Improve Profitability by Improving Processes – Part 1

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Understanding Complexity

- A **complex system** is a system composed of interconnected parts that as a whole exhibit one or more properties that are not obvious from the properties of the individual parts.
  - Diverse, interdependent, connected, adapting entities
- Complex systems:
  - Are unpredictable
  - Produce large events
  - Are very robust

Taming the Lion v. Poking the Tiger

- "An actor in a complex system controls almost nothing but influences almost everything" *Professor Scott Page, Ph.D, University of Michigan*
- In their book, Harnessing Complexity, Bob Axlerod and Michael Cohen present the idea that while we can't control complex systems, we might hope to harness their power.

Decision Theory

- Based on two concepts; uncertainty and risk
- The four steps to decision making are as follows:
  1. Imagine future states or conditions
  2. Determine payoff (or consequence) of each state
  3. Probabilistic prediction of future events
  4. Create a benefit-risk analysis (ROI)
- Works well in linear, predictable systems
- Complex systems are non-linear and unpredictable

Why Complex Systems Require a Different Model

- According to Dr. page, there are four reasons why decision theory does not apply to complex systems:
  1. The model doesn't take into account the behavior of other interested actors
  2. The model translates complexity into uncertainty
  3. The model is all exploitation (Bayesian)
  4. The model focuses on a single outcome, not on system properties like connectedness, interdependence, diversity and rates of learning and selection
- The key to making effective decisions in complex systems is to recognize that the system is complex

What's the primary responsibility of a medical practice?

Profit and Profitability

- Profitability = $\frac{\text{Revenue}}{\text{Expense}}$
- Profit Margin = Revenue – Expense
- What do both have in common?
- To be more profitable, you have to either increase revenue or reduce expense
  - …and without profitability, you don't have a business

Reducing Expenses

- Staff pay and benefits
- Eliminate FTEs
- Pinch capacity
- Reduce overhead

- Bottom line:
- Quality is expensive

Increase Revenues

- Increase charges
- Increase collections
- Negotiate better contracts
- Merge into larger groups

- Bottom Line:
- Payers introduce constraints that make it impossible for a practice to maximize revenue

What a Bummer, Dude!

- If we can only marginally affect expenses and/or revenue, then how is it possible to improve profitability?
- BECOME MORE EFFICIENT
- Efficiency is the ability to do the same with less or more with the same
- The only way to become more efficient is to engage in the science of process improvement.

What's Wrong with my Practice?

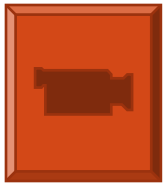
- A practice analysis is a business adaptation of differential diagnoses
- A general assessment is akin to a physical exam
- Granularity as it relates to the operational, financial and efficiency of the medical practice requires the same diagnostic events that a physician requires when drilling down on a diagnoses
  - Capacity
  - A/R
  - Cycle times
  - Denial analysis
  - etc

Understanding Process Improvement

"Today's problems come from yesterday's 'solutions'."

Peter Senge

Process Focus



- **Why have a process focus?**
  - So we can understand how and why work gets done
  - To characterize patient/physician/payer relationships
  - To manage for maximum patient/payer/staff satisfaction while utilizing minimum resources
  - To see the process from start to finish as it is ***currently*** being performed
  - Blame the process, ***not*** the people

proc•ess (pros′es) *n.* – A **repetitive and systematic** series of **steps or activities** where **inputs** are modified to achieve a value-added **output**

Art vs. Science

Classification

Correlation

Cause and effect

Classification

- Discovery
  - What do we see?
  - What did we find?
  - How does it work?
- Here, we explore the workings of the organization to understand how it things really are
- This is where we begin current state mapping
  - Physical space
  - Staff movement
  - Redundant events
  - Manual processes

Correlation

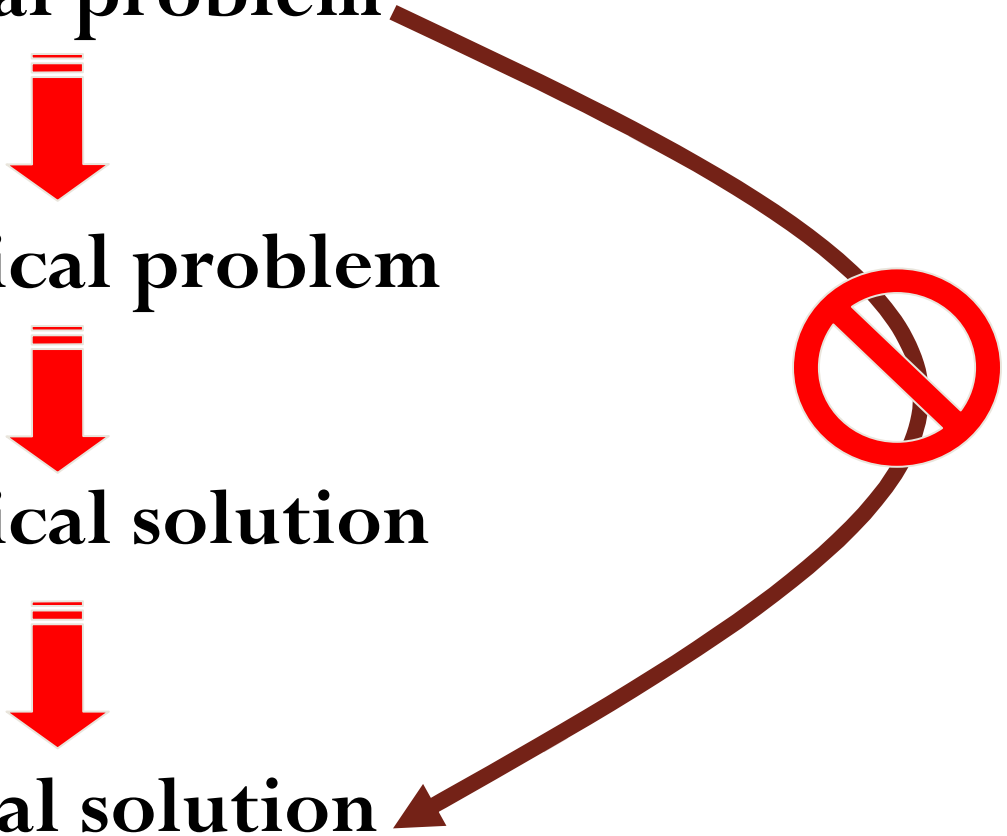
- Understanding relationships
  - Are the events related?
  - How well are they related?
  - Is it coincidence?
- Correlation is a mathematical conclusion and is often confused with association
- Events that are correlated are always associated but events that are associated are not always correlated
  - Payer mix and revenue
  - Work RVUs and charges
  - Fee schedule and RBRVS
  - A/R days and EMR

Cause and Effect

- The linking together of events
  - Does an event cause a change?
  - Is there a threshold of causation?
  - Why did it happen?
  - If I remove one problem, does it create another?
- Establishing causation is more difficult than correlation and often requires qualitative tools
  - Change in payer mix equals change in revenue?
  - Length of time to appointment effects rate of no-shows?
  - Coding training for docs decreases risk of non-compliance?
  - Quicker phone response increases patient satisfaction?
  - EMR results in increased revenue and/or decreased A/R?

Solving Problems is Key

- **Practical problem**
- **Analytical problem**
- **Analytical solution**
- **Practical solution**



Pitfalls to Anecdotal Thinking

- **Failure to Observe**
  - Assuming you know what the problem is without seeing what is actually happening
- **Failure to Plan**
  - Assuming you know how to fix a problem without first finding out what is causing it
- **Failure to Validate**
  - Assuming the action you have taken to fix the problem has worked without measuring to see if it is doing what was expected

Continuous Improvement Models

Six Sigma

Lean

Lean Six Sigma

Kaizen

What is Six Sigma?

- A management philosophy designed to reduce process variability, ultimately increasing quality, profitability and compliance
  - Eliminate errors and mistakes
- Six Sigma is a metric measured in unacceptable events per million
  - 6 σ = 3.4 per million
  - 5 σ = 233 per million
  - 4 σ = 6,210 per million
  - 3 σ = 66,810 per million
- Sigma measures variation rather than averages
- Six Sigma alone is rarely successful when employed within a medical practice

What is Lean?

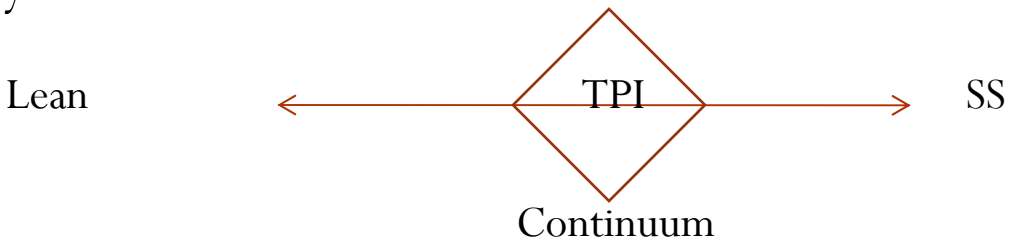
- Reduce the time it takes to deliver a service
  - Reduce waste and increase efficiency without sacrificing quality
  - Shorten the time between when you see the patient and you get the cash
- Lean looks at the value stream of any process with the goal to eliminate steps that do not provide
  - Value to the organization, or
  - Value to the customer
- Lean is more applicable to medical practices
  - Shorter improvement cycle
  - Less expensive delivery system
  - Fewer resources

What is Lean Six Sigma?

Lean Six Sigma combines the strengths of each system into one

- **Lean**
  - Guiding principles based operating system
  - Relentless elimination of all waste
  - Creation of process flow and demand pull
  - Resource optimization
  - Simple and visual
- Efficiency

- **Six Sigma**
  - Focus on voice of the customer
  - Data and fact based decision making
  - Variation reduction to near perfection levels
  - Analytical and statistical rigor
- Effectiveness



Total Practice Improvement (TPI)

An aggregation of the most effective and efficient tools and techniques from Lean and Six Sigma specifically applicable to a medical practice

What is Total Practice Improvement (TPI)?

- A process that helps to identify potential improvement opportunities at the highest organizational level
- A model that helps employees and management to understand and visualize the current state process
  - The process before changes
- A system of tools that provides a general understanding of the types of processes and therefore, the types of problems and improvements that are available within the practice
- TPI culls only those tools that are applicable for process improvement within the medical practice

TPI Game Theory

- Strategy
  - Where are we going?
  - strategy is a long term plan of action designed to achieve a particular goal.
- Tactics
  - How do we get there?
  - A **tactic** is a stepwise method employed to help achieve a certain strategy or strategic plan
- Logistics
  - How do we make what we do, work within our organization?
  - The time related to the positioning of resources

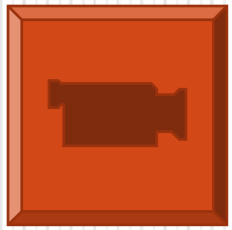
Problem Solving / Decision Support

- Using this information to develop solutions to problems
- Organization of existing resources
  - Billing function
  - Front office staffing
  - Waiting room structure
- Benefit/risk of new resources
  - Hiring non-physician practitioners
  - The use of hospitalists
  - Benefits vs. risks of an EMR/EHR
- Compromise vs. obliteration
  - Acceptance thresholds, such as A/R and payer mix
  - Outsourcing billing function
  - Selling or merging a practice

Practice Improvement Areas

- **Revenue cycle analysis**
- **Patient throughput analysis**
- **Denial analysis**
- **Cost accounting**
- **Code and modifier analysis**
- **Fee schedule analysis**
- **Patient Satisfaction (complaints)**
- **Compliance risk analysis**
- **Physician productivity analysis**
- **PQRI, or more important, outcomes**

Metrics and Goals



If you can't measure it, you can't manage it

TPI Begins with Benchmarking

- Current state or condition of operational components
- PMS and other IT systems
- Find and review MCO contracts
- Accounting system and financial performance benchmarks
- Capacity (Maximum, minimum, excess, over, etc.)
- HR policies and practices
- Value stream efficiencies

Primary TPI Metrics

- Profit and profitability
- Capacity
- Cycle times
- Contract effectiveness
- Performance and productivity
- Utilization
- Resources

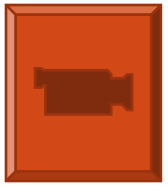
Effective Measurement Systems

- There should be a standardized method of measurement
- The data should be accurate
- The data should be meaningful and worthwhile
- Measurement systems should be easy to install and use
- The measurement system should be polymorphic

Performance Metrics

- Process level
  - Comes from process owners and involves MAIC
- Operations level
  - 30,000 foot view, including cycle time analyses
- Business level
  - Highest level, i.e. financial and operational summaries
- Focus on the 'vital few' vs. the 'trivial many'
- Metrics should be linked to key goals and objectives
- Metrics should evolve as the practice's needs evolve

The TPI Toolbox



1. Process Mapping
2. Value Stream Mapping
3. VOC (Voice of the Customer)
4. Kano's Model
5. CTQ Tree
6. SIPOC
7. Spaghetti diagrams
8. Data mining and statistics
9. Ishakawa (Fishbone) diagrams
10. Takt Time
11. Heijunka (Load balancing)
12. Poka Yoke (Mistake proofing)
13. 5S (organizational efficiency)
14. House of Quality
15. Hoshin Planning
16. Prioritization matrices
17. Pareto Charts
18. MSA Drilldown
19. Brainstorming
20. Multi-voting
21. Assumption busting
22. Theory of Constraints
23. Hypothesis testing
24. Performance scorecards

