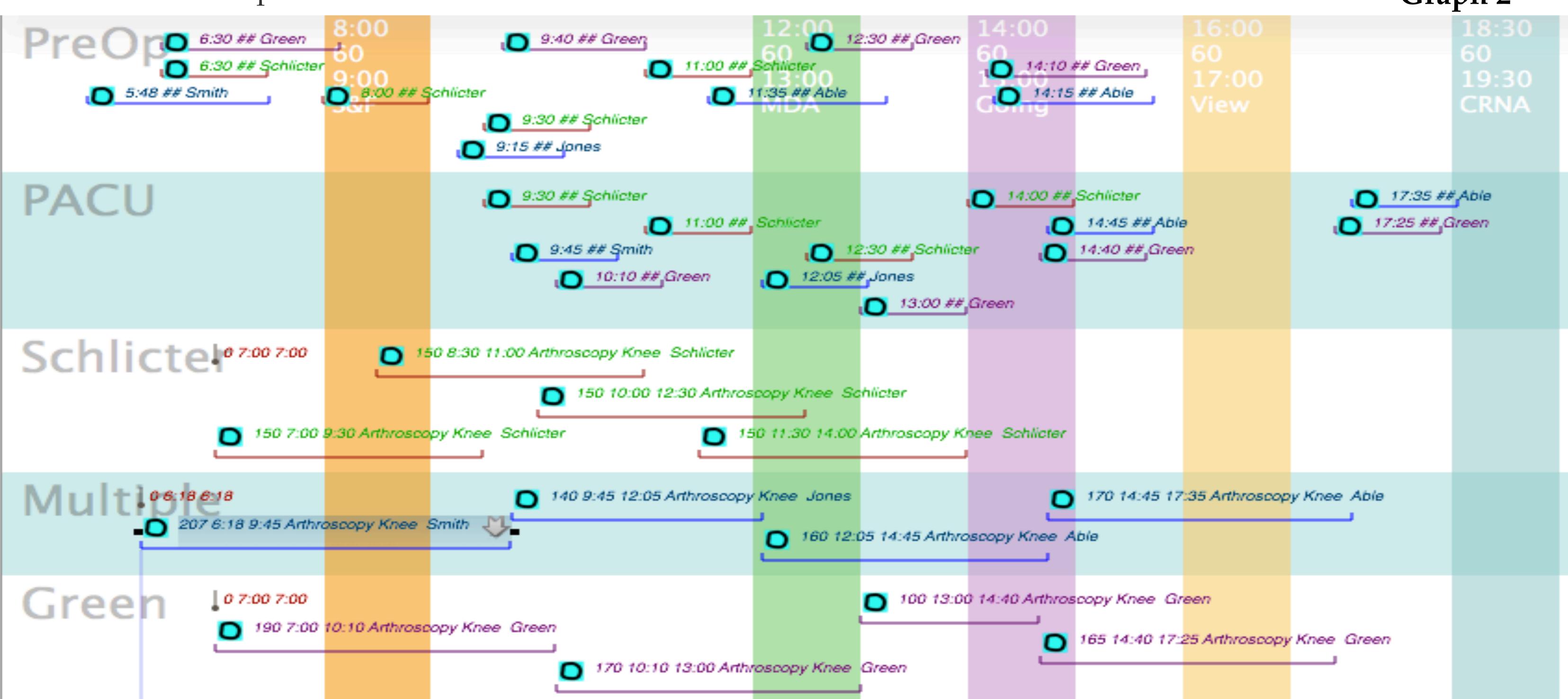
Effects of OR On-time Starts

Dr. Able has two cases following two surgeons in the room 'Multiple'. He has to be finished by 16:00 to take call; if not, the hospital says that he will have to get a partner to cover call.

