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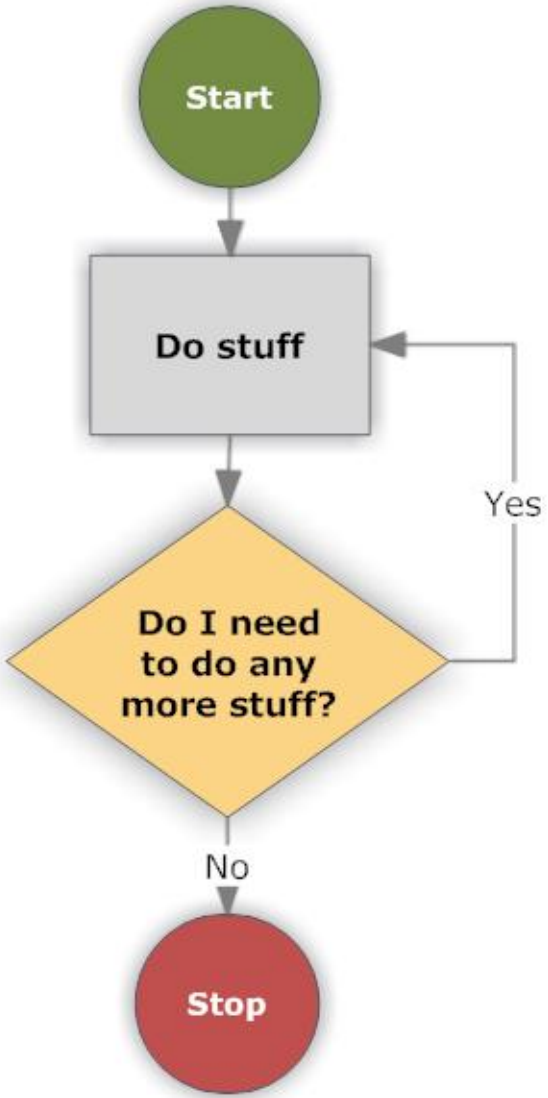
# "Workflow" demystified

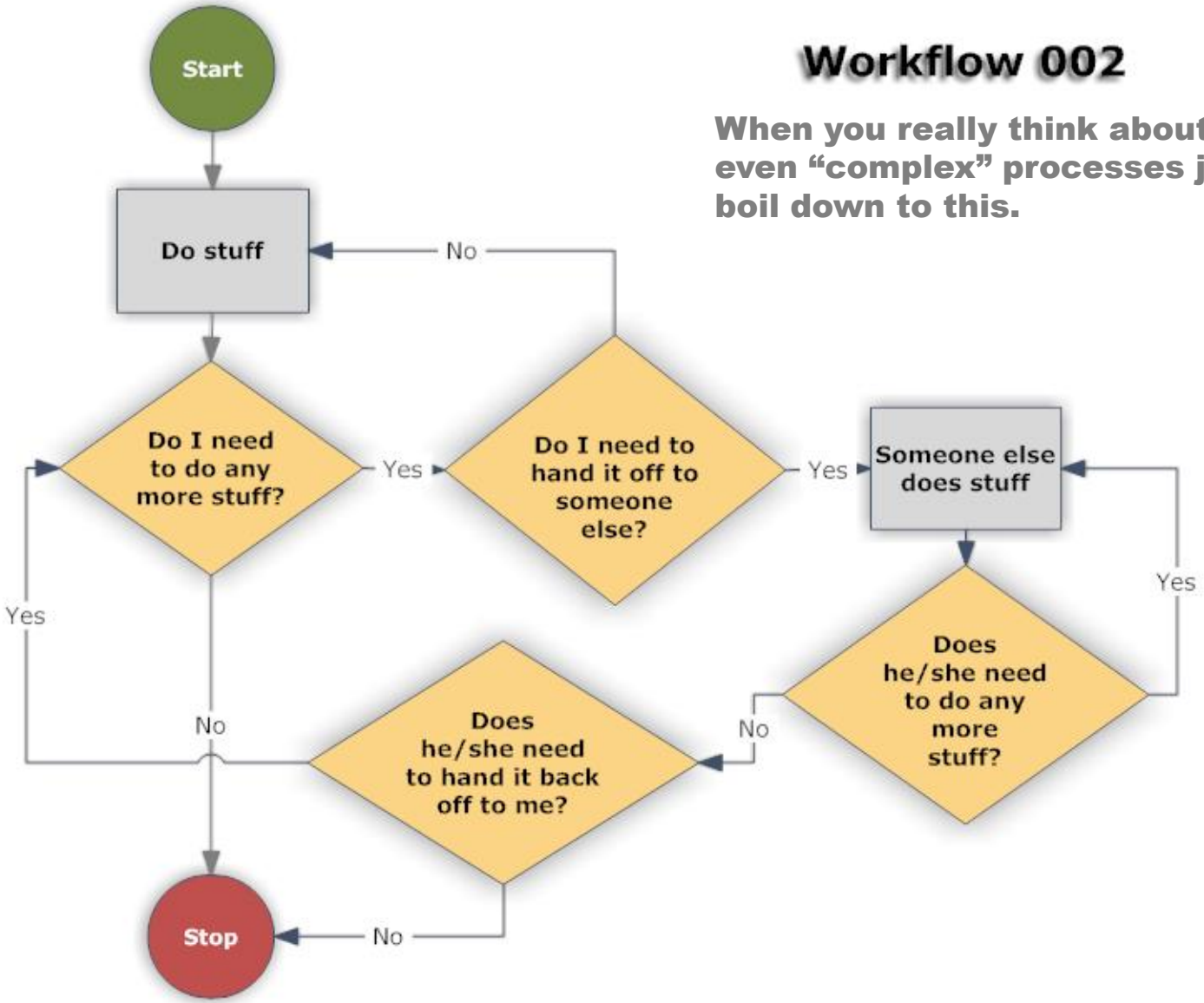
Prepared by HealthInsight as part of our work as the Regional Extension Center
for Nevada and Utah, under grant #90RC0033/01 from the Office of the National Coordinator,
Department of Health and Human Services. 9SOW-UT-2010-00-112