Process Improvement Trilogy

- Process Mapping
- Value Stream mapping
- Cause and Effect analyses

Finding the Right Deployment Platform

PDSA

DMAIC

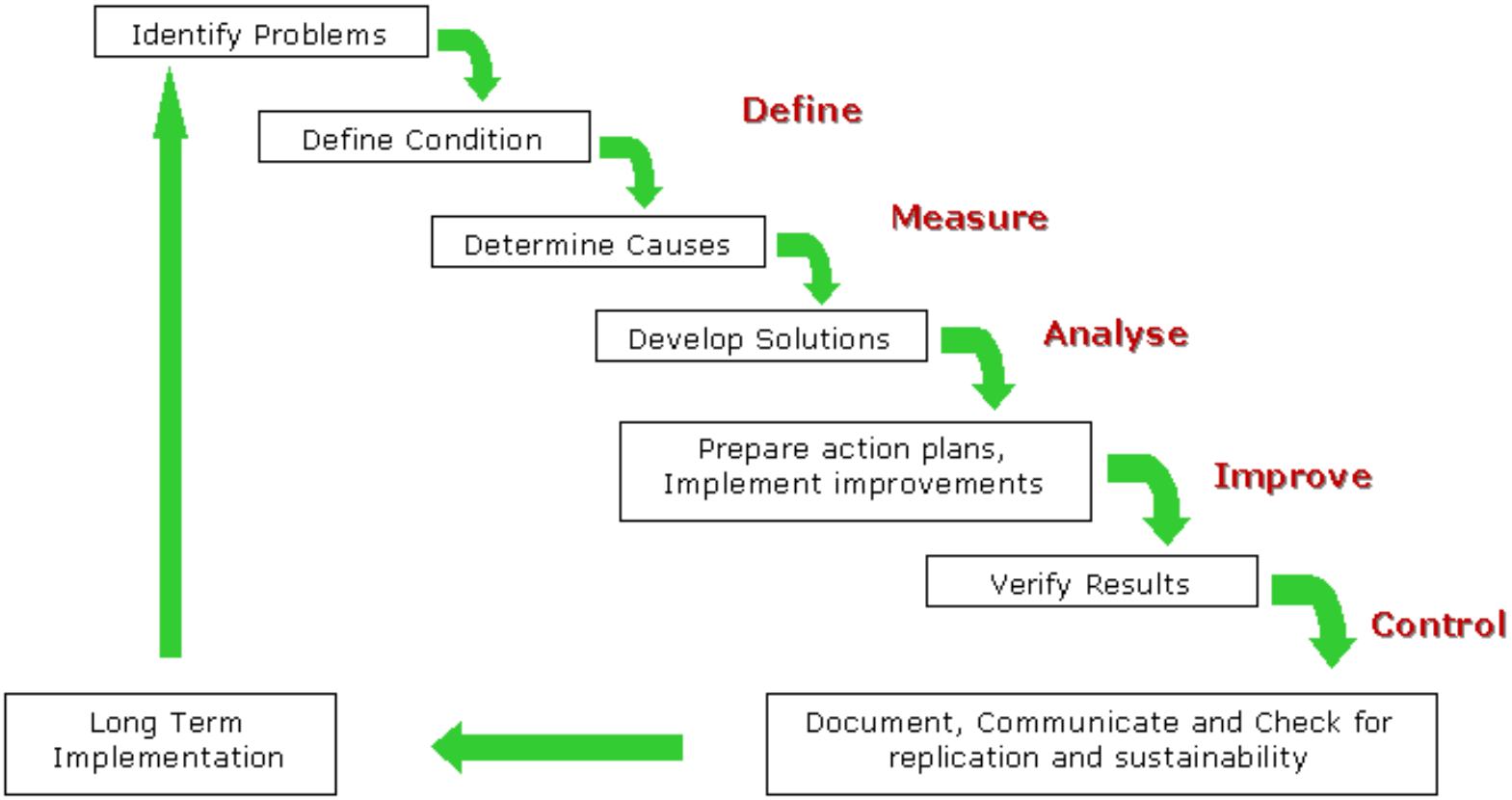
A3

Common Steps in Every Project

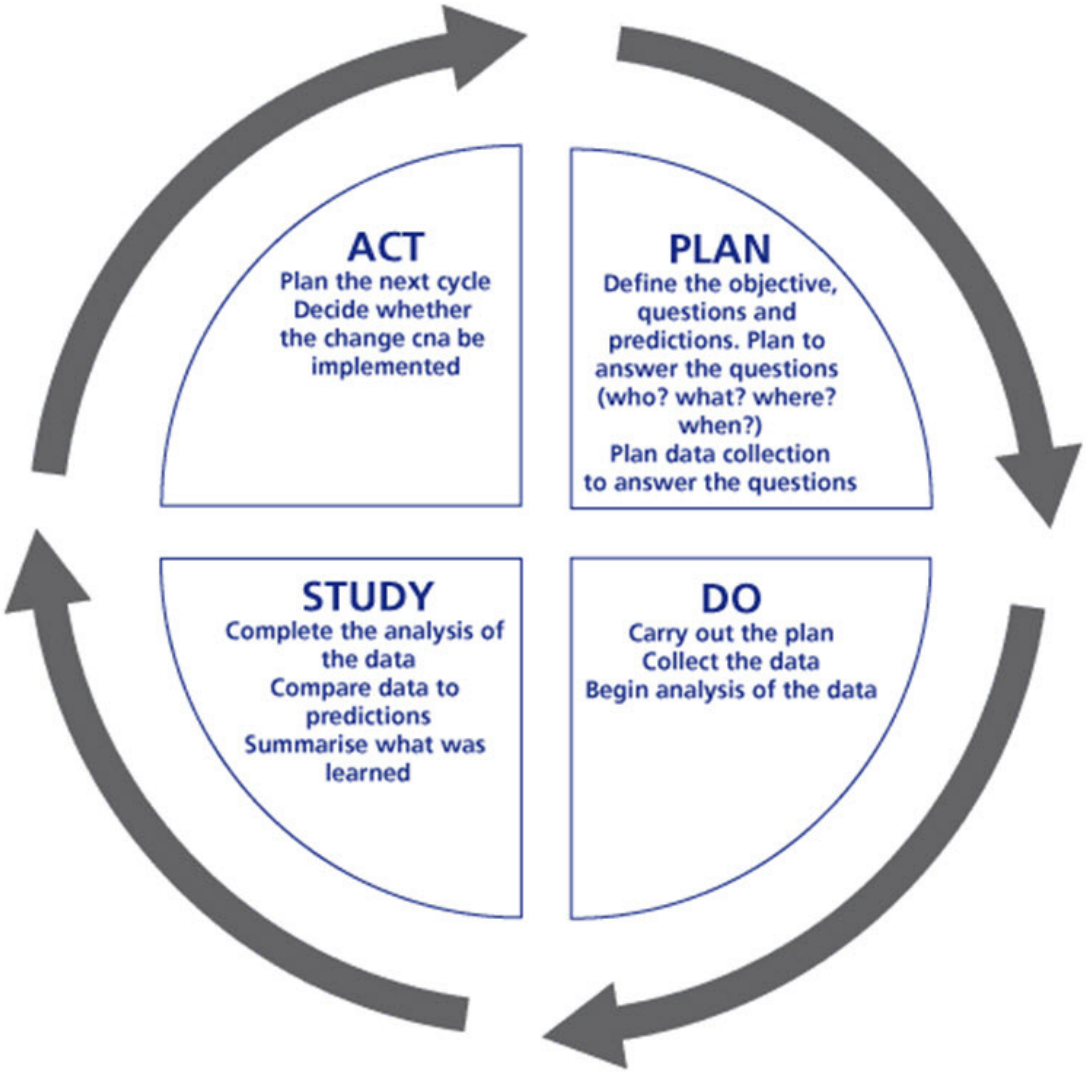
- Define the issue
- Create the Benchmarks
- Find the cause(s)
- Recommend, test and implement the solutions
- Validate the results

DMAIC – The King of Process Improvement

DMAIC Exemplifies a Logical Flow



PDSA is Simple, Graphical and Logical



A3

- A3 may be more effective for problem solving that formal process improvement projects
  - Most organizations effect 'first-order' problem solving
  - Create non-robust work-around instead of real solutions
- Pushes towards the root cause of the problem
  - Without root cause, problems don't get solved, only pushed around within the cycle

The Two Worst Times for TPI

- When times are bad
  - During bad times, money is tight and survival is king
  - The Eorr Syndrome
- When times are good
  - During good times, money is flowing and resources are focused on doing the same things
  - No sense of urgency or mission

The Two Best Times for TPI

- When times are bad
  - You can't afford to keep losing money
  - Sets you up for the rebound when things get better
- When times are good
  - High profitability is normally accompanied by higher waste and poorer quality
  - Creates an attitude of being 'unsinkable'

Does Process Improvement Always Work?

- NO
- In addition to a lack of buy-in by senior management and owners, here are the biggest reasons for failure
  - Lack of a specific target or goal
  - Failure to define what constitutes success
  - Ignoring the chaos that may be created during interactions
  - Confusing improvement in a process with improvement of the system
  - Assuming that the final output will actually result in the final goal
  - Failure to associate how improvement moves toward the vision for the organization
- Not all goals are appropriate for process improvement

Is Process Improvement Enough?

- NO
- "a competitive strategy based solely on cost will lead to predictably disastrous results" {*Michael Porter, Competitive Advantage,1998*}
- When all else is equal, it is cultural and philosophical issues that predict success in the market place
- After continuous process improvement becomes part of the culture, it is time to move on to other areas of improvement

Improve Profitability by Improving Processes – Part 2

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The Right Tool for the Right Job

"If the only tool you have is a hammer, pretty soon, everything starts to look like a nail."

The Tools of TPI

1. Process Mapping
2. Value Stream Mapping
3. VOC (Voice of the Customer)
4. Kano's Model
5. CTQ Tree
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Mapping Work Processes

What is Process Mapping

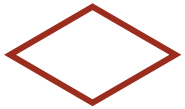
- A process map, or flow chart, is:
  - Visual representation of a process that can illustrate:
    - What activities are completed, by whom, in what sequence
    - Hand-offs between departments or individuals
    - Internal and external operational boundaries (swim lanes)
- Why map a process?
  - Diagnosis and Improvement
  - Determine the cause of a problem or condition
  - Provide a critical assessment of what really happens within an institution
  - Training and Communication
    - Serve as component of training or operations manual.
- Process mapping can be constructed both informally and formally
  - Informal method is best for getting started and securing buy-in
  - Formal method ensures rigor and accuracy

Process Mapping Symbols

Standardized symbols enable the map to clearly, visually display what happens in a given process. The most common symbols include:


= Start or stop point


= Processing step or task


= Decision point or checkpoint


= Queue or wait point


= Form or documentation


= Information sent to MIS

However…

Keep the overall number of different symbols in a map as limited as possible to prevent confusion

Avoid being hampered by nomenclature. Choose what works best for your institution.

Before the Mapping Begins

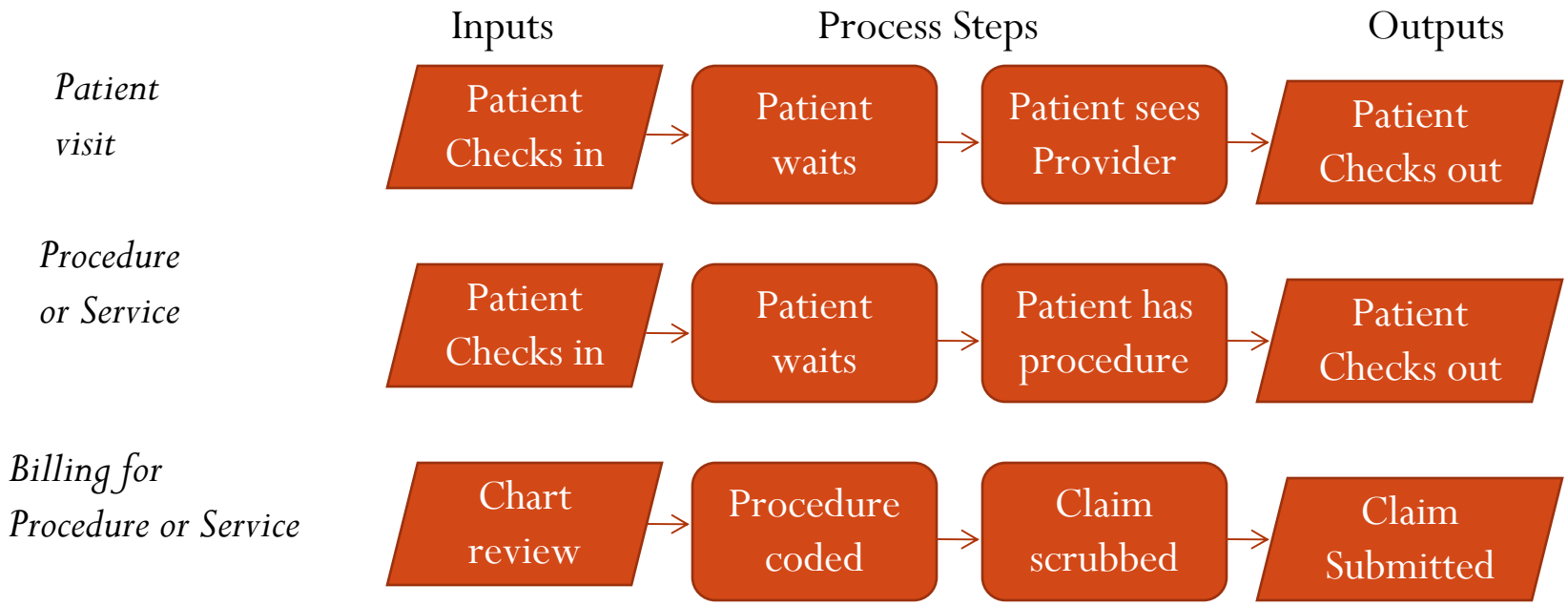
- Select a process to map
  - Patient visit cycle
  - Billing cycle
  - Fee schedule management cycle
- It doesn't have to be a cycle, just a process
  - Hiring and firing
  - Payroll
  - Clinical components
  - Lab or imaging procedures
  - Telephone system