Room setup of first case in room 'Multiple' begins at 7am with Dr. Smith... Dr. Able finishes at 18:17



Surgeon starts at 7am for 95% surgical start at 7am... Dr. Smith has wanted a 95% guarantee of a 7am surgical start. Unfortunately for him, the OR will not let the nurses clock in before 6:00. By the time the nurses have changed into scrubs and arrived at the room, it's 06:18. Dr. Smith keeps records of his start times, and has calculated that for a 95% chance of being ready to cut, he should show up at 07:25 [67 minutes later] which he does. Dr Jones starts 43 minutes earlier than in Graph 1. Dr. Able finishes at 17:35. **Graph 2**



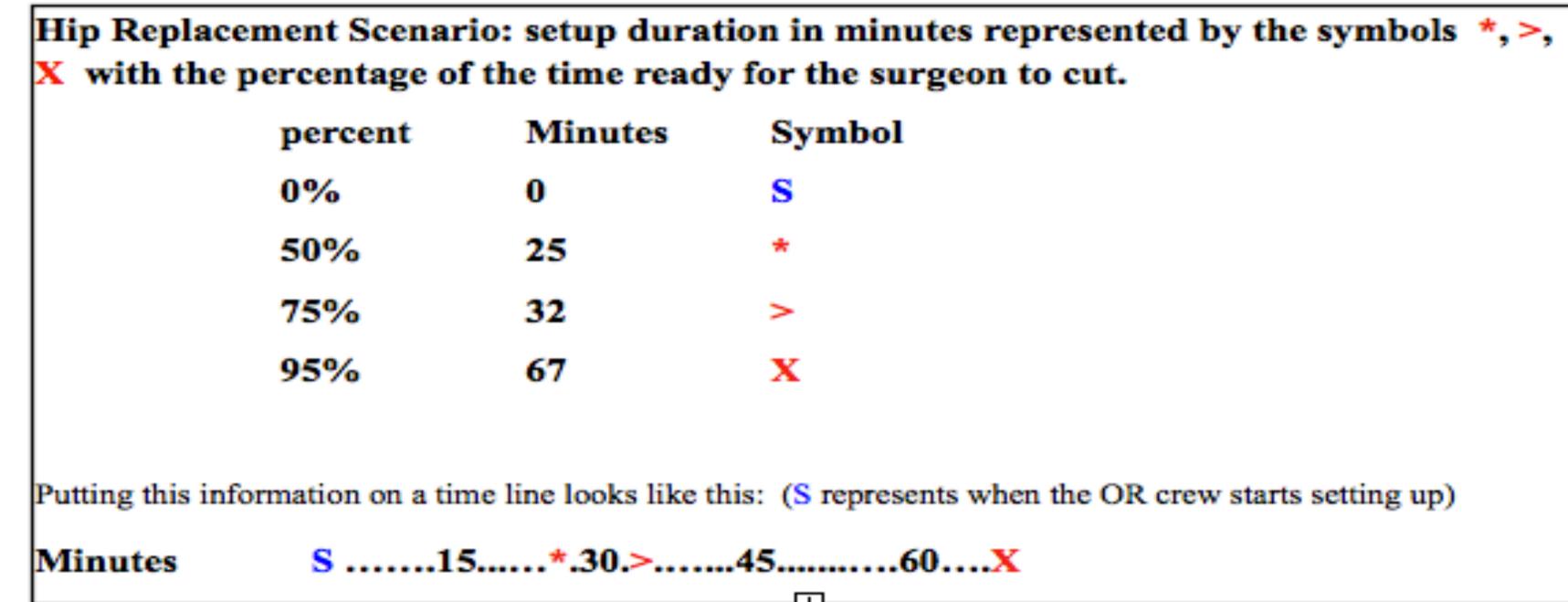
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There are several Start Times: room start time, and surgeon cut time are common.

Directly below are black diagrams that explain the fallout from not understanding how ontime starts should be implemented. To the sides, the four colored graphs show a progression of techniques (counter-clockwise from top left, bottom left, top right to bottom right) that attempt to achieve the same beneficial effects desired by on-time starts.

Depending on the scenario, on-time starts are not the most powerful technique for finishing a day's cases, and if poorly implemented (surgeon not showing up early for on-time starts as diagrammed below) waste employees' time. They also may have beneficial or harmful effects in Pre-op and PACU if not strategically applied.