# Workflow 001

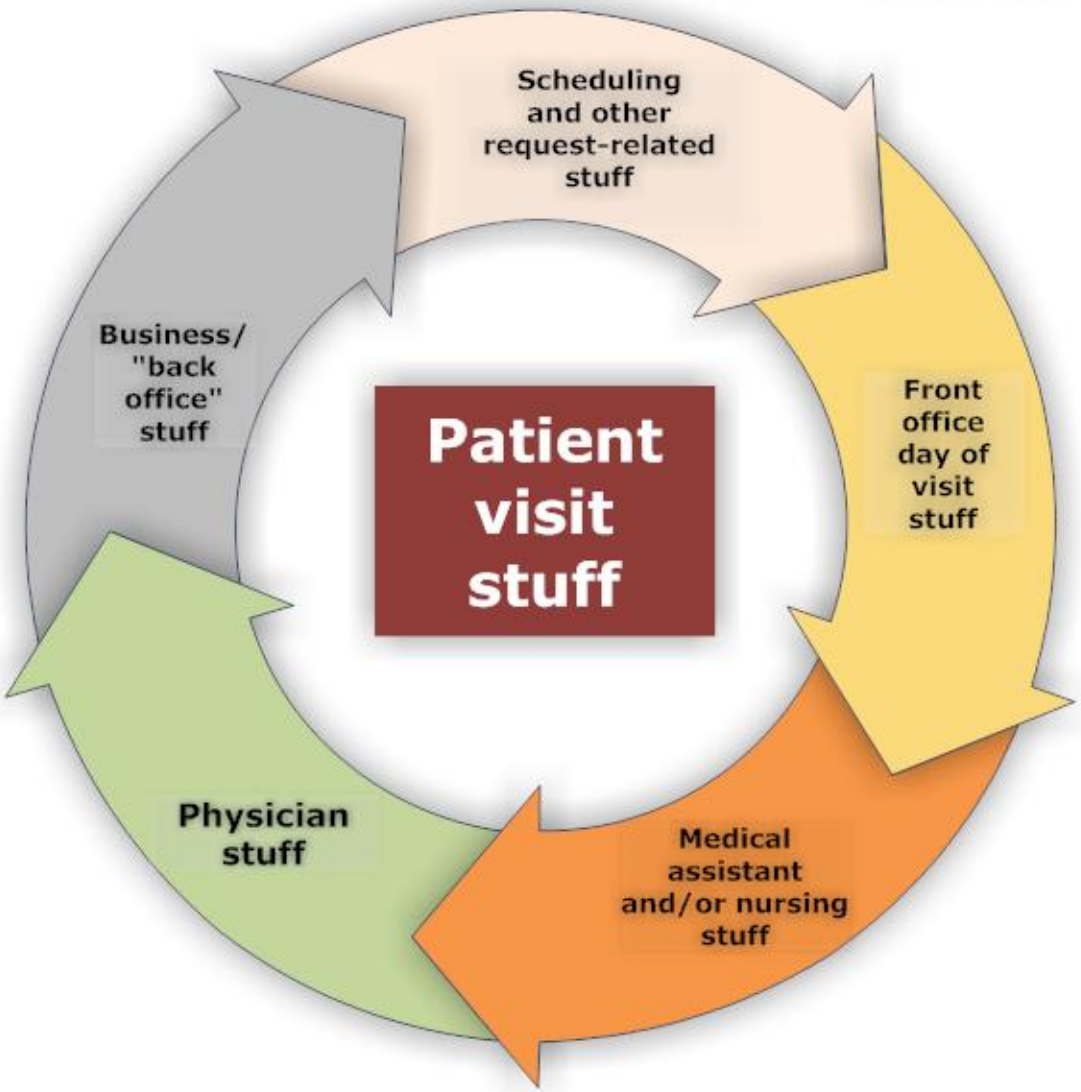


# Workflow 002

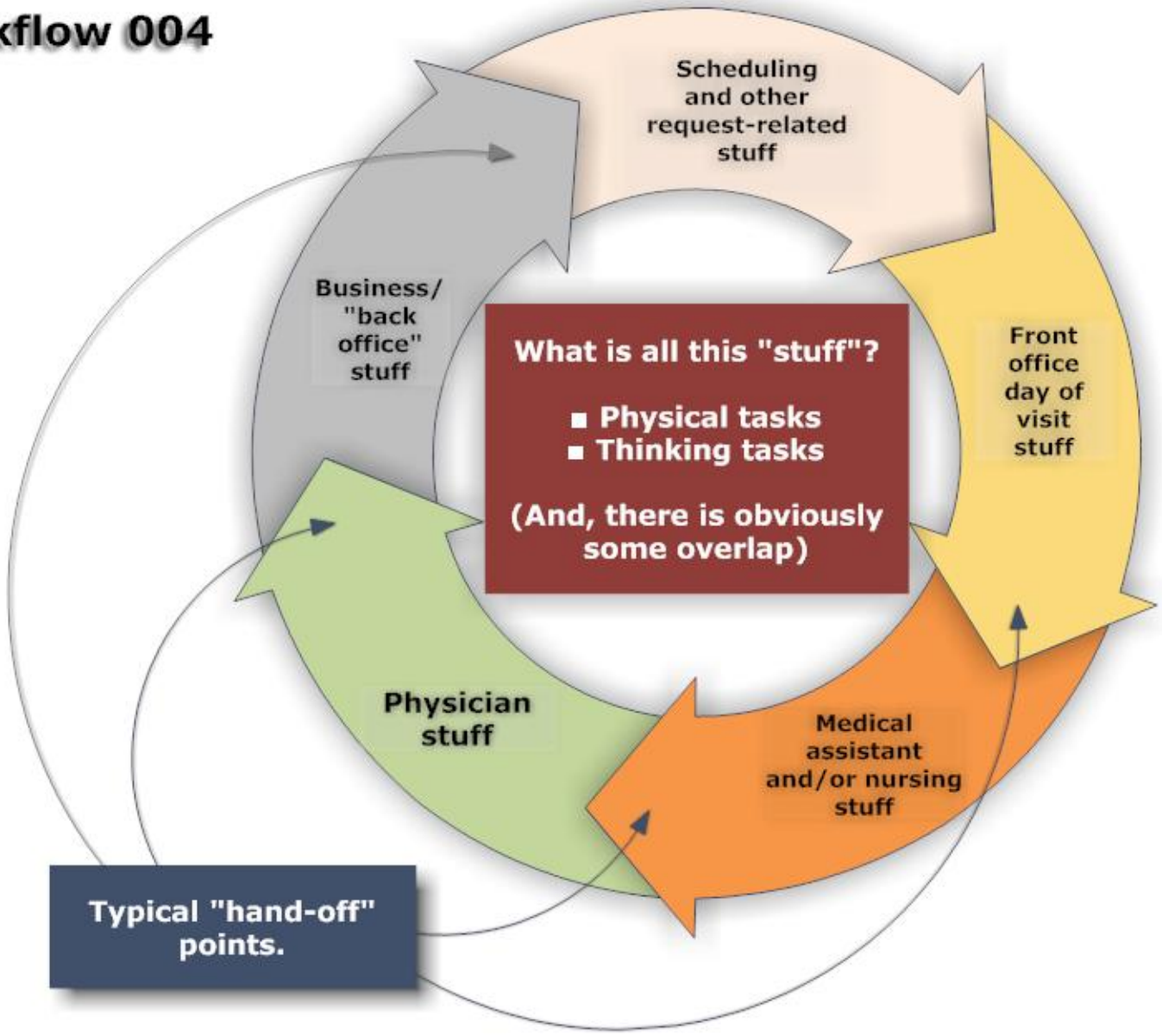
**When you really think about it, even "complex" processes just boil down to this.**



# Workflow 003



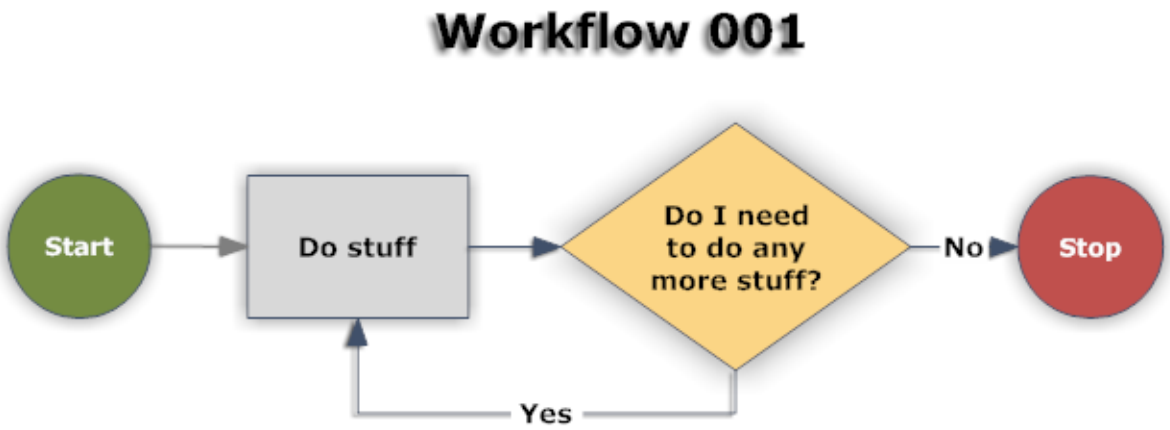
# Workflow 004



**"Workflow analysis" is really just about fully recognizing and documenting all of the task steps (“stuff”) you and your fellow staff must take to complete your work (and to see how well it actually “flows”). Between the "begin" and "end" points, there are really only two types of process steps:**

**[1] straight input/output tasks (typically depicted by a square or rectangle), and**

**[2] decision point tasks (the "diamond" box) where the output path is the result of having made some decision from a set of alternatives.**

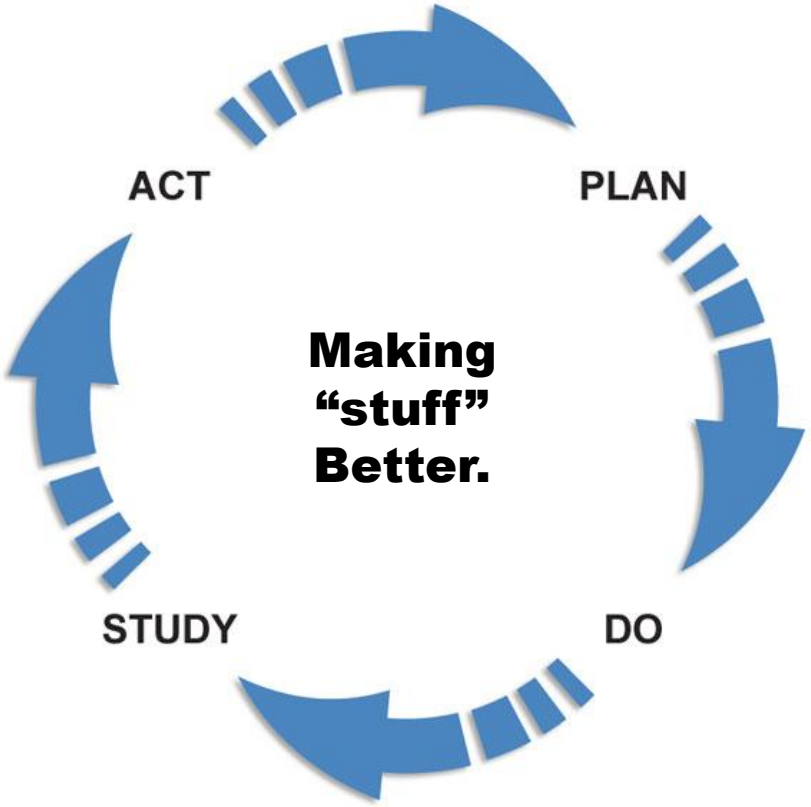


**Individual process tasks are sequential, one after the other, often with "hand-offs" between people. Unless you work alone, work tasks typically run in parallel, i.e., different staffers performing different tasks at the same time (and where hand-off misalignments result in “bottlenecks”).**

**We are simply interested in a small number of basic things related to process tasks:**

- **The total number of steps/tasks in a process;**
- **People and tools involved in each step;**
- **Time to completion for each step (min/average/max if possible, to capture variability);**
- **Number and type(s) of errors encountered in each step.**

**We first seek to understand and depict our "current state" processes. Only after doing so can we begin to understand where things might systematically be changed for the better (e.g., fewer steps, faster task completion, fewer errors) using The "PDSA" cycle (Plan-Do-Study-Act) in order to verify that we are in fact making things better.**