Define the Process

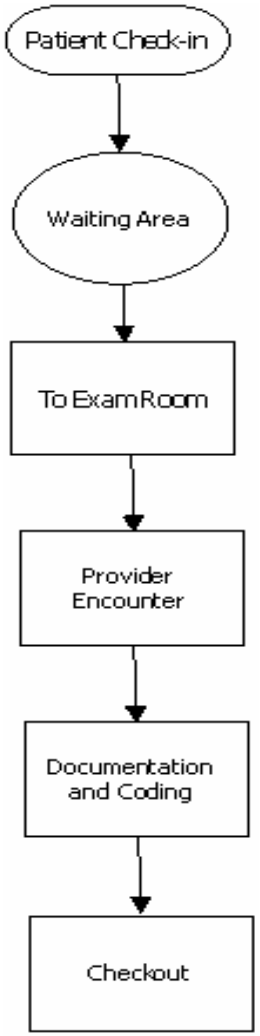
- Determine to whom the process is focused
- Who are the customers?
  - Patients
  - Payers
  - Staff
- List the customers' requirements
  - Quality
  - Speed
  - Value
- Define the process boundaries
  - Map the first and last steps first

Map the Primary Process First

- The basic steps that produce the output
  - Only the essentials
  - Everyone patient goes through this process

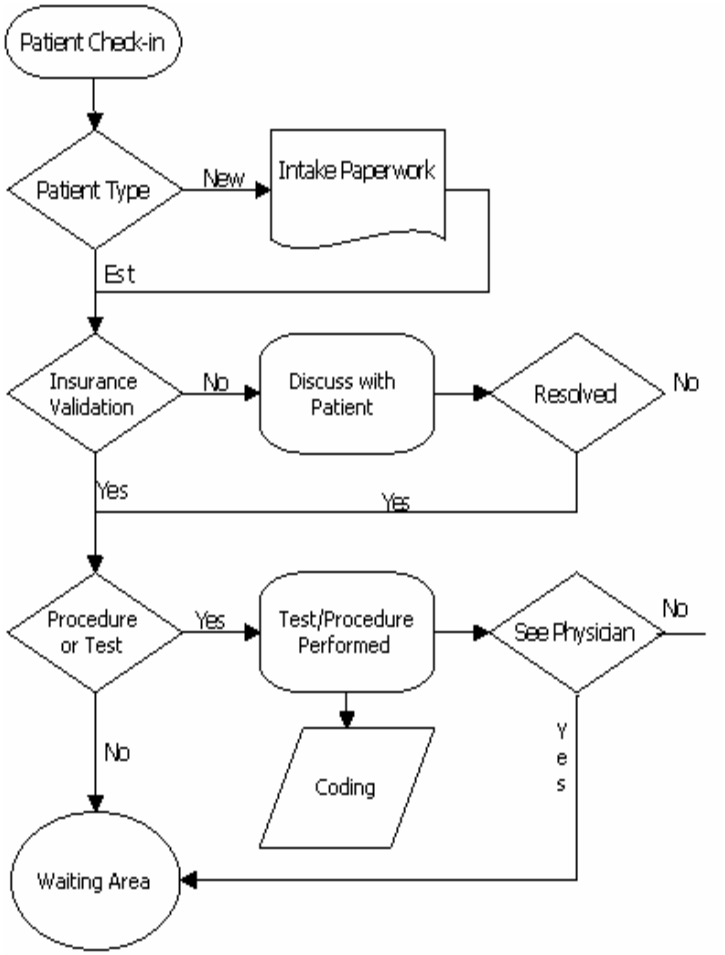


Patient Visit – Primary Process



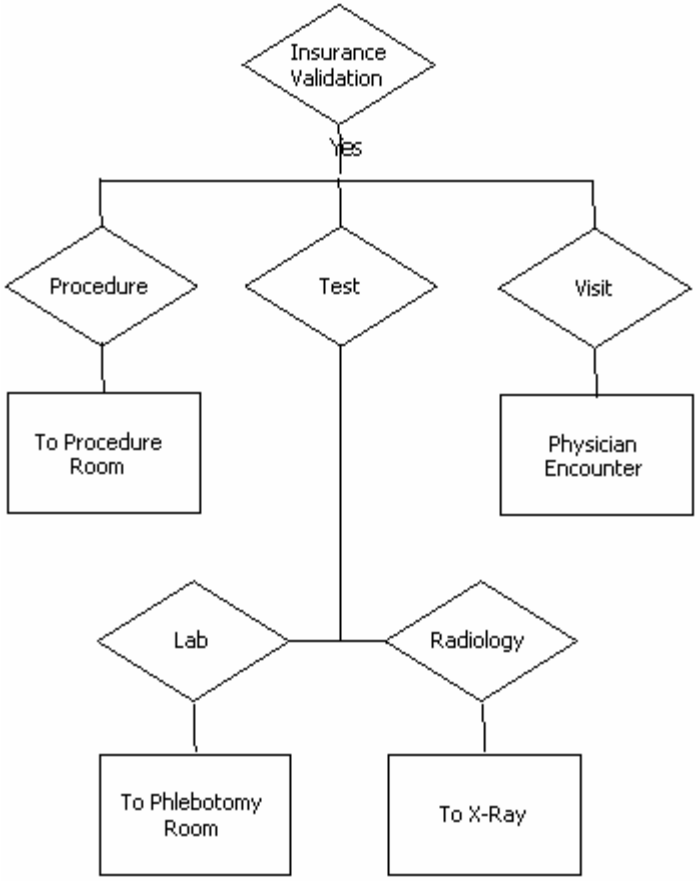
- We start with the 'always' process steps, such as
  - The patient checks in (starting point)
  - The patient waits in the waiting room
  - The patient is escorted by someone to the exam room
  - The patient sees the provider
  - The encounter is documented and the coded
  - The patient checks out
- The assumption is that all patients will experience at least these steps

Map Alternative Paths



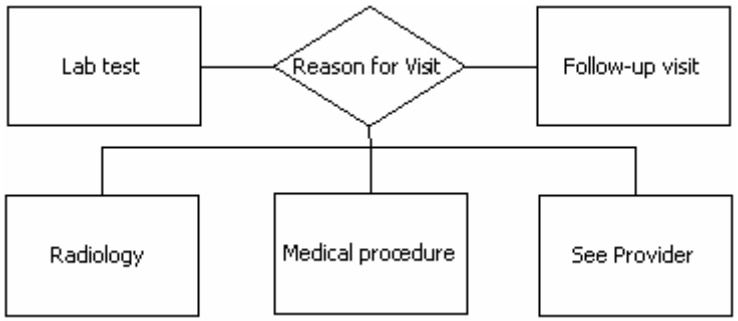
- Decision points are represented as diamonds
  - New or established patient?
  - Able to validate insurance?
  - Is the patient there for a procedure/test or to see the provider?
- Each decision point includes an additional branch for each possible answer

Example 1 - Multiple Decision Points



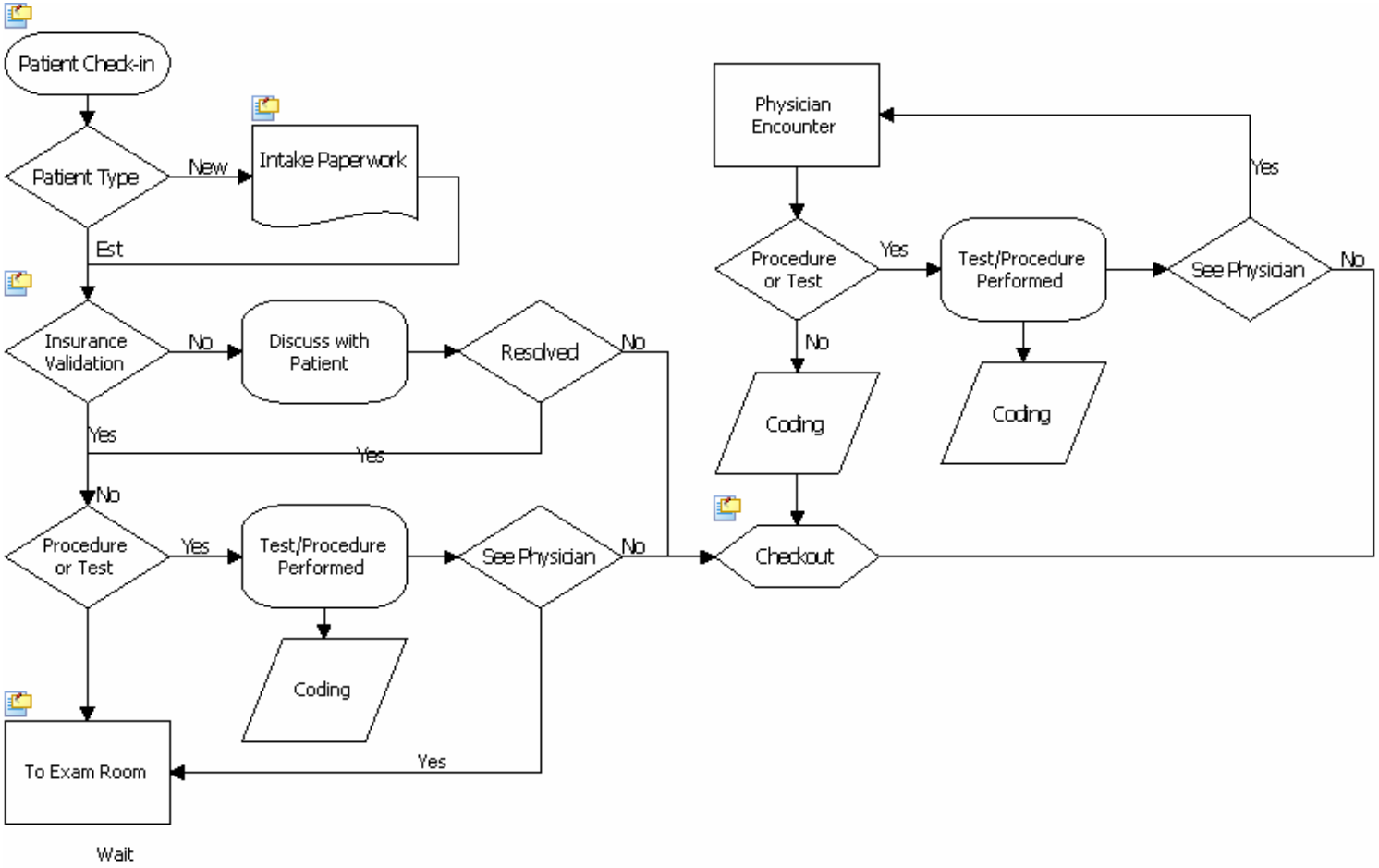
- There can be multiple decision points (other than just Yes or No
- Each decision point creates its own branch
- Some decision points require a separate process map
  - i.e. procedures or tests

Example 2 - Multiple Decision Points

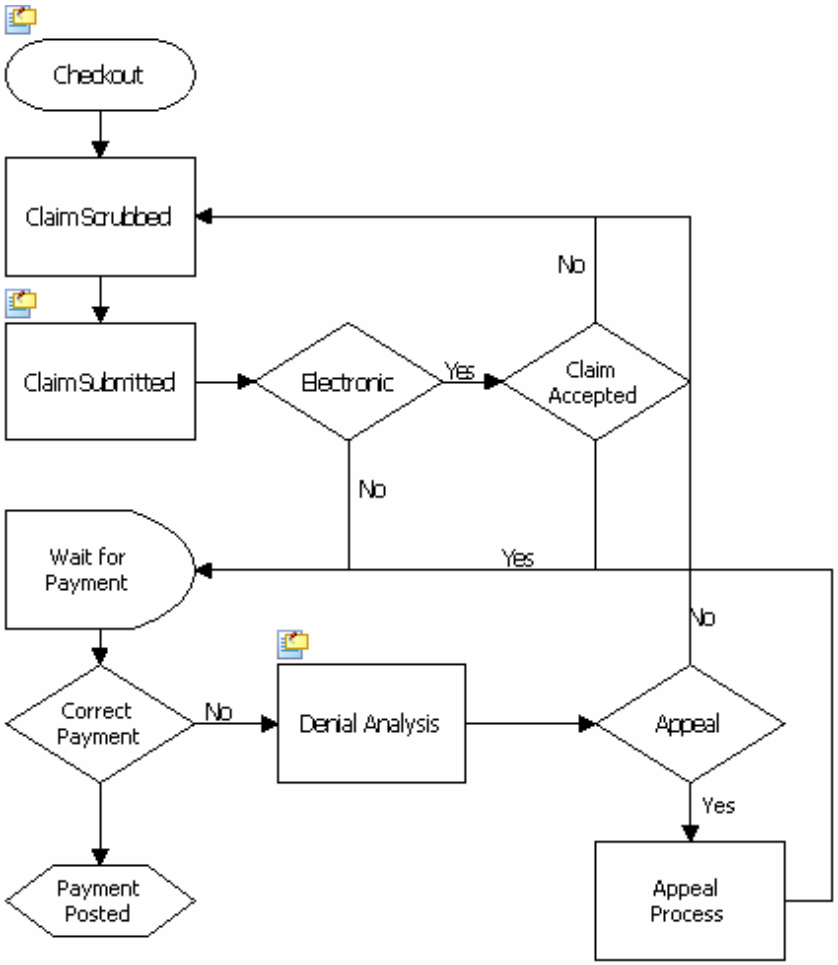


- One decision point can have multiple specific paths
- Each path may be independent or dependent of other paths
- Each path may require its own process map