Figures 1 and 2



If we place the actual time of day above the time line for the hip replacement, we can tell that the OR crew had to begin to setup the case at 5:53am. In this particular instance, the Figure 3 time line has been placed to coincide with a policy that requires the OR room to be ready 95% of the time for a 7am start-time (the X was placed under 7am). Notice the S before 6am. Contrast that with Figure 4 when OR policy is set so that the room must be ready 75% of the time:

In Figure 4, the time line has been shifted to the right so that the > representing 75% is under 7am. In this case, the OR staff has to begin about 6:28, roughly 35 minutes later than the 95% policy. If the policy was a 50% start time, the * would be placed under 7am and the OR crew would begin setting up around 6:35. The effects are shown in Figure 5.

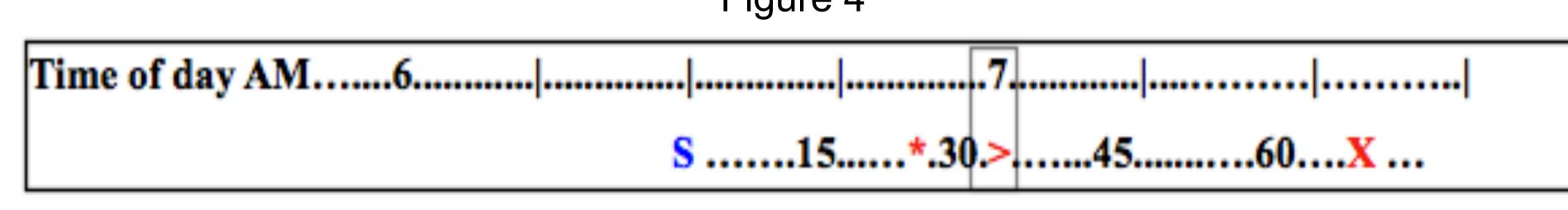
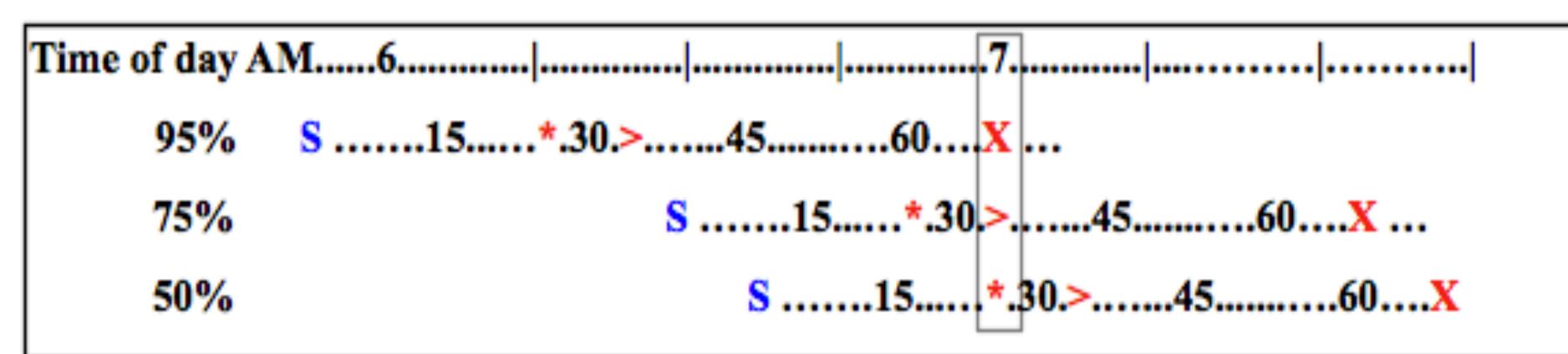
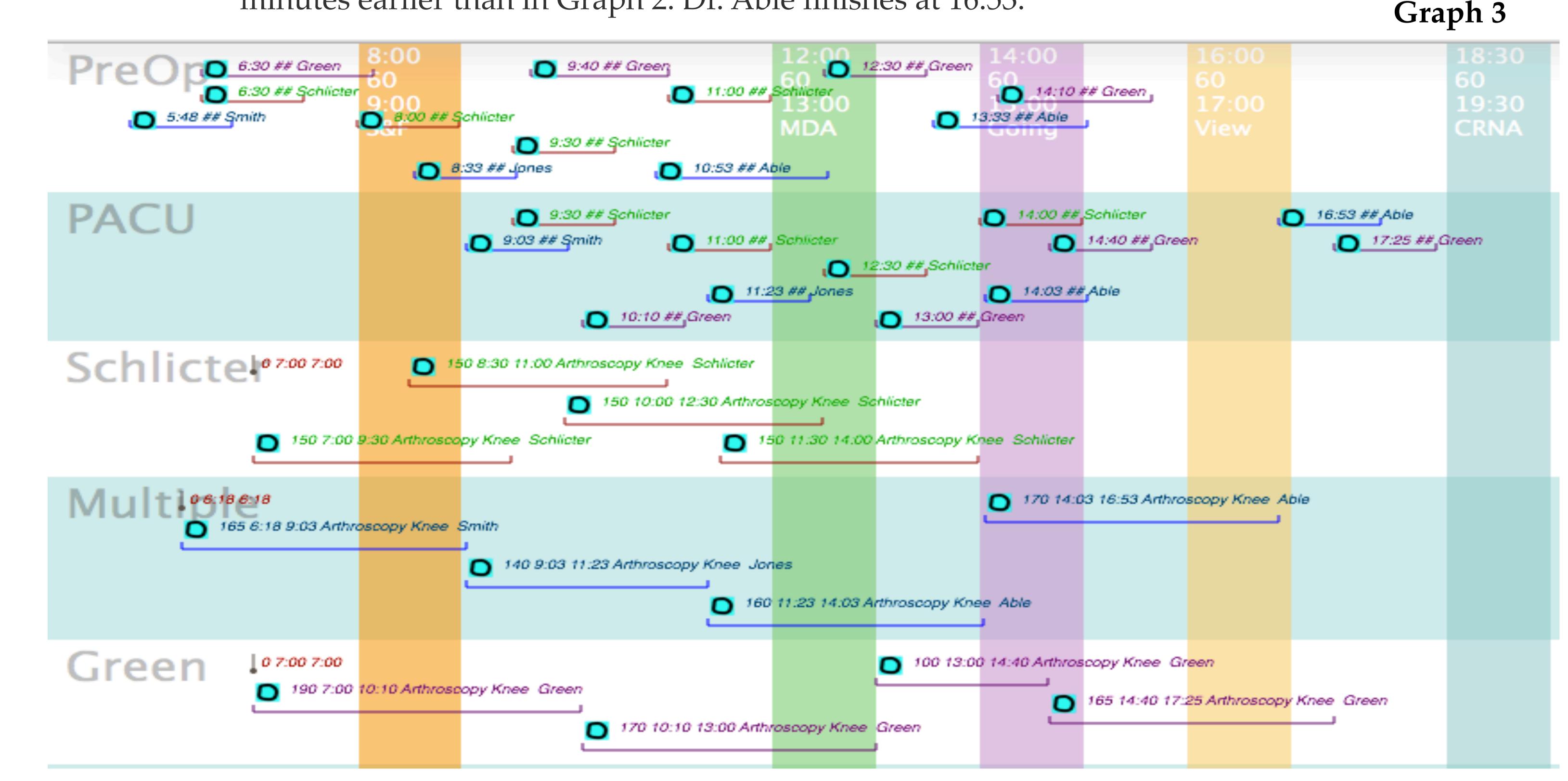


Figure 5



With an OR policy that dictates cases must start by 7am 95% of the time, the OR staff will have to arrive earlier than when policy dictates a success rate of 75% or 50%. With a 95% success of starting by 7am, the majority of the time the case could start before 7am if the surgeon were present and ready.

Surgeon starts earlier than 7am because the room and patient are usually ready earlier for a 95% surgical start at 7am... Dr. Smith sees the gantt chart and realizes how much sooner he can usually finish if he arrives earlier. He buys a faster car and arrives at the hospital before the time the room and patient are ready, 50% of the time being before 06:43 [42 minutes (67-25) earlier than before]. With the saved time, the nurses and anesthetist start Dr. Jones' case 42 minutes earlier than in Graph 2. Dr. Able finishes at 16:53.



Dr. Able flips his last room into one of the two rooms which Dr. Schlicter had been using... Dr. Able finishes [90 minutes earlier than in Graph 3] at 15:23... and does not need to get a partner.