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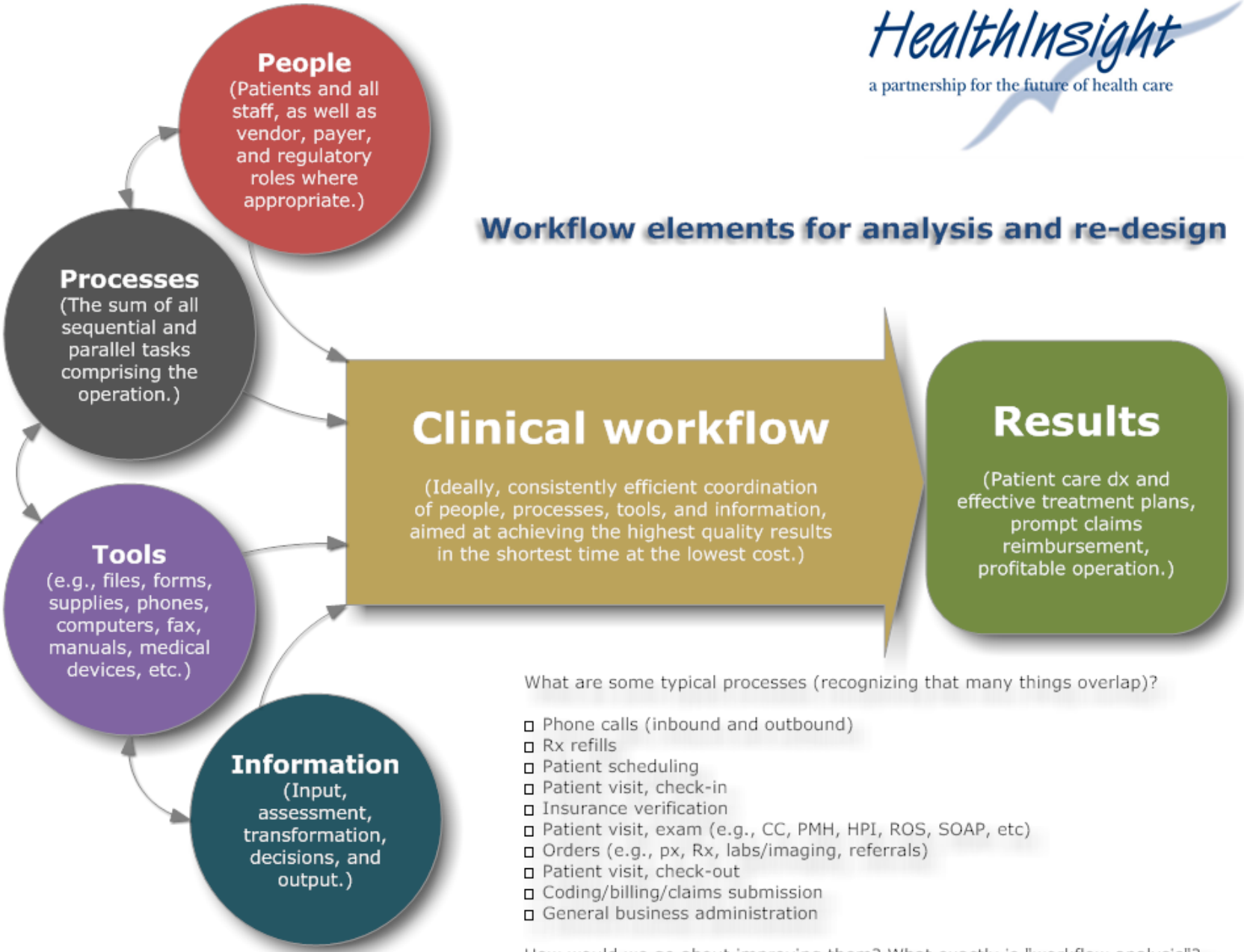
## Workflow elements for analysis and re-design




What are some typical processes (recognizing that many things overlap)?

- ☐ Phone calls (inbound and outbound)
- ☐ Rx refills
- ☐ Patient scheduling
- ☐ Patient visit, check-in
- ☐ Insurance verification
- ☐ Patient visit, exam (e.g., CC, PMH, HPI, ROS, SOAP, etc)
- ☐ Orders (e.g., px, Rx, labs/imaging, referrals)
- ☐ Patient visit, check-out
- ☐ Coding/billing/claims submission
- ☐ General business administration

How would we go about improving them? What exactly is "workflow analysis"?

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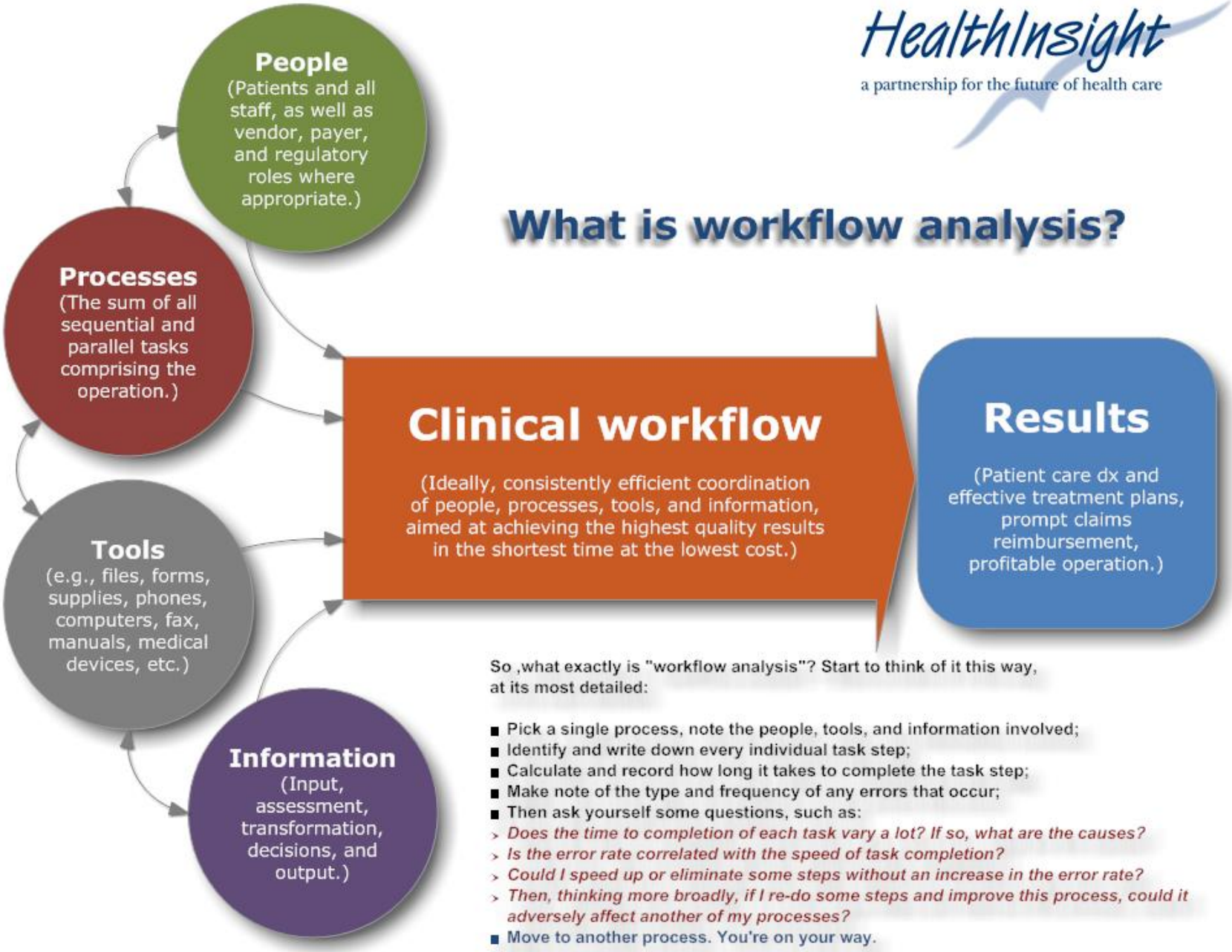
# What is workflow analysis?