Example - Visit Process Map



Example - Billing Cycle Process Map



Map Inspection Points

- The purpose of the inspection points is to identify potential errors before they reach the customer
  - Patient
  - Payer
  - Staff
- For each step, ask yourself, “what could go wrong?”
  - Errors
  - Duplication
  - Waste
  - Risk

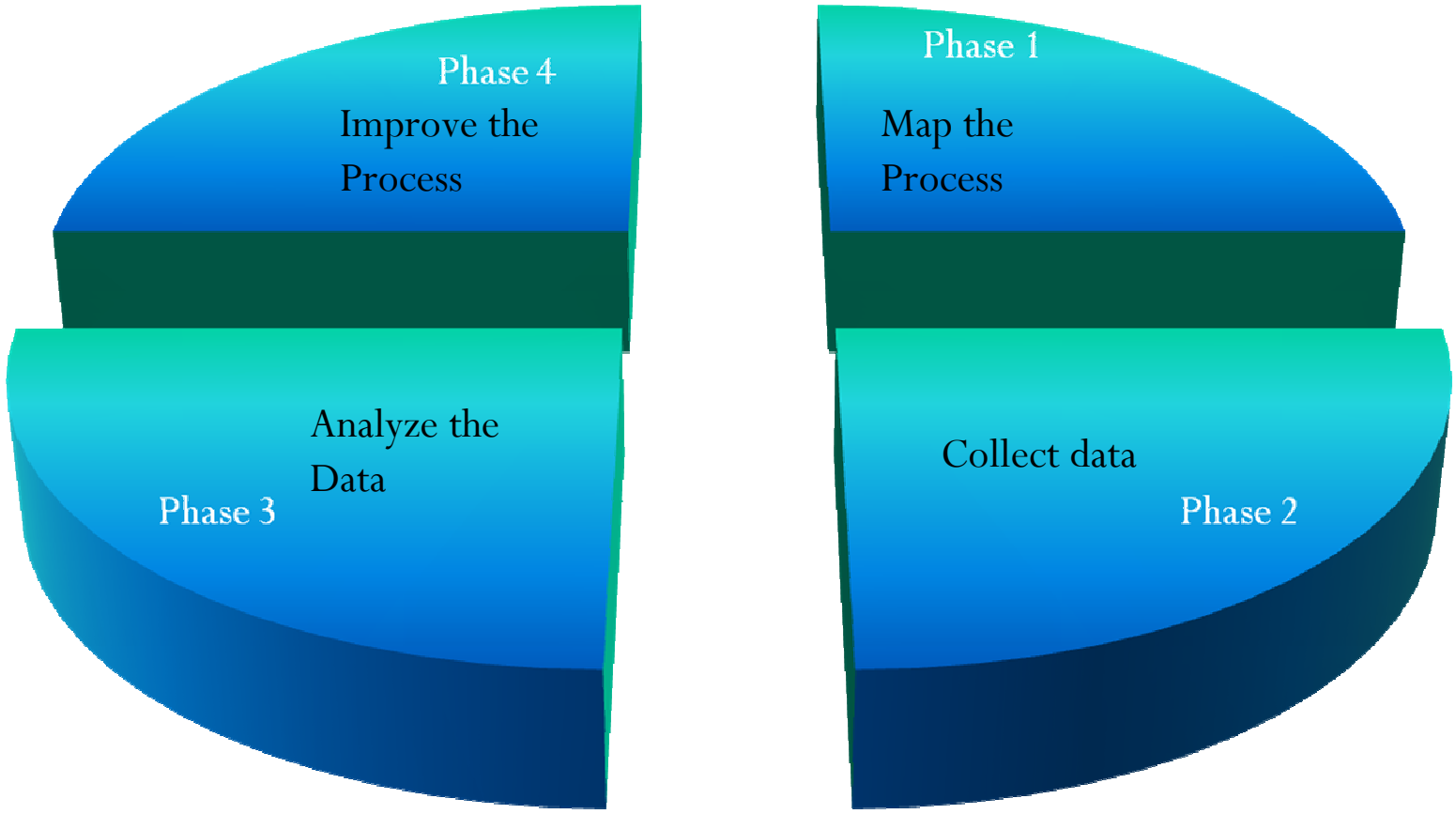
Value Stream Mapping

"If you do what you've always done, you'll get what you've always gotten."

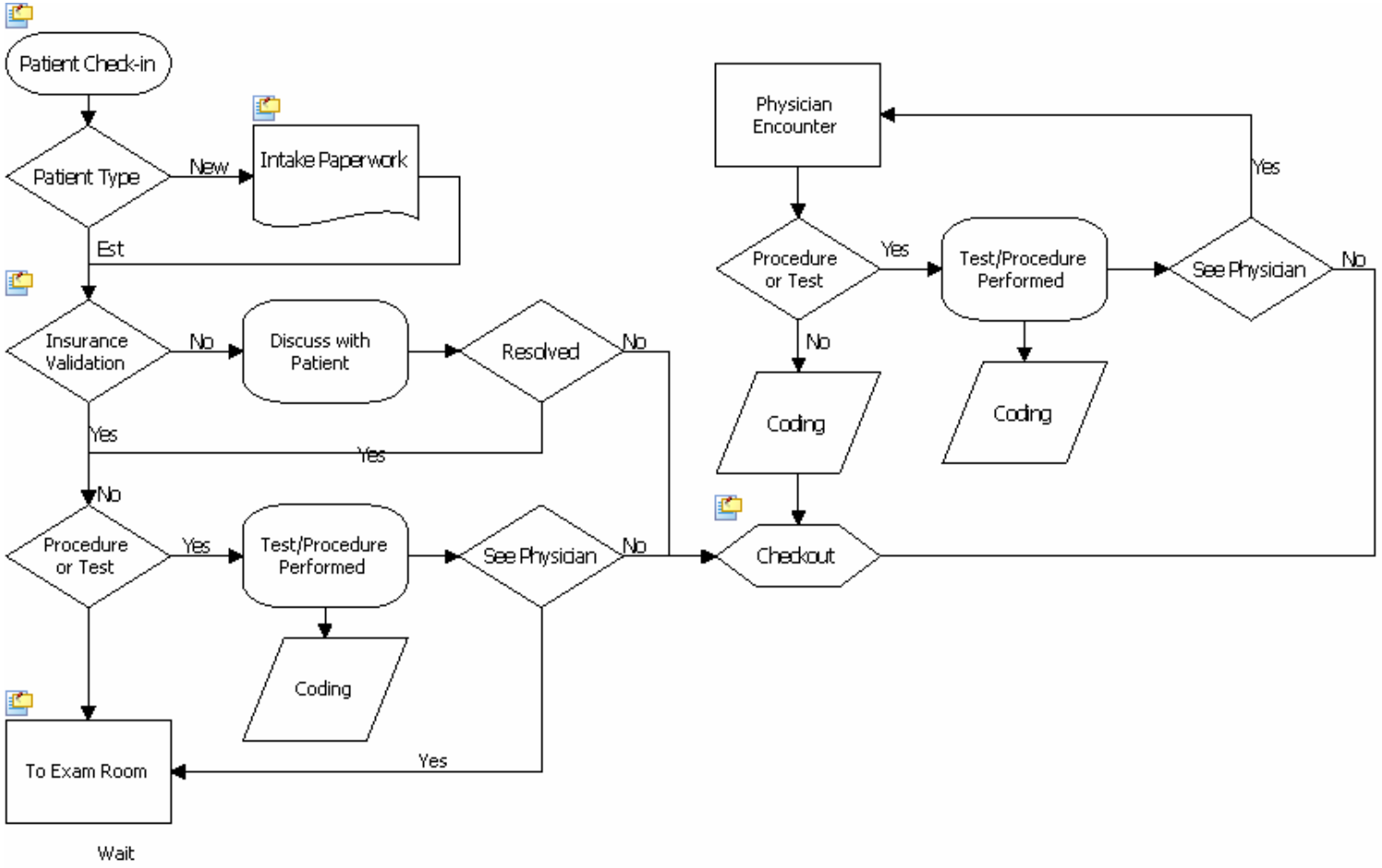
What is Value Stream Mapping?

- Value stream mapping starts as a paper and pencil tool that helps you to see and understand the flow of objects, patients, materials, supplies and information as a product or service makes its way through the value stream.
- It differs from the process mapping in four ways:
  - It gathers and displays a far broader range of information than a typical process map
  - It tends to be more specific than process maps
  - It tends to be used at a broader level, i.e. from inventory to accounting to clinical
  - It tends to be used to identify where to focus future projects, subprojects, and/or kaizen events
- A value stream map takes into account not only the activity of the procedure/service, but the management and information systems that support the basic process.
  - This is especially helpful when working to reduce cycle time, because you gain insight into the decision making flow in addition to the process flow
- The basic idea is to first map your process, then map the information flow that enables the process to occur

Four Phases of VSM



Phase 1 – Map the Process

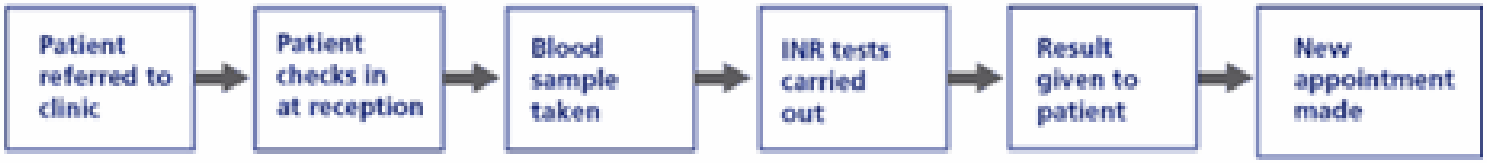


Phase 2 – Collect the Data

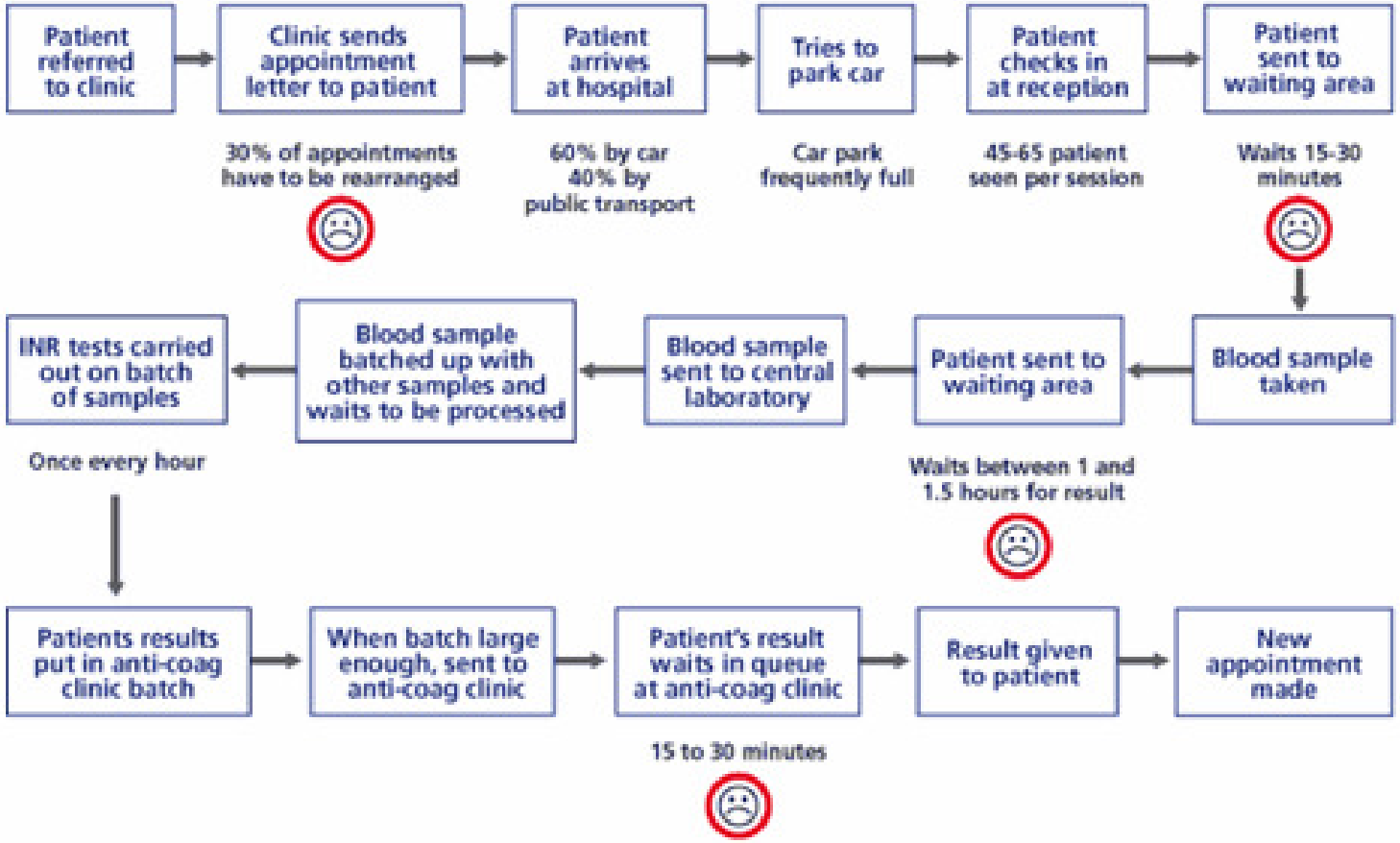
- Know ahead of time what data you need vs. what data you can collect
- For primary research, create a design for the experiment
  - This is particularly prevalent with cycle time studies
- Look for existing studies
- Identify specialists within (and outside of) your organization that may be necessary to assist you
  - IT support
  - PMS support
- Have a written data collection plan
  - Includes the 'what' and 'where' and 'who'

What is in the Data Box?

- Who does it?
- How many people does it take?
- Cycle time for the task
- Average daily requirement (Daily Demand Rate)
- Delay time prior to the task
- Process step details
- Average delay before this step occurs
- Total units waiting (claims, patients, charts, etc.)
- Top 3 rework issues
- Top 3 risks
- Artifacts (screen captures, forms, traceable documents, etc.)



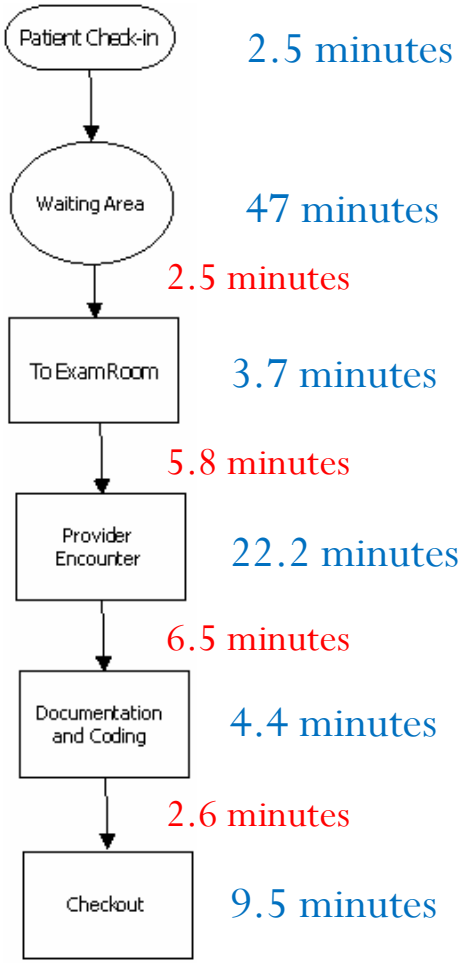
THE ANTICOAGULANT BLOOD TESTING PROCESS



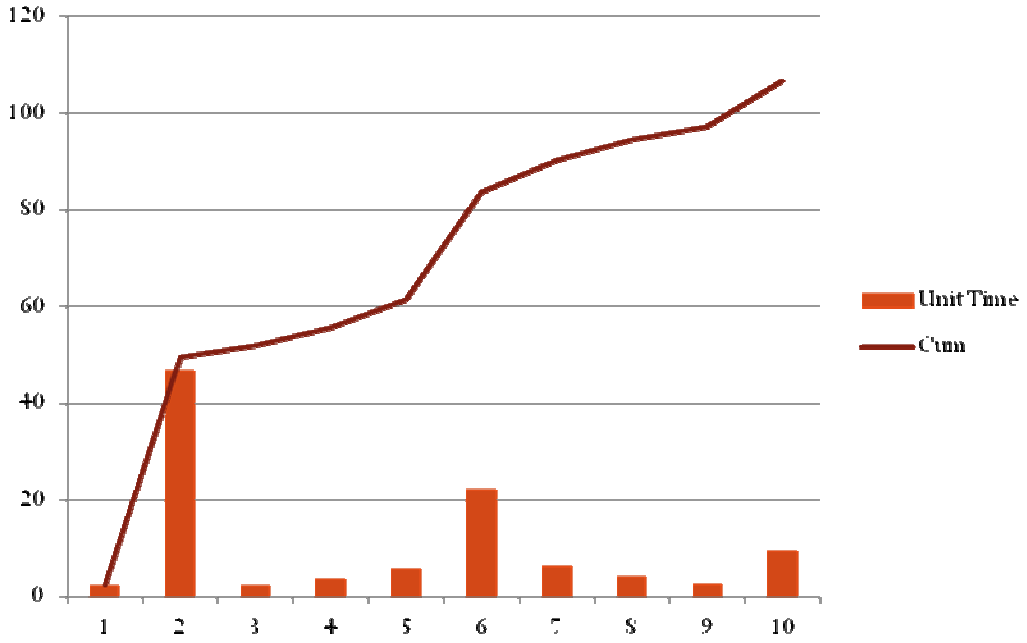
Phase 3 – Analyze the Data

- Separate useful from fun-to-know data
- Use analytical tools and statistical methods to conduct the analysis
- Look for variability and conduct root-cause analyses to understand the underlying conditions
- The key is accountability
  - Someone within the organization should be able to explain, in understandable language, the reason for every significant variation.

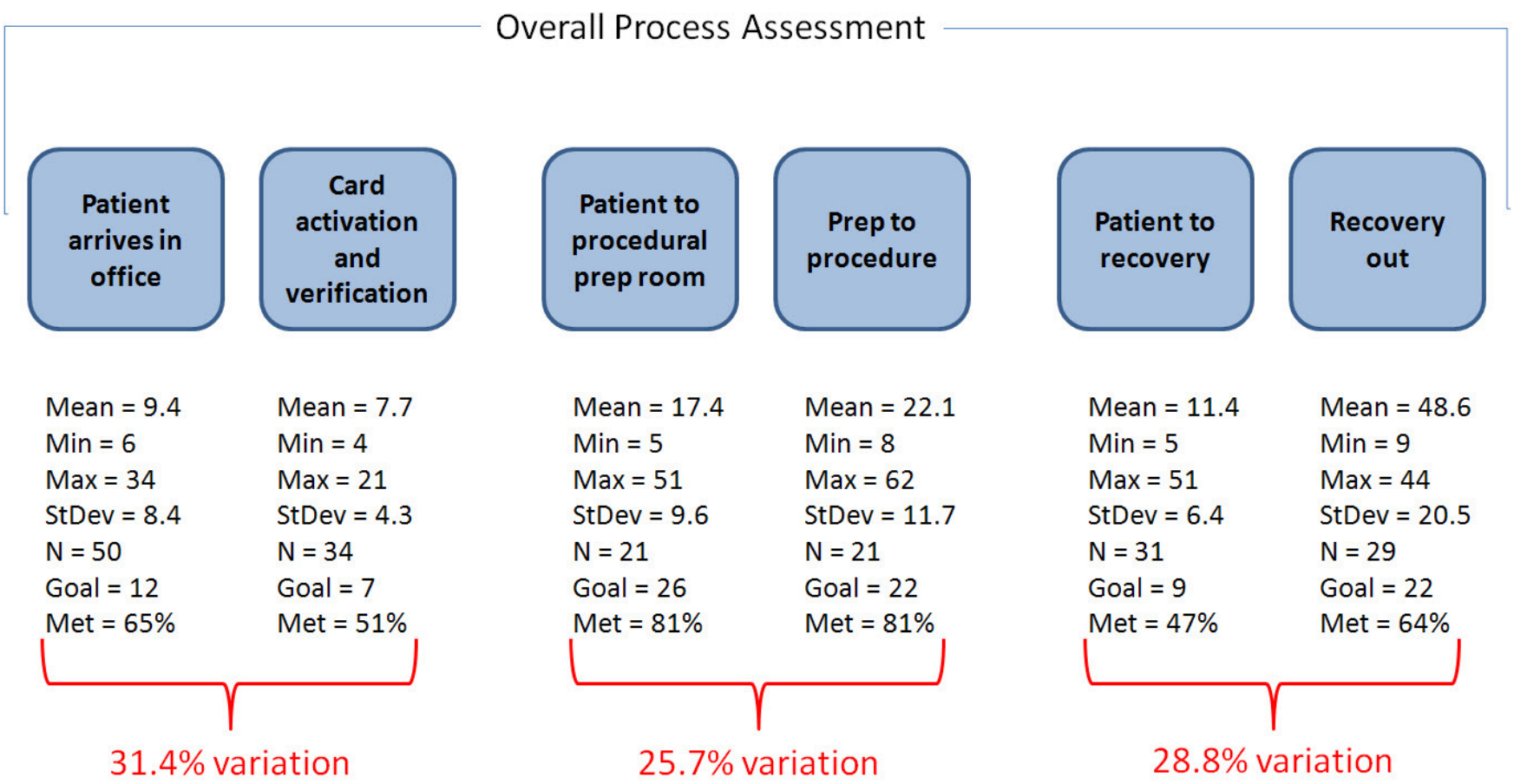
Example of Time Analysis – Est. Visit



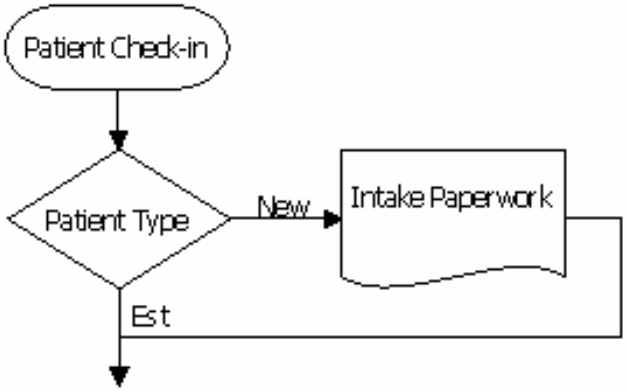
Total patient visit cycle time = 106.7 minutes (1.8 hours)



Example of VSM for Procedure

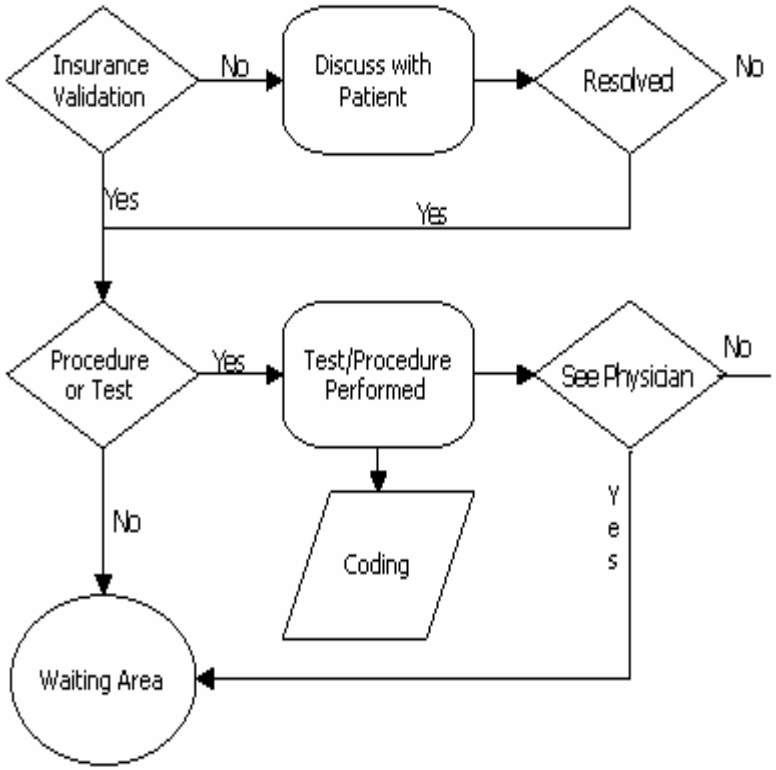


Risks and Errors – Check in



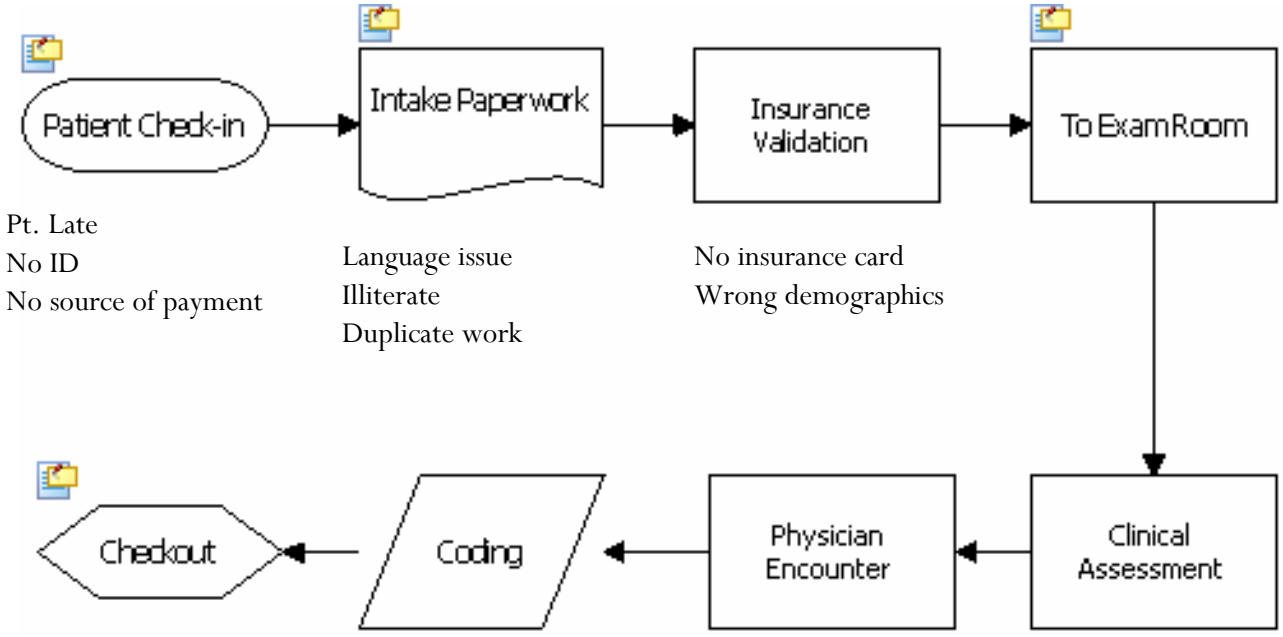
- Patient is late
- Confusion over appointment time or reason for visit
- Patient may not be able to fill out paperwork
- Patient may owe money and not have ability to pay
- Unable to locate patient's record