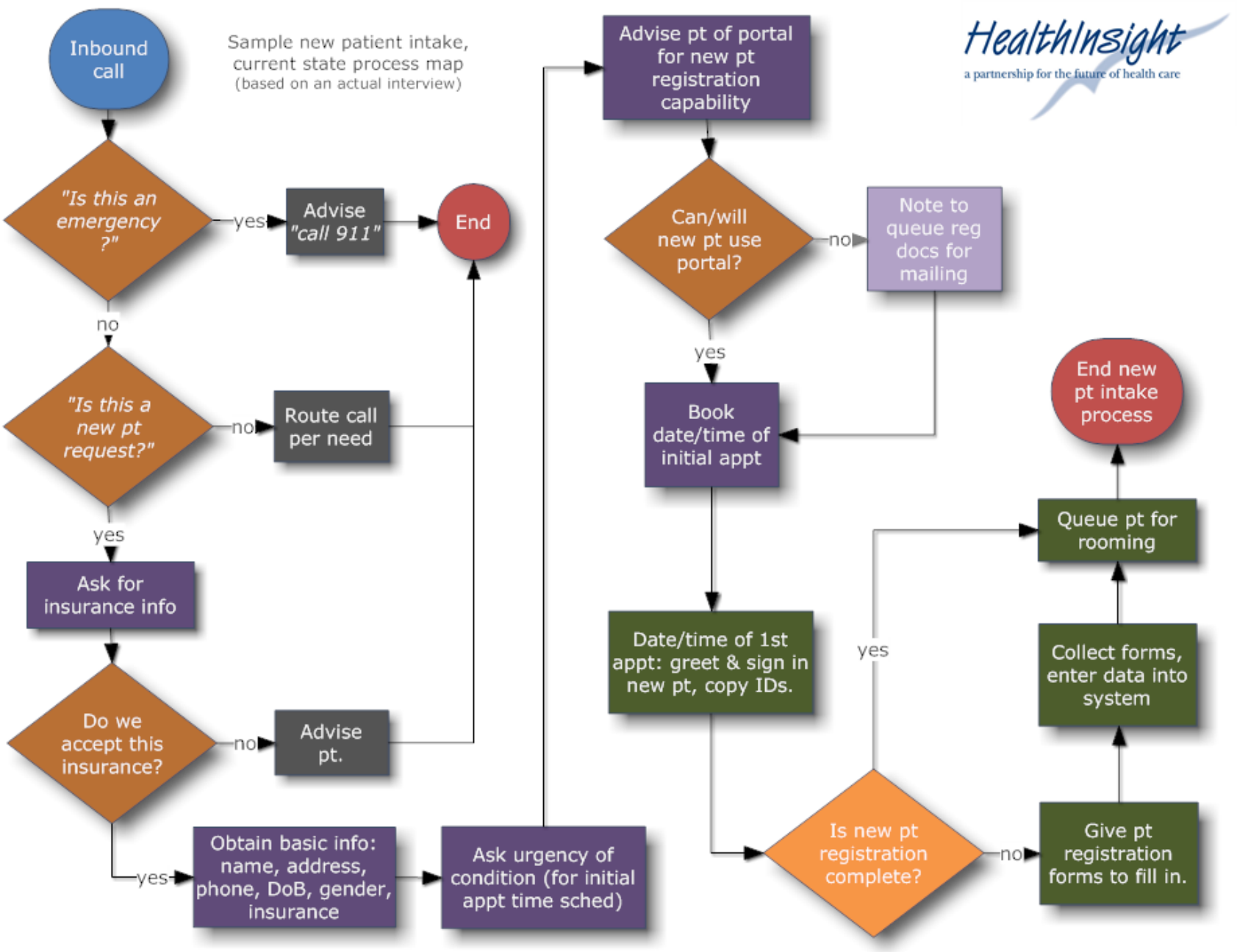

So ,what exactly is "workflow analysis"? Start to think of it this way, at its most detailed:

- Pick a single process, note the people, tools, and information involved;
- Identify and write down every individual task step;
- Calculate and record how long it takes to complete the task step;
- Make note of the type and frequency of any errors that occur;
- Then ask yourself some questions, such as:
  - *Does the time to completion of each task vary a lot? If so, what are the causes?*
  - *Is the error rate correlated with the speed of task completion?*
  - *Could I speed up or eliminate some steps without an increase in the error rate?*
  - *Then, thinking more broadly, if I re-do some steps and improve this process, could it adversely affect another of my processes?*
- Move to another process. You're on your way.

# A quick real world example from a clinic staffer phone interview

| Step# | Process step (including decision point steps) | Staff role (e.g., front ofc, MA, physician, back ofc etc) | Tool(s) used | Avg time (minutes) to completion |
|---|---|---|---|---|
| 1 | If inbound call, ask [1] is this a 911 situation? or [2] non new-pt related, and [3] insurance carrier. Else, if new pt request inbound via email, call pt outbound to gather this info (start w/ step 3). | Front desk staff | Phone, email | 2.00 |
| 2 | If 911, so advise ("call 911"). If insuror not taken, so advise. Sorry. End of call. | Front desk staff | Phone | 0.25 |
| 3 | Else: Take down/enter name, address, phone#, DoB, gender. | Front desk staff | Phone, computer | 2.00 |
| 4 | Ask about urgency of condition relating to 1st visit (for intial visit time allotment). | Front desk staff | Phone | 0.25 |
| 5 | Advise pt to use portal to fill out pt info docs if possible, otherwise we will mail them to be filled out. If the latter, queue for forms mailout. | Front desk staff | Phone, computer | 0.50 |
| 6 | Ask for prior provider(s) info for MedRecs request(s). | Front desk staff | Phone, computer | 2.00 |
| 7 | Book 1st appointment with estimated appropriate time allotment, end call. | Front desk staff | Phone, computer | 1.00 |
| 8 | Day of appt: greet and sign in pt. | Front desk staff | sign-in sheet, computer | 0.50 |
| 9 | If setup info was completed via portal, queue for rooming. | Front desk staff | computer | 0.10 |
| 10 | If setup info not done online, ask for /provide paperwork and have pt sign releases (e.g, HIPAA docs), then queue for rooming and enter pt info into system. | Front desk staff | computer, paper forms | 5.00 |

**(Depiction in a flowchart graphic on the next page.)**


Inbound call
Sample new patient intake, current state process map
(based on an actual interview)
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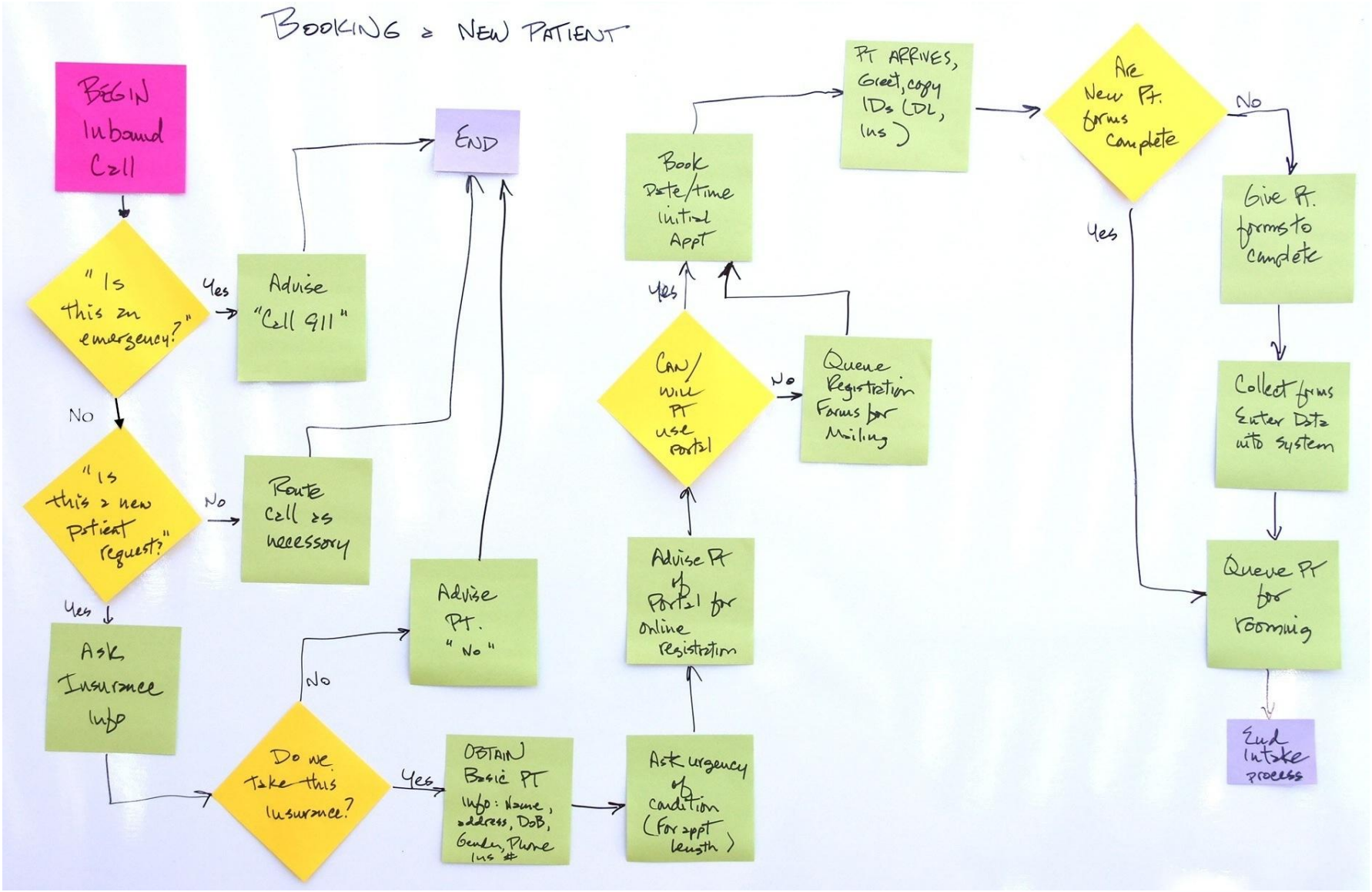
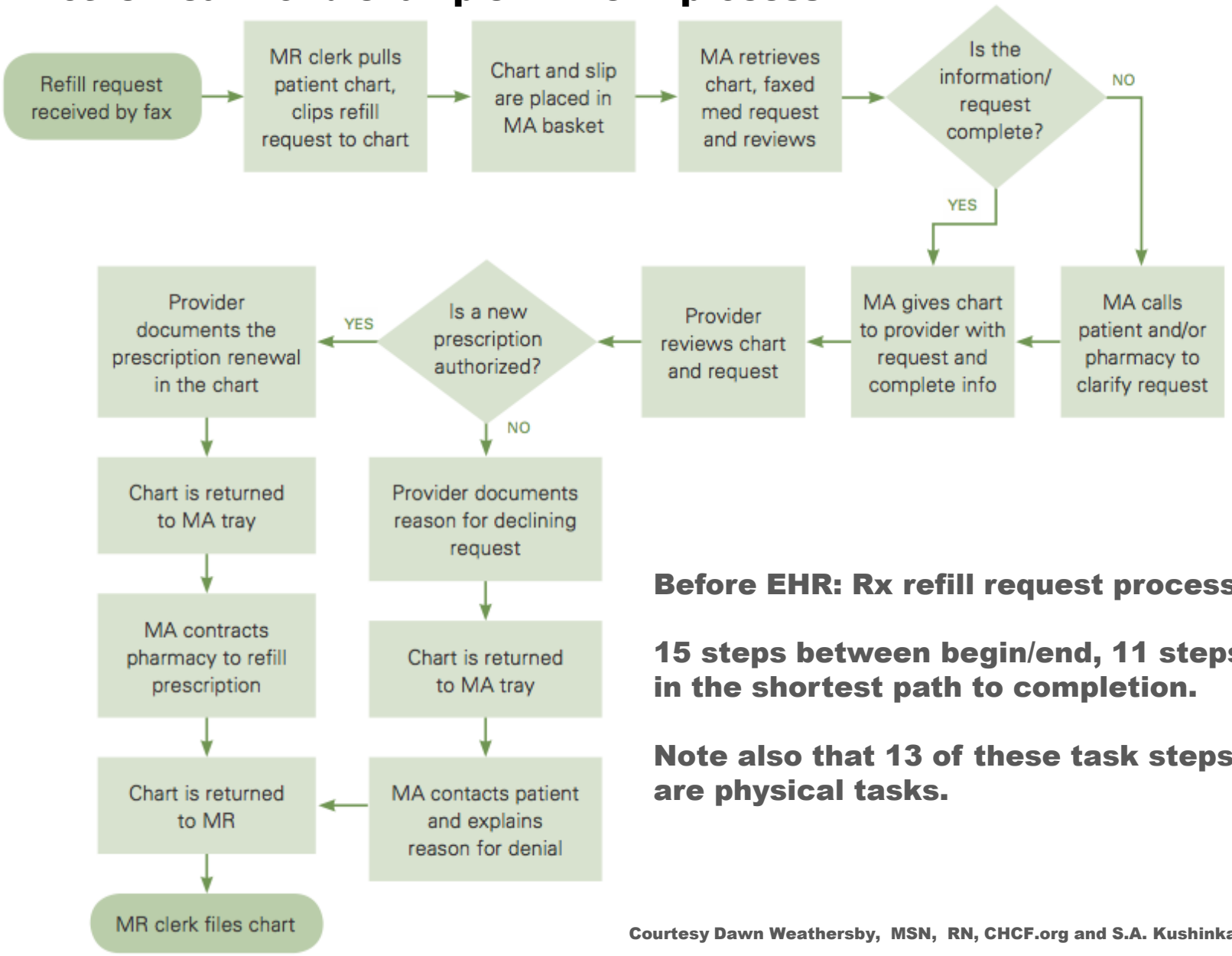
"Is this an emergency ?"
yes
Advise "call 911"
End
no
"Is this a new pt request?"
no
Route call per need
yes
Ask for insurance info
Do we accept this insurance?
no
Advise pt.
yes
Obtain basic info: name, address, phone, DoB, gender, insurance
Ask urgency of condition (for initial appt time sched)
Advise pt of portal for new pt registration capability
Can/will new pt use portal?
no
Note to queue reg docs for mailing
yes
Book date/time of initial appt
Date/time of 1st appt: greet & sign in new pt, copy IDs.
Is new pt registration complete?
no
Give pt registration forms to fill in.
Collect forms, enter data into system
Queue pt for rooming
End new pt intake process
yes