Risks and Errors – Insurance Validation

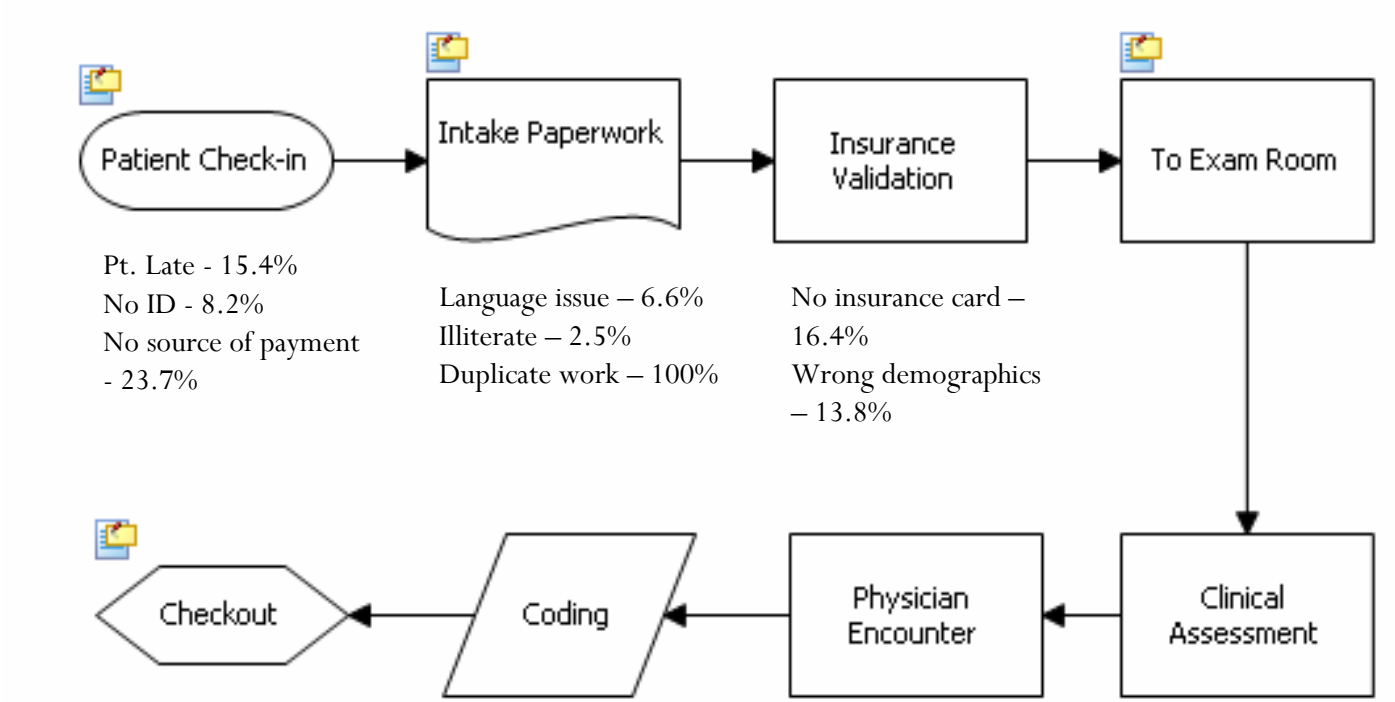


- Long hold time to validate insurance (give up)
- Payer could give wrong information
- Patient could have incorrect demographic
- Patient may not have ability to pay
- You may not be able to refuse care or treatment

Example of Rework or Errors



Detailed Example of Rework or Errors



Phase 4 - Improve the Process

- Use the information from the VSM and analysis phase to recommend process improvements
- Develop future state maps with the improvements embedded and compare to current state maps
- Include contingencies associated to risk analysis

VSM Challenges in a Medical Practice

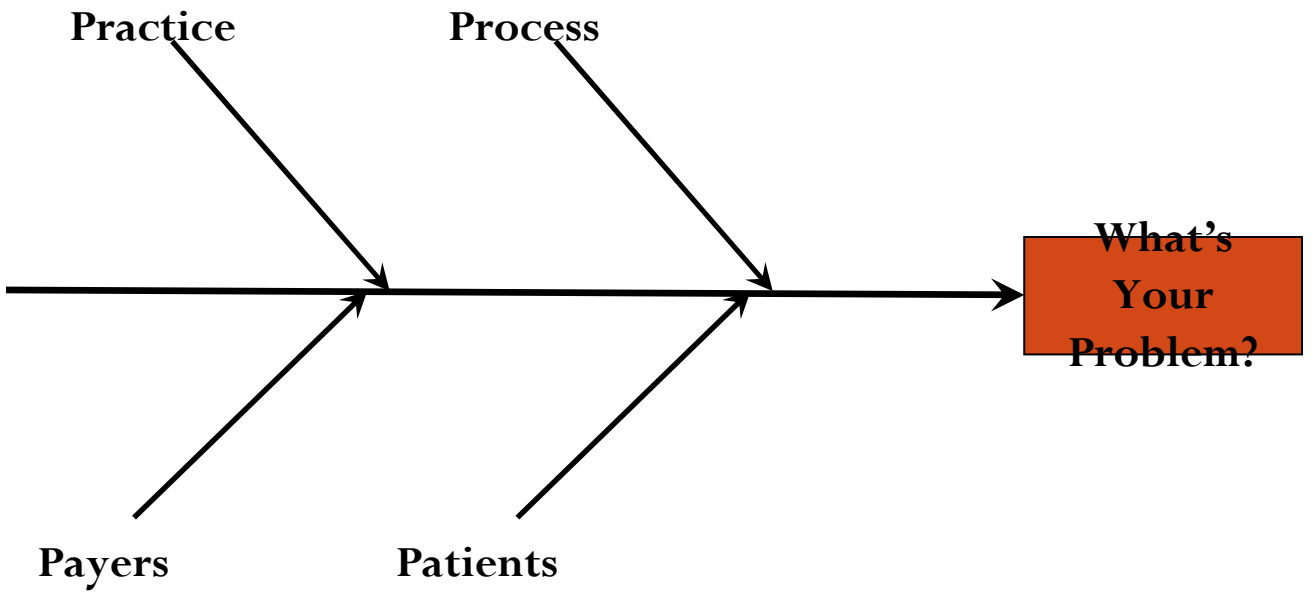
- Speed of change is usually slower
- Policies are well established and politics get in the way
- It is often difficult to establish the metrics needed to measure and analyze processes and results
- Even though it is easy to see what needs fixing, it normally takes longer to achieve results
- Establishing the true cost of quality and the cost of the process is much more difficult than other industries

Cause and Effect Relationships

Getting to the root cause

What is an Ishikawa Diagram?

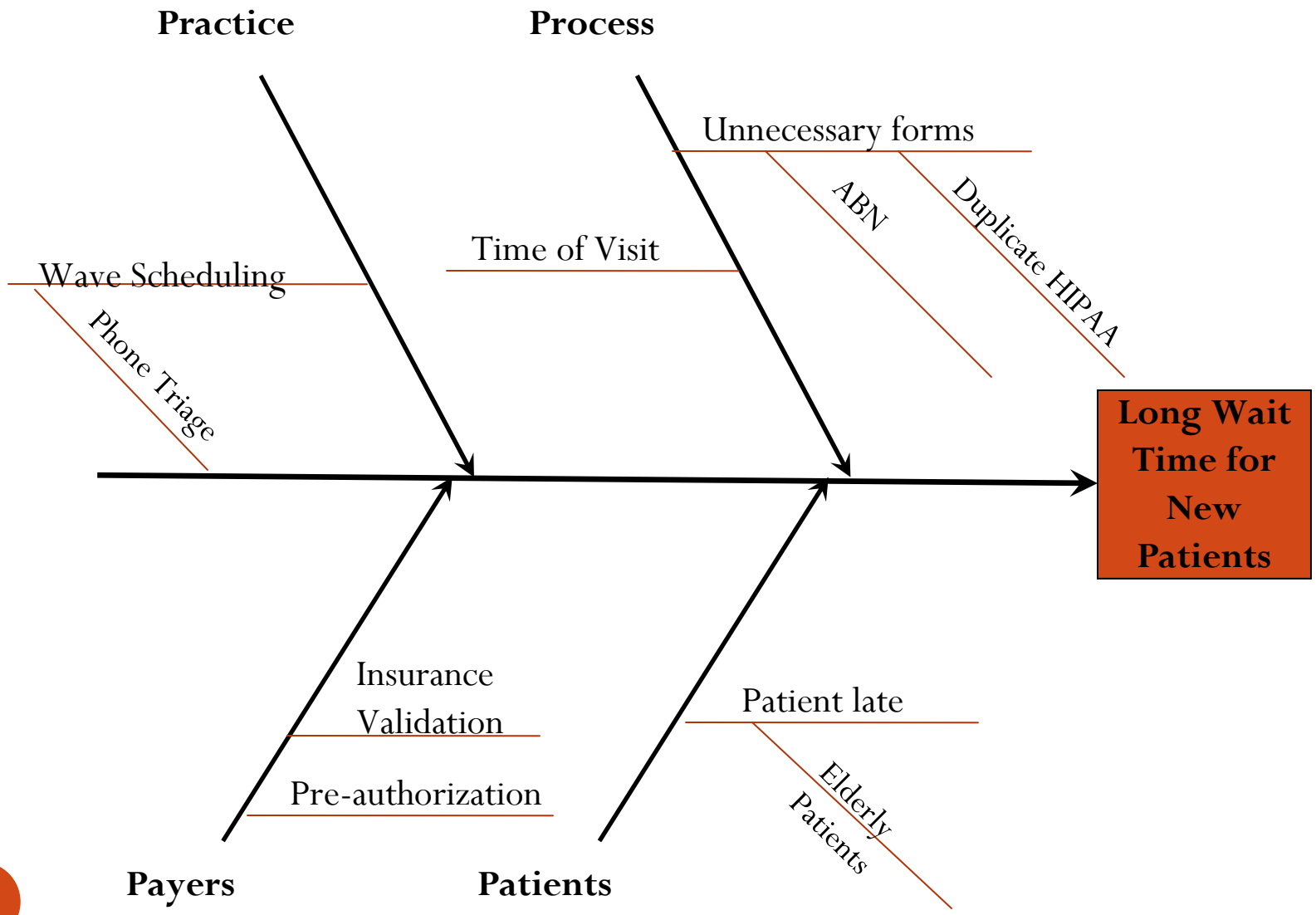
- Also called a Fishbone diagram
- This is a tool that is used to drill down during cause-and-effect steps in a project