**It doesn't have to be fancy to get going. Sticky notes on a whiteboard will do.**



# Another real world example: Rx refill process




**Before EHR: Rx refill request process.**

**15 steps between begin/end, 11 steps in the shortest path to completion.**

**Note also that 13 of these task steps are physical tasks.**

Courtesy Dawn Weathersby, MSN, RN, CHCF.org and S.A. Kushinka

**After EHR: Rx refill request process.**

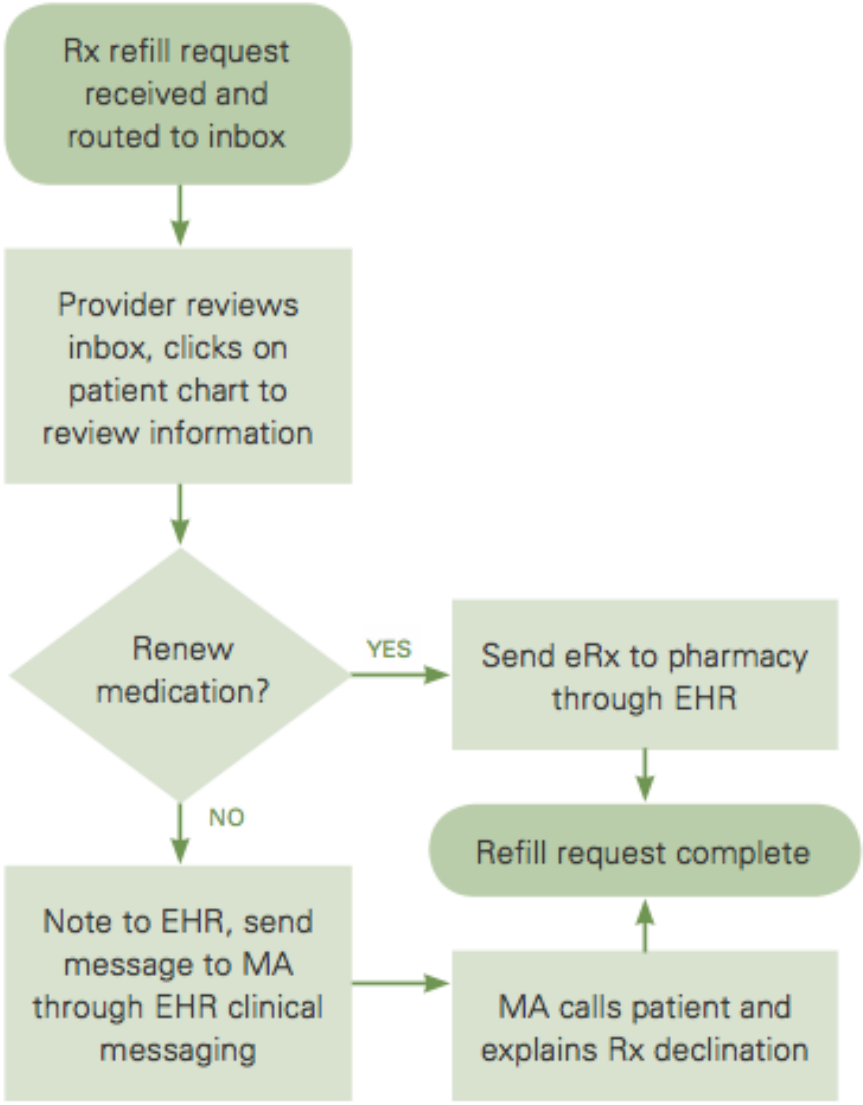
**Now only 5 steps between begin/end, only 3 steps in the shortest path to completion.**

**Fewer steps means quicker task completion in general, and fewer opportunities for error.**

**Think about it; unless every step in a process works perfectly every time, each additional step increases the likelihood of a mistake.**

**Note also that while some of the tasks are still "physical," they are less so, involving the use of the computer rather than moving paper around the clinic.**

**One caution: moving from a paper chart process to an EHR can result in "information flow misalignment" if we're not careful to analyze our processes and reorganize tasks where warranted.**




**Courtesy Dawn Weathersby, MSN, RN, CHCF.org and S.A. Kushinka**

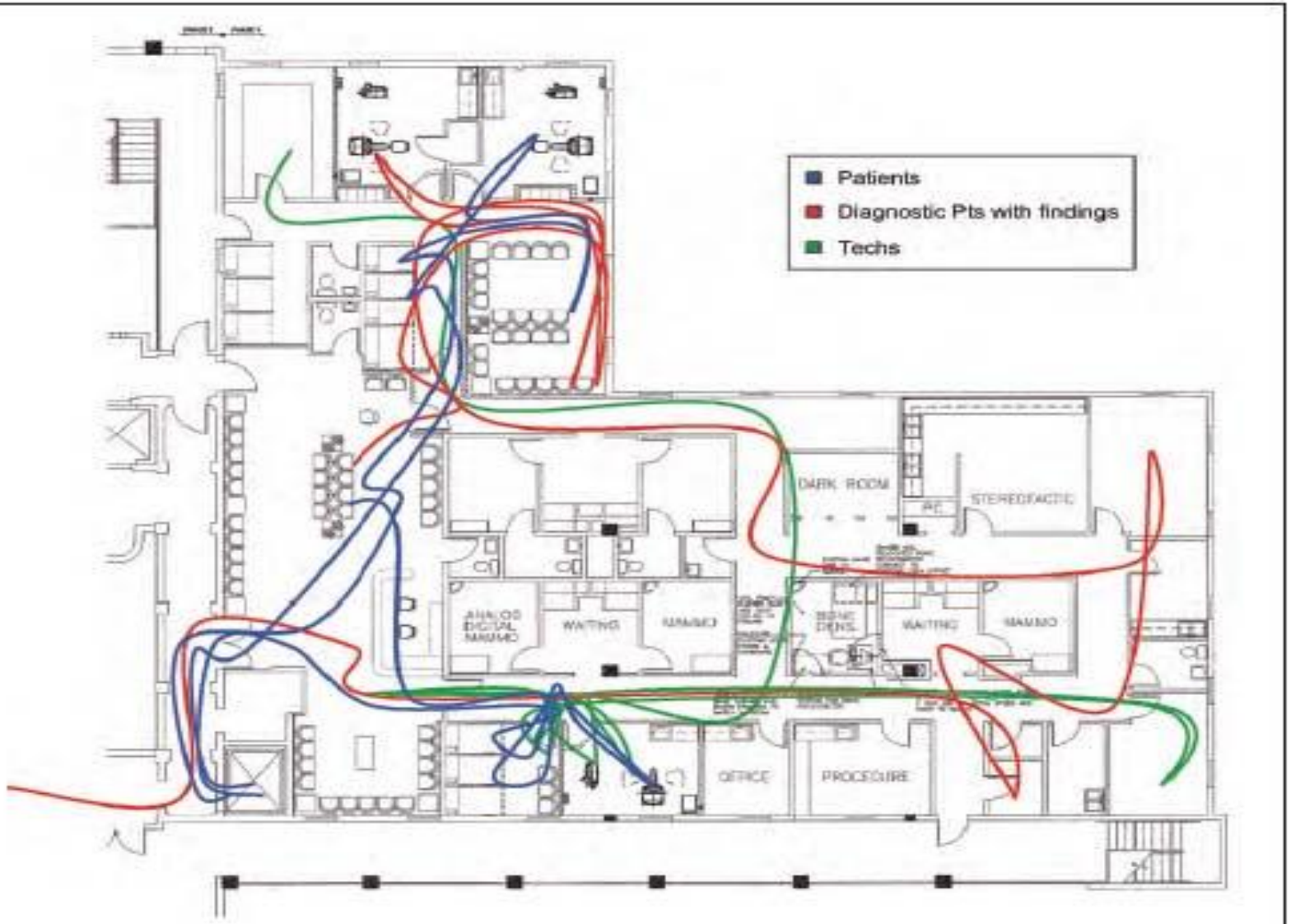
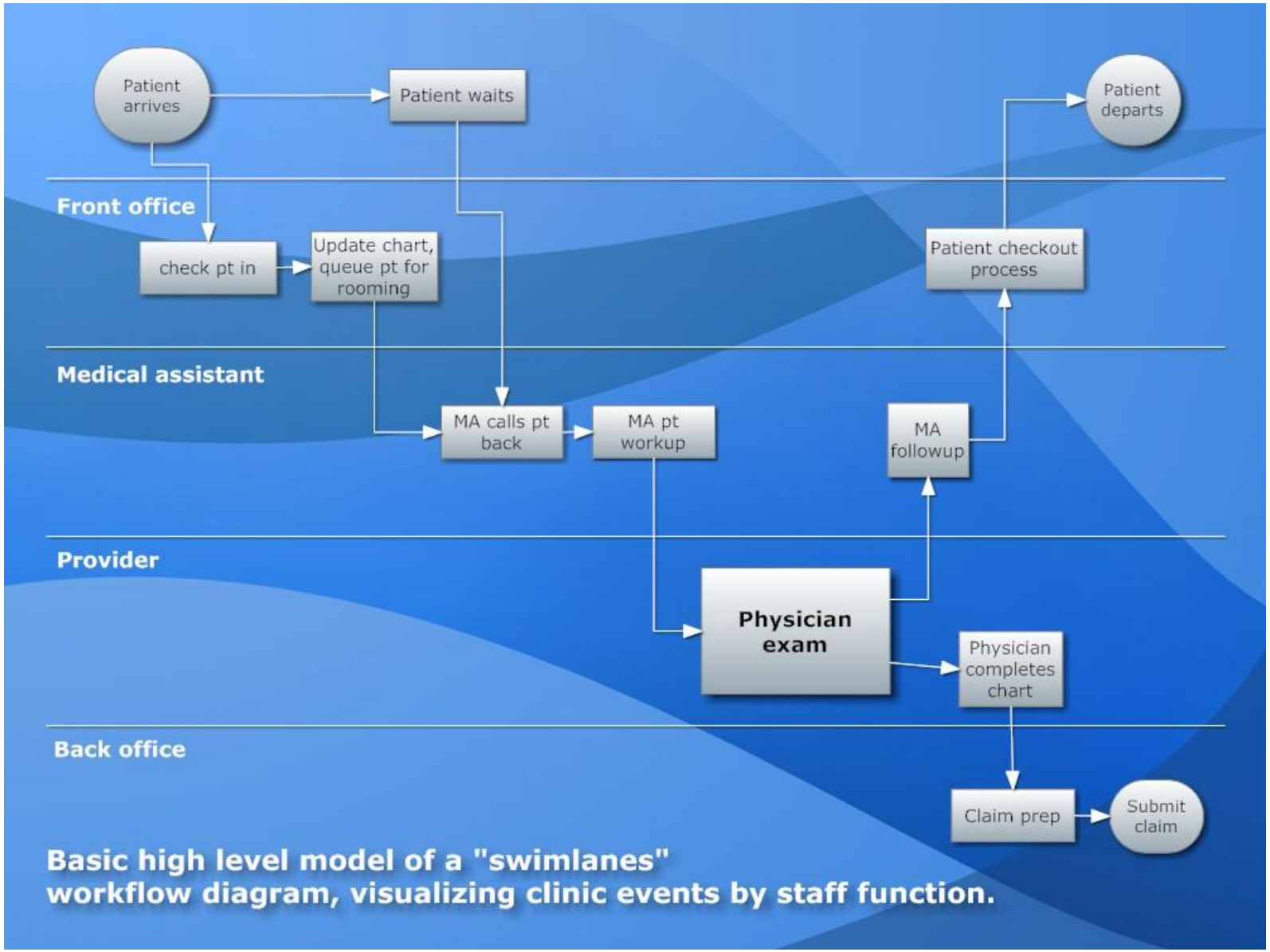
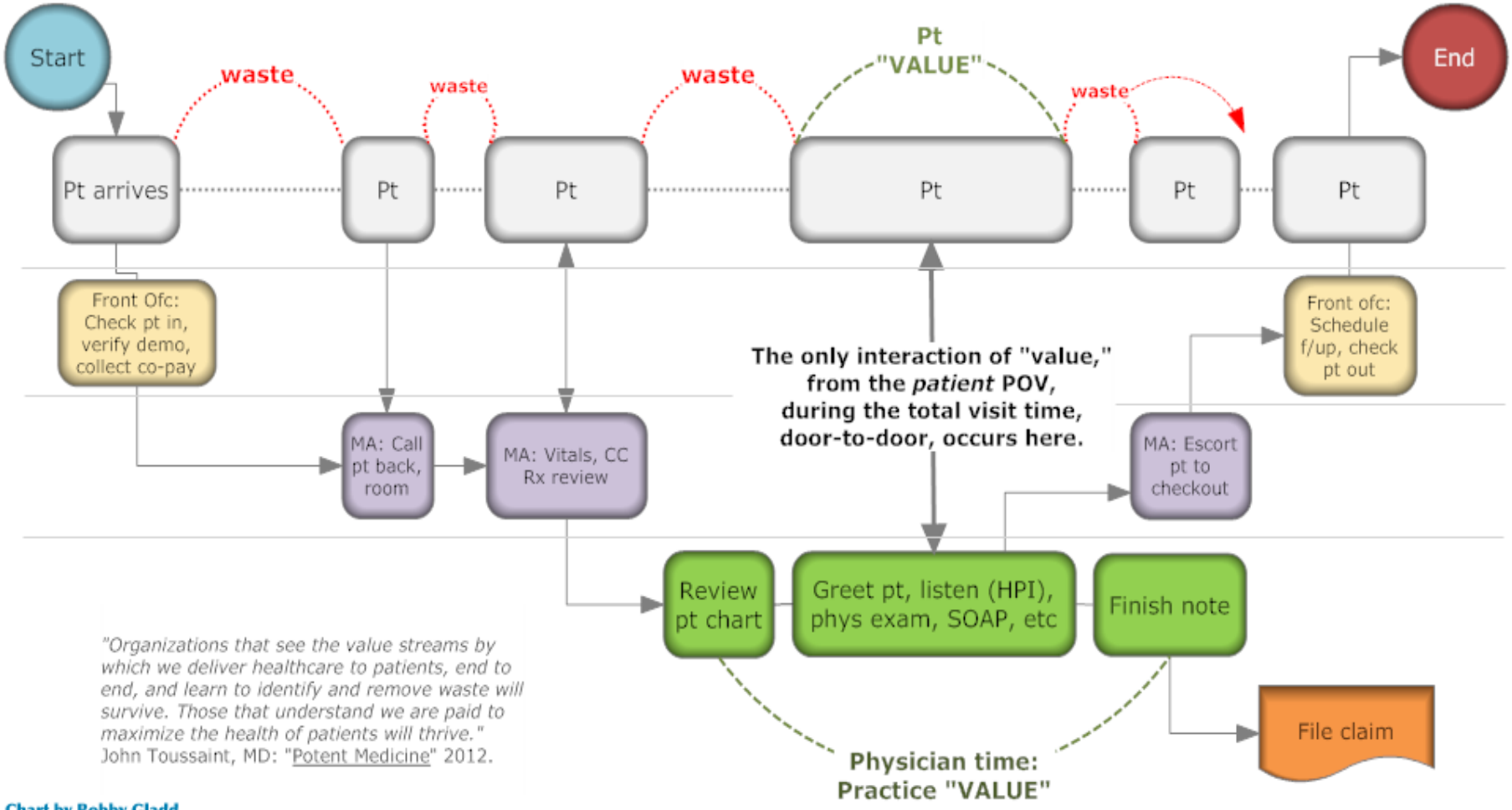



Figure 7. Spaghetti Mapping Floor Plan.