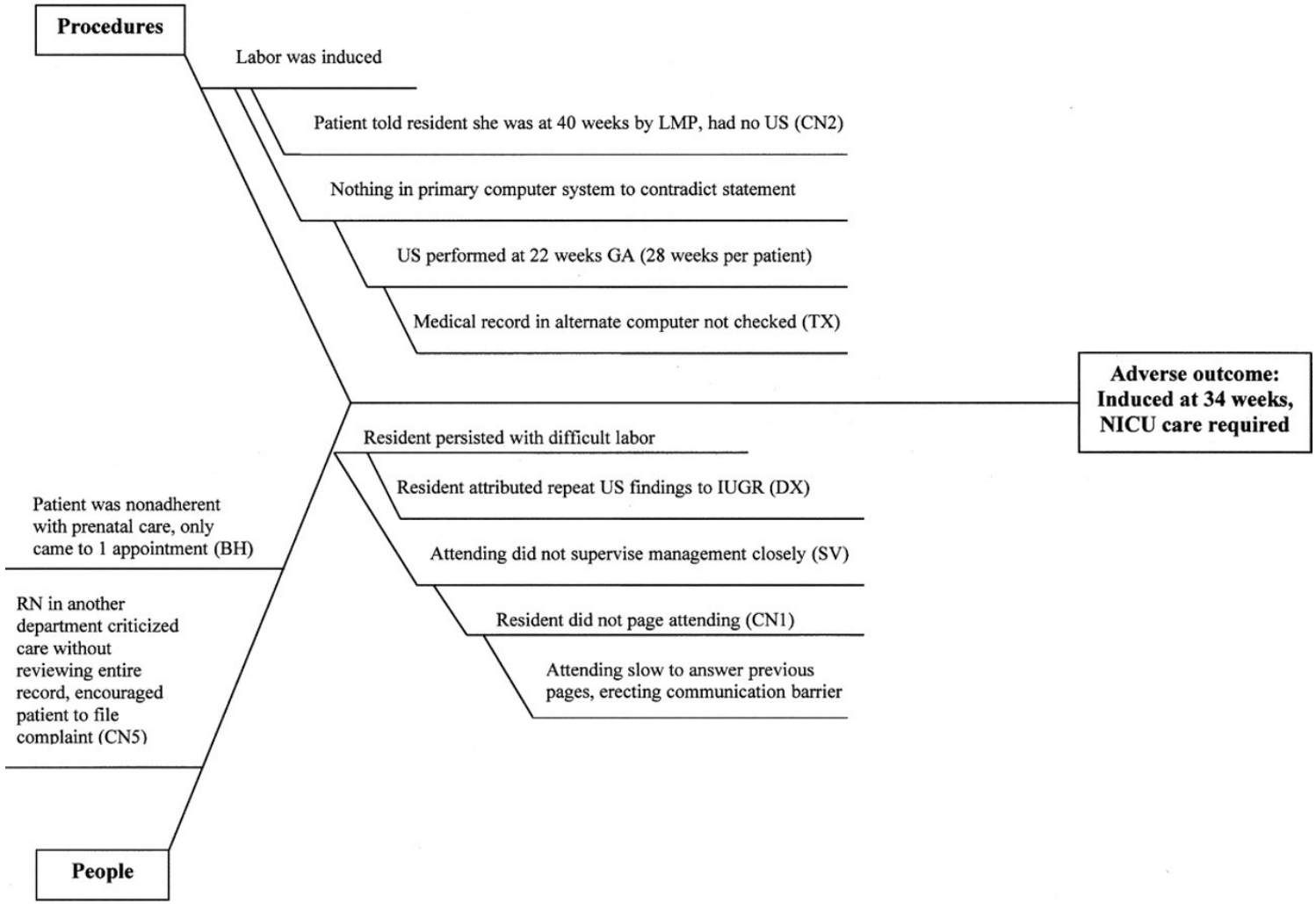
Steps to Developing the Ishikawa Diagram

1. Agree on a problem statement (effect), write it at the center right of the flipchart or whiteboard, draw a box around it and draw a horizontal arrow running to it
2. Brainstorm , the major categories of causes of the problem. If this is difficult use generic headings:
    a. Policies
    b. Payers
    c. People (manpower)
    d. Equipment
    e. Measurement
    f. Environment
3. Write the categories of causes as branches from the main arrow
4. Identify ***all*** the possible causes of the problem
    a. Use brainstorming techniques
5. Write sub-causes branching off the causes until all 'why's' have been exhausted

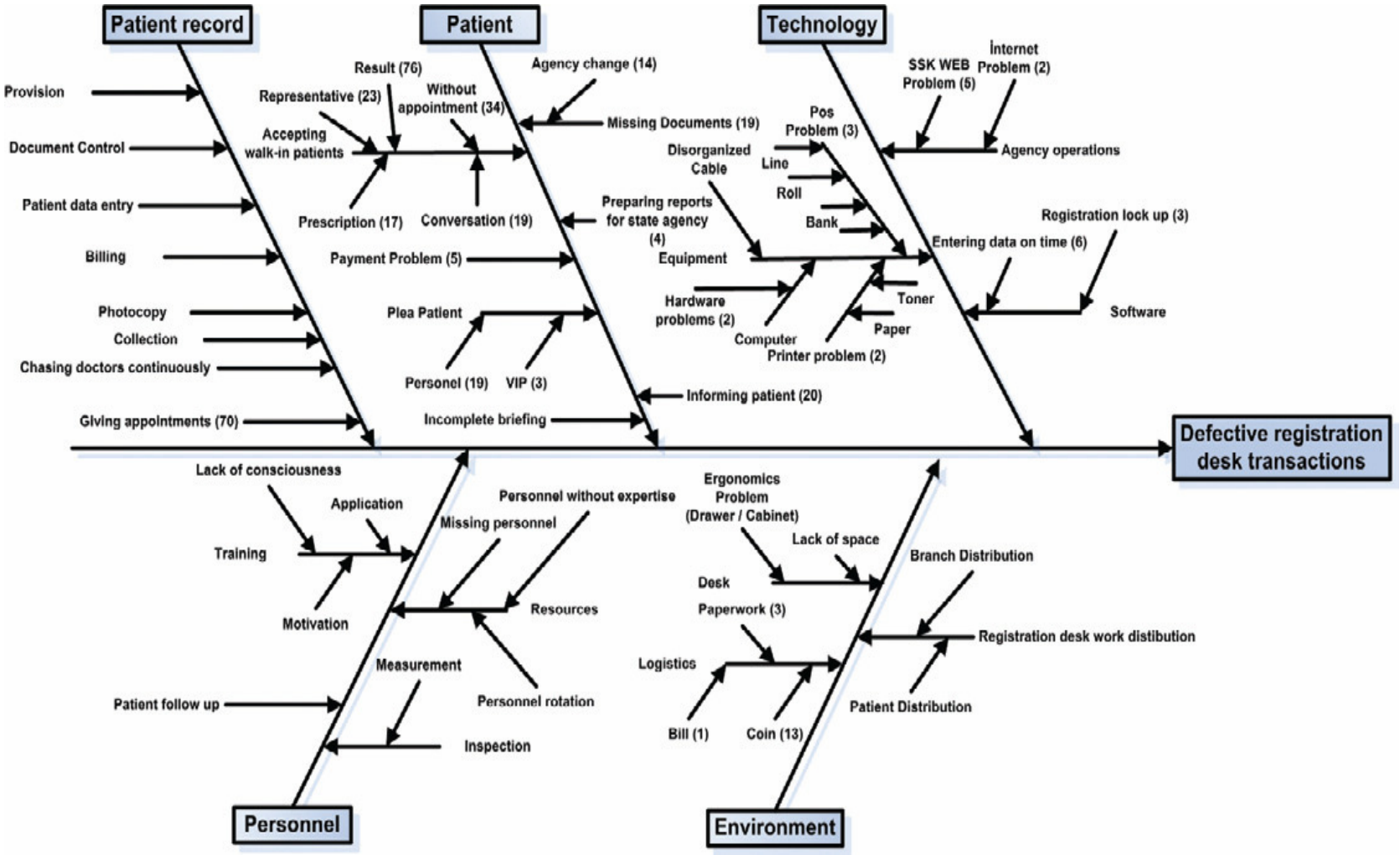
Example – Long Wait Time for New Patients