## Another process diagramming approach, the “swimlanes” map.



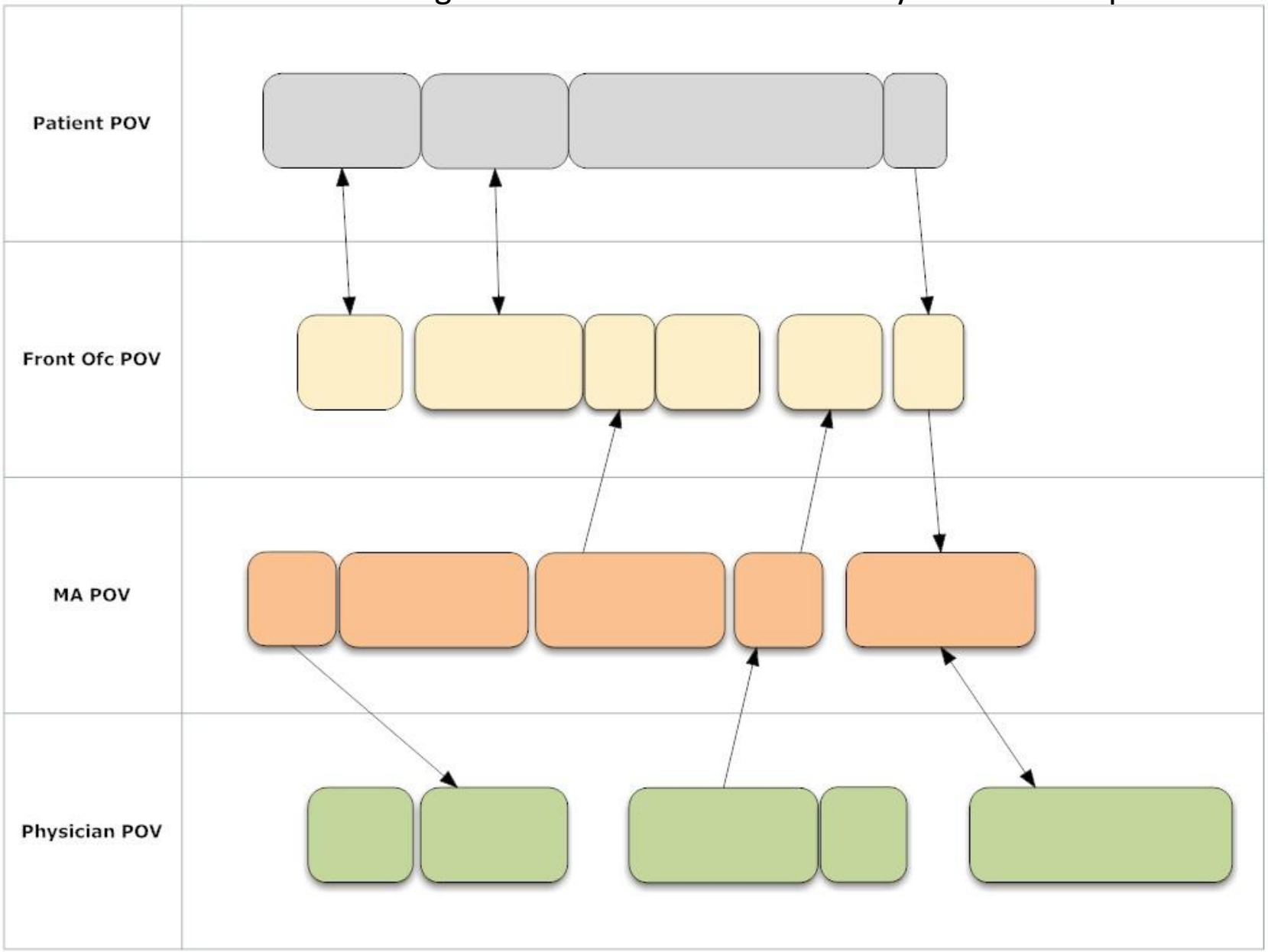
*"Strip away all the expectations about medicine and you will find that what people really want is not fancy tests, name-brand drugs, and flat-screen televisions in the waiting room. They want to be fixed-relieved from pain, returned to good health, assisted in delivering healthy babies. Everything else is noise and, very often, a waste of resources."* John Toussaint, MD, and Roger Gerard, PhD: "On The Mend" 2010.

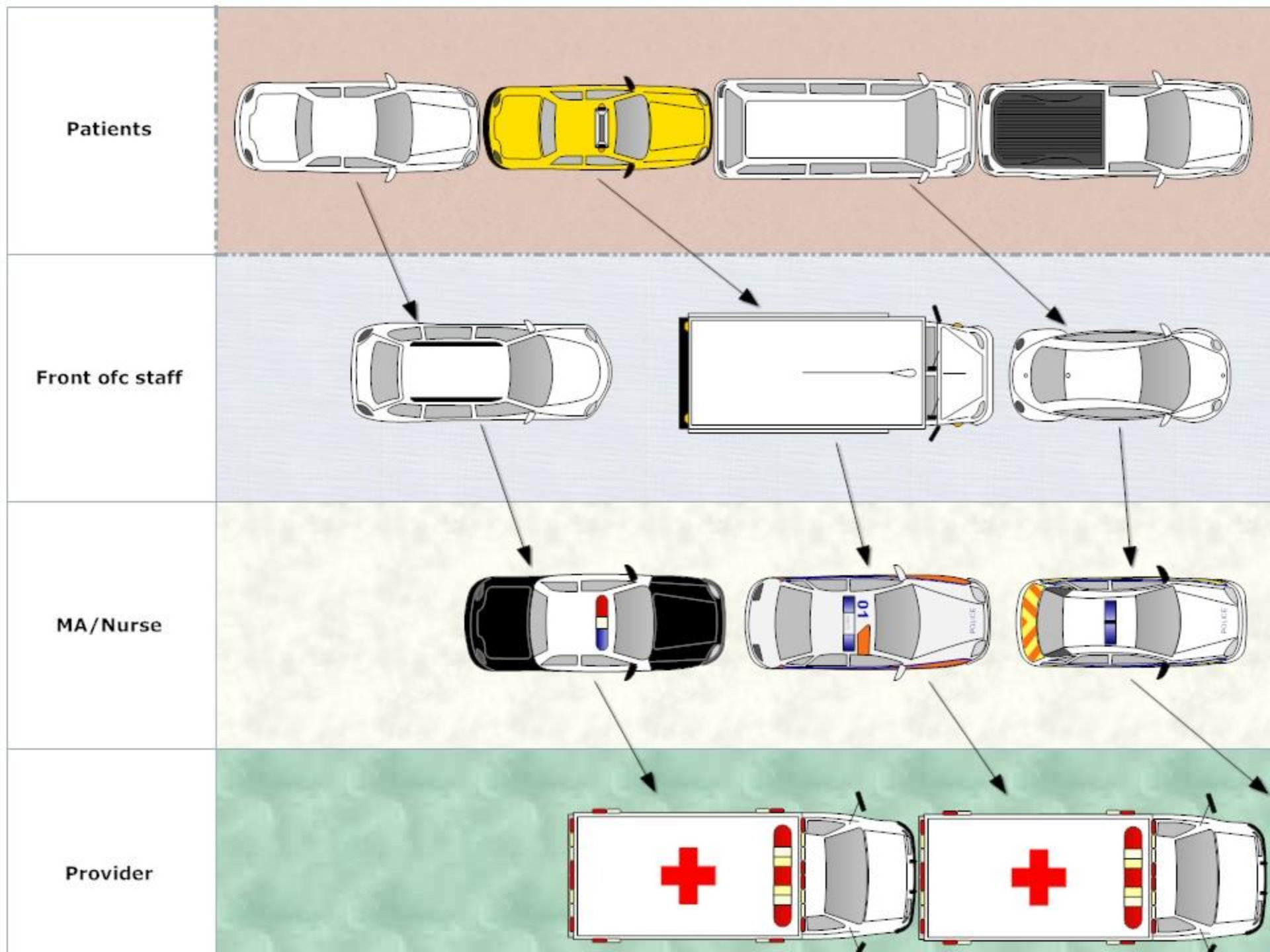


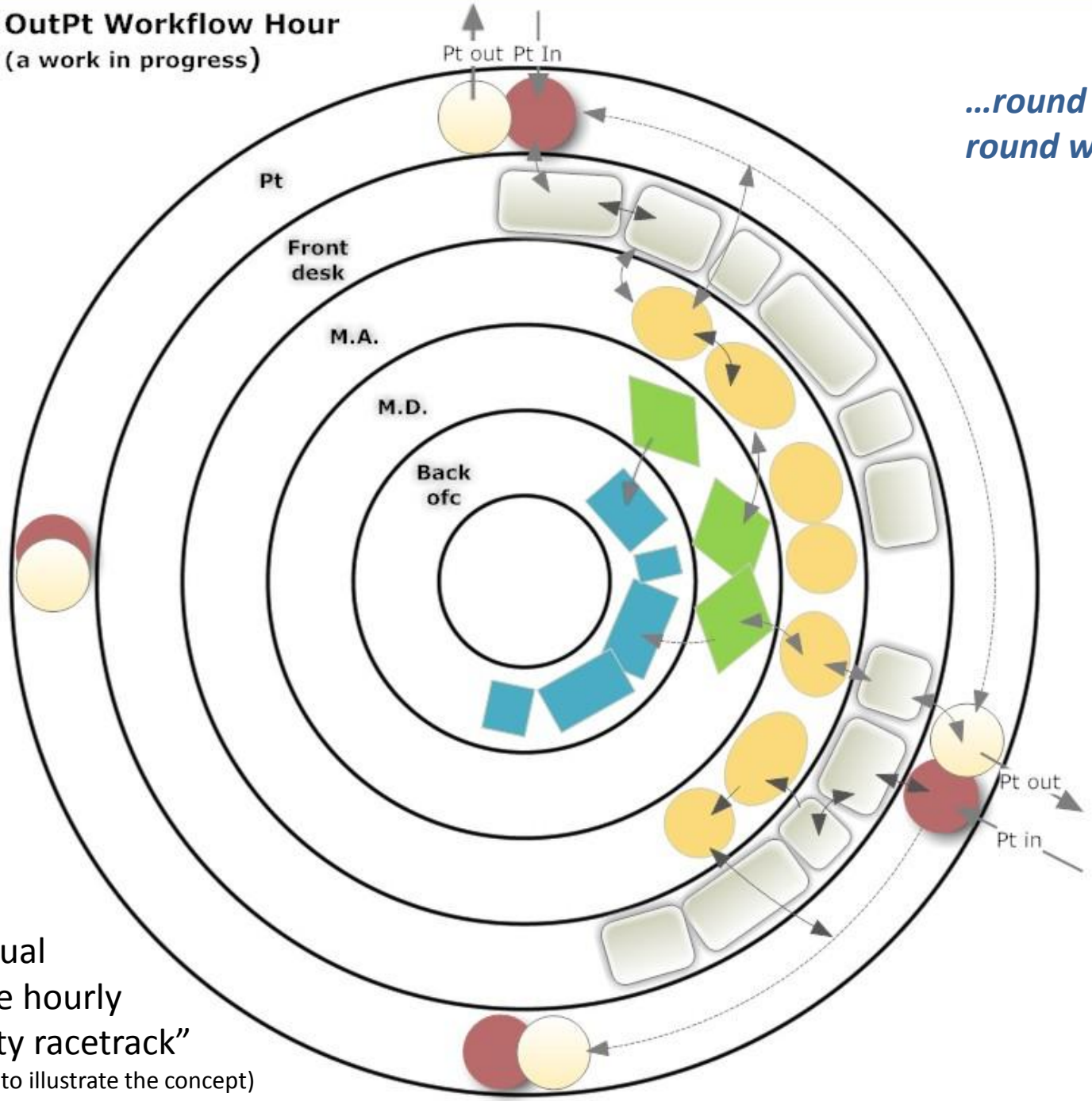

*"Organizations that see the value streams by which we deliver healthcare to patients, end to end, and learn to identify and remove waste will survive. Those that understand we are paid to maximize the health of patients will thrive."* John Toussaint, MD: "Potent Medicine" 2012.

**Chart by Bobby Gladd**

A realistic “swimlanes” diagram would illustrate that everyone works in parallel




Patients
Front ofc staff
MA/Nurse
Provider




*…round and round we go…*

Another visual analogy: the hourly "productivity racetrack"
(partially filled in to illustrate the concept)

Clinic _____ Process _____
Date _____
By _____

| Step# | Process step (including decision point steps) | Staff role (e.g., front ofc, MA, physician, back ofc etc) | Avg time (minutes) to completion | Tool(s) used | Notes |
|---|---|---|---|---|---|
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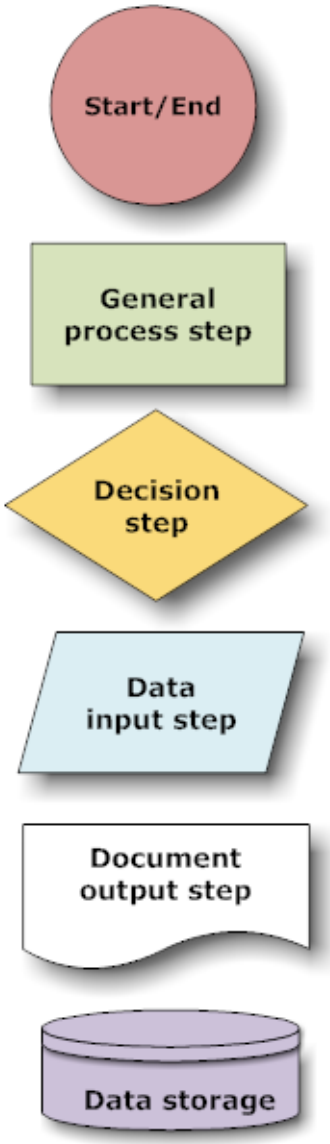
(Photocopy and use additional pages as needed.)

## Basic workflow diagram symbols

**While there are dozens of "formal" workflow mapping symbols, we advise that you**

# Keep It Simple.

**Also, pay attention to task completion times and types and rates of errors. The standard workflow diagram is really a "process logic map," which, while important, doesn't capture time and error information, but those too are critical for true process improvement.**



**A few thoughts about "Lean" methods for workflow re-design.**

**Advocates of "lean" process re-design classify tasks as**

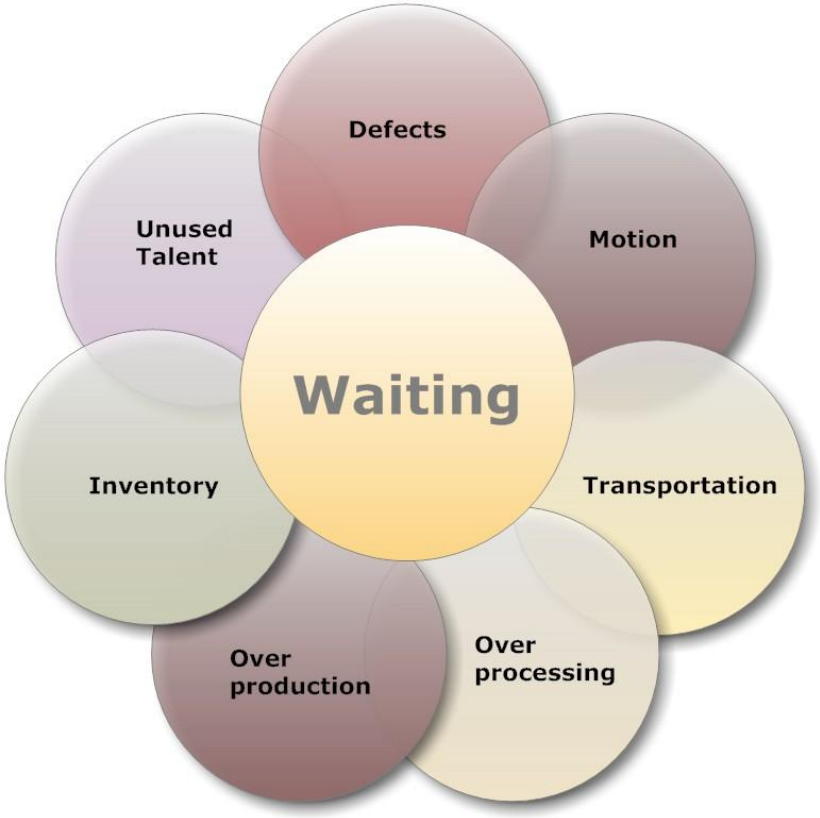
1. **Value adding,**
2. **Non-value adding but necessary, and**
3. **Unnecessary (i.e., "waste")**

**We want to maximize time spent on #1, minimize time spent on #2, and eliminate tasks in category #3.**

**In the context of your clinic, "point of view" must be considered. For example, only the provider "adds value" in terms of being the one person who whom services can be billed. All other tasks are either necessary support or waste.**

**From the point of view of the *patient*, that which eases or cures her medical problem is the source of "value." Time spent waiting or filling out the same forms repeatedly is waste.**

## Barriers to a Lean operation: The Eight Wastes




We wait for defects to be corrected. We wait while tasks involving excess motion and transportation get completed. We wait while multiple forms get filled in -- all asking for much of the same information (overprocessing). We wait while piled-up chart review goes unfinished 'til after hours (overproduction and inventory). Finally, we wait owing to unrealized/underutilized talent and skills. We need to ID and remove waste.

# Workflow 001


**Ask yourself:**

**"How much of the 'stuff' I do every day is really 'wasted' effort that keeps me from being more productive and less frustrated?"**

**The answer lies in first documenting and then analyzing your processes as necessary first steps to systematically improving them.**

**We all typically come to work every day and do our jobs with the best of intentions, but we usually don't give much thought to *how* we "do stuff" once we've been trained and we're mired in the onslaught of daily work.**

**But, a relatively small amount of time spent figuring out better ways to "do stuff" can have a huge and durable payoff, both in terms of productivity and job satisfaction.**

**"Experts" really can't come in and do this from the outside, because, really, YOU are the experts. But, we can certainly help.**

# Some useful links:

**www.healthinsight.org/Internal/REC_Resources.html**
(You can download our workflow data capture Excel tool here.)

**www.ama-cmeonline.com/health_it_workflow**

**www.lean.org**

**www.asq.org/health**

**en.wikipedia.org/wiki/Workflow**

**en.wikipedia.org/wiki/Lean_services**

**tinyurl.com/4y557ah** (AHRQ workflow resource for Health IT)

**RegionalExtensionCenter.blogspot.com**

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