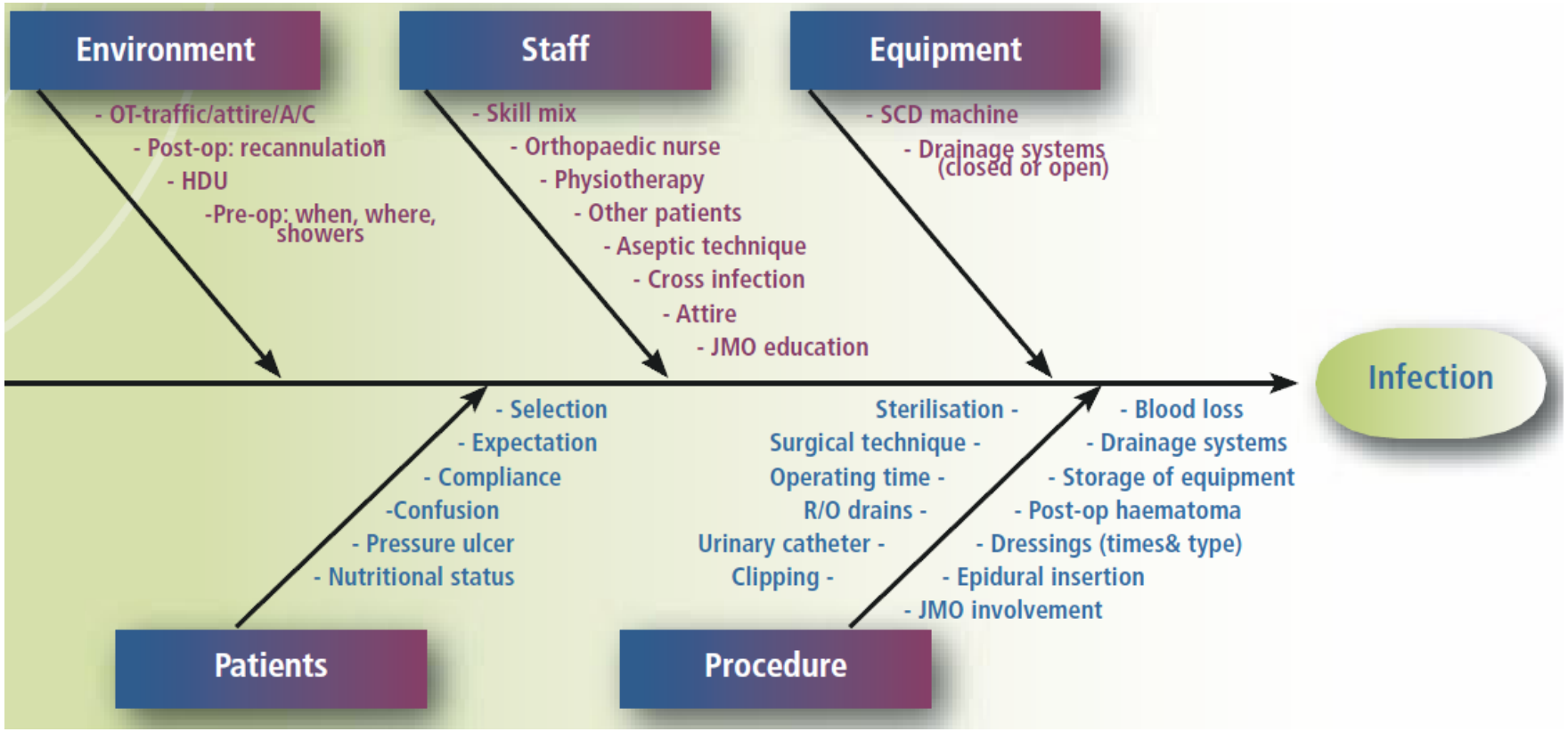
Two-pronged Ishikawa



Sample – Registration Errors



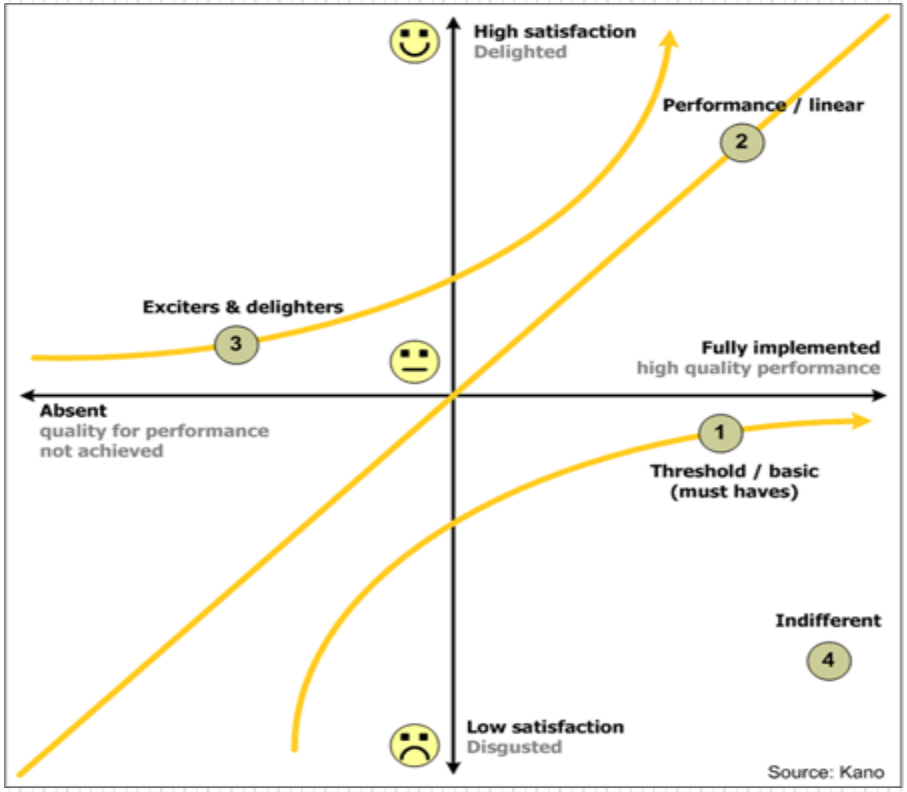
Sample – Causes of Infection



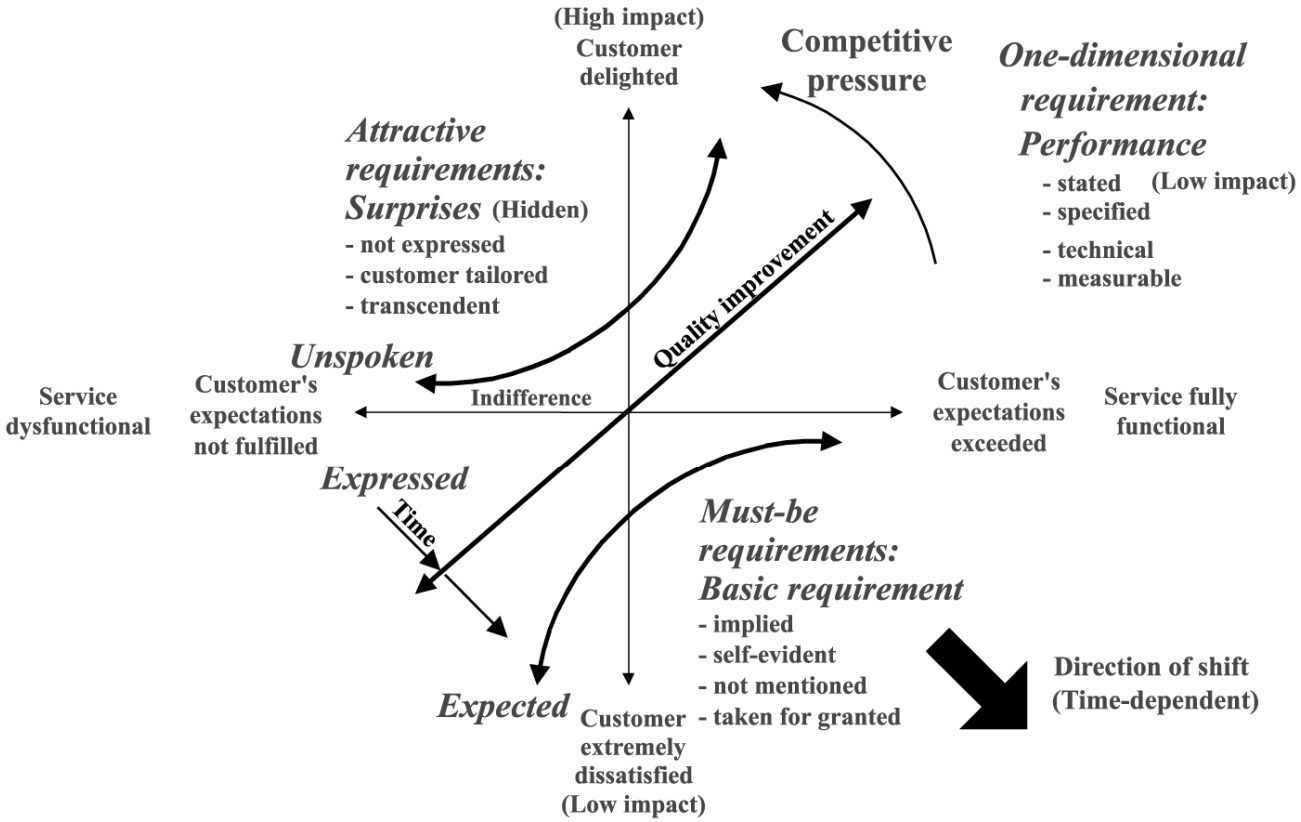
Final Steps for the Ishikawa Diagram

- Make sure all possible suggestions have been exhausted
  - In a team setting, everyone has passed
- Review each of the suggestions and begin a high-level vetting process to remove those that may not be valid
  - For those that need additional information, assign team members to investigate and report back
- When whittled down to the 'real' causes, begin a process of prioritization for testing and improvement
- Focus on and address those that are the most likely candidates for improvement projects

The Kano Model



The Kano Model



Source: Kano *et al.* (1984), *ASI Quality Systems* (1992), Mazur (1993), Rolstadas (1995),Wakhlu (1994), Matzler and Hinterhuber (1998), Cohen (1995)

Threshold Attributes

- Threshold attributes are also know as basic attributes and equate to the basic needs a customer has regarding the products or services being offered
  - Proper diagnosis and treatment
  - Successful surgical procedure
- Increasing performance of threshold attributes actually produces diminishing returns
  - It's difficult to improve on proper Dx and Tx
  - A surgical procedure is either successful or it is not
- Failure to provide this attribute results in product failure
- Requires a binary measurement (pass or fail)

Performance Attributes

- Often classified as customer requirements or 'wants'
  - Short wait to see the provider
  - Treated courteously and professionally
  - On-time departure and arrival
- In most cases, more is considered better
  - Improves customer satisfaction
- What customers are willing to pay (or tolerate) is closely associated to performance attributes
- Often measured using Likert scales
  - i.e., satisfaction on a 1 to 10 (or 1 to 5) scale

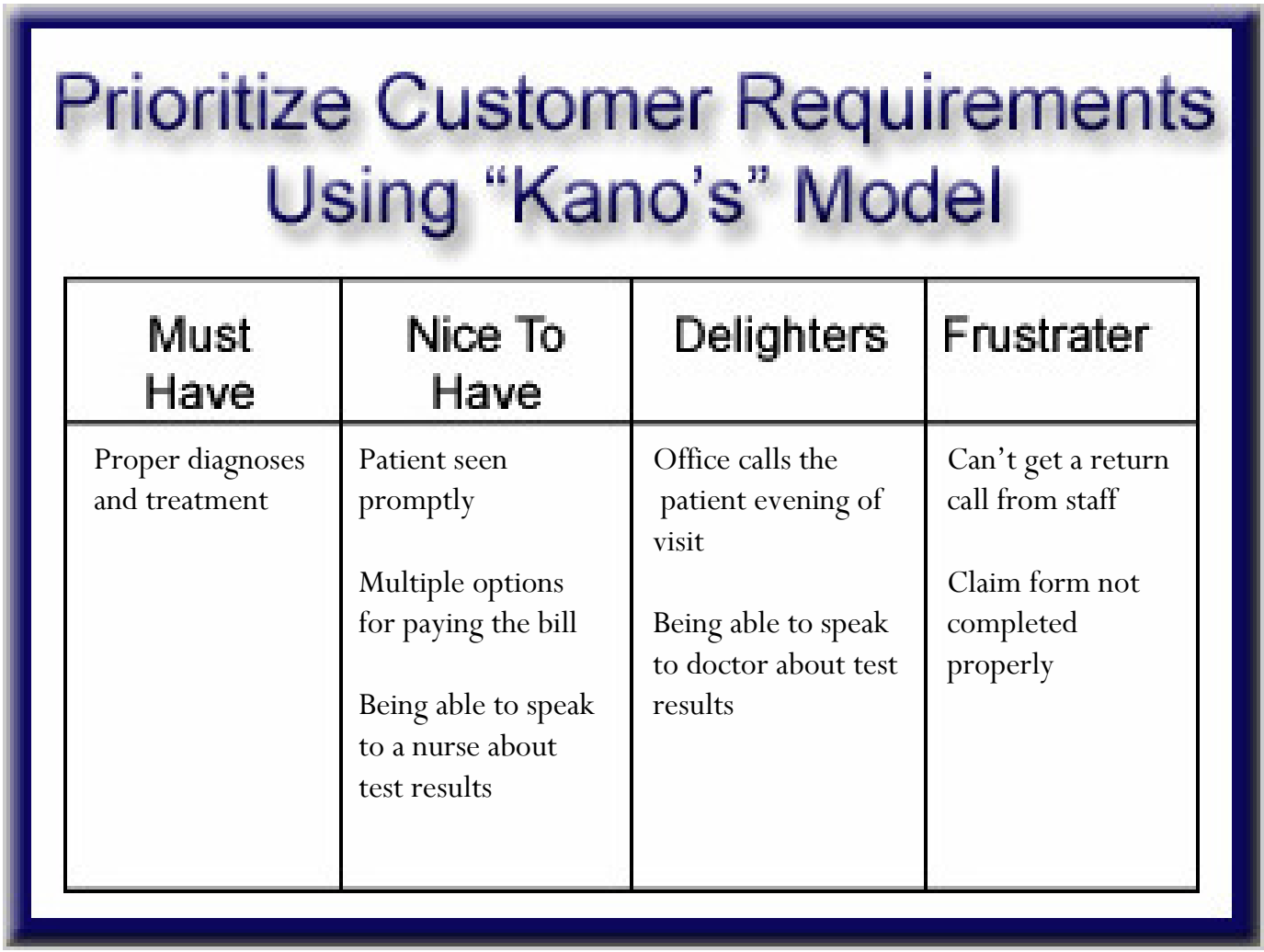
Excitement Attributes

- Also called ‘delighters’, these attributes are most often unexpected
  - Phone call from provider at home evening of visit
  - No-hassle results from tests with interpretation or comments
  - Upgrade from coach to first class
- Presence can significantly increase satisfaction while absence will not result is reduction
- In competitive markets, exciters can often tip the balance of business
  - Employer may offer ‘preferred’ status
  - Payer may negotiate better rates
  - Patients will refer friends and family

Frustraters

- Not a formal attribute in Kano's model
- These are attributes that create wait time, confusion and frustration for a customer
  - Not able to reach a live person at the practice
  - Lab results not reported to the patient on time
  - Poor provider communication skills
  - More than one delay or gate change
- Presence of frustraters can degrade otherwise positive customer experience
  - Will negatively effect satisfaction studies

Kano's Model



Prioritize Customer Requirements Using "Kano's" Model

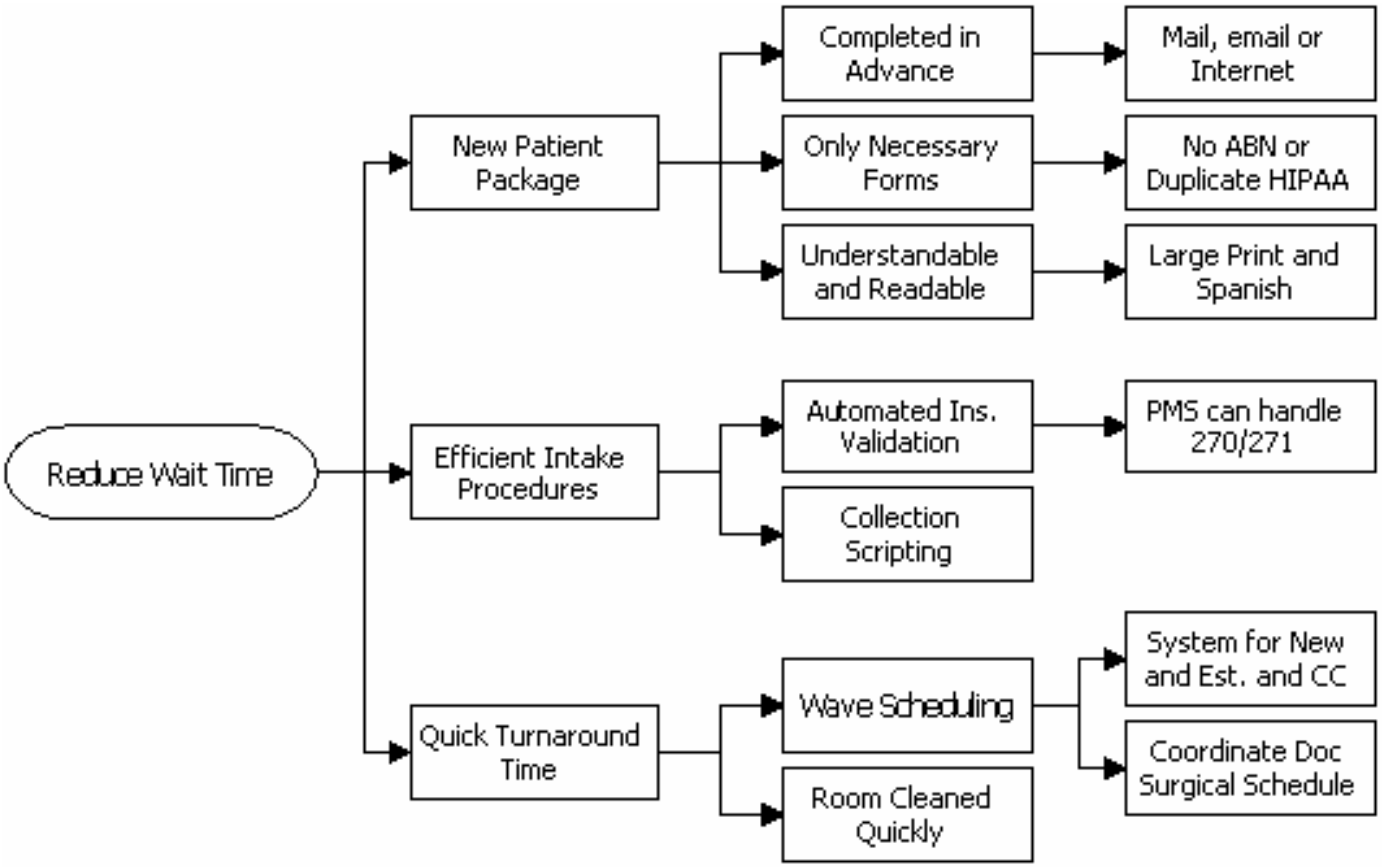
Must Have	Nice To Have	Delighters	Frustrater
Proper diagnoses and treatment	Patient seen promptly Multiple options for paying the bill Being able to speak to a nurse about test results	Office calls the patient evening of visit Being able to speak to doctor about test results	Can't get a return call from staff Claim form not completed properly

Critical to Quality (CTQ) Trees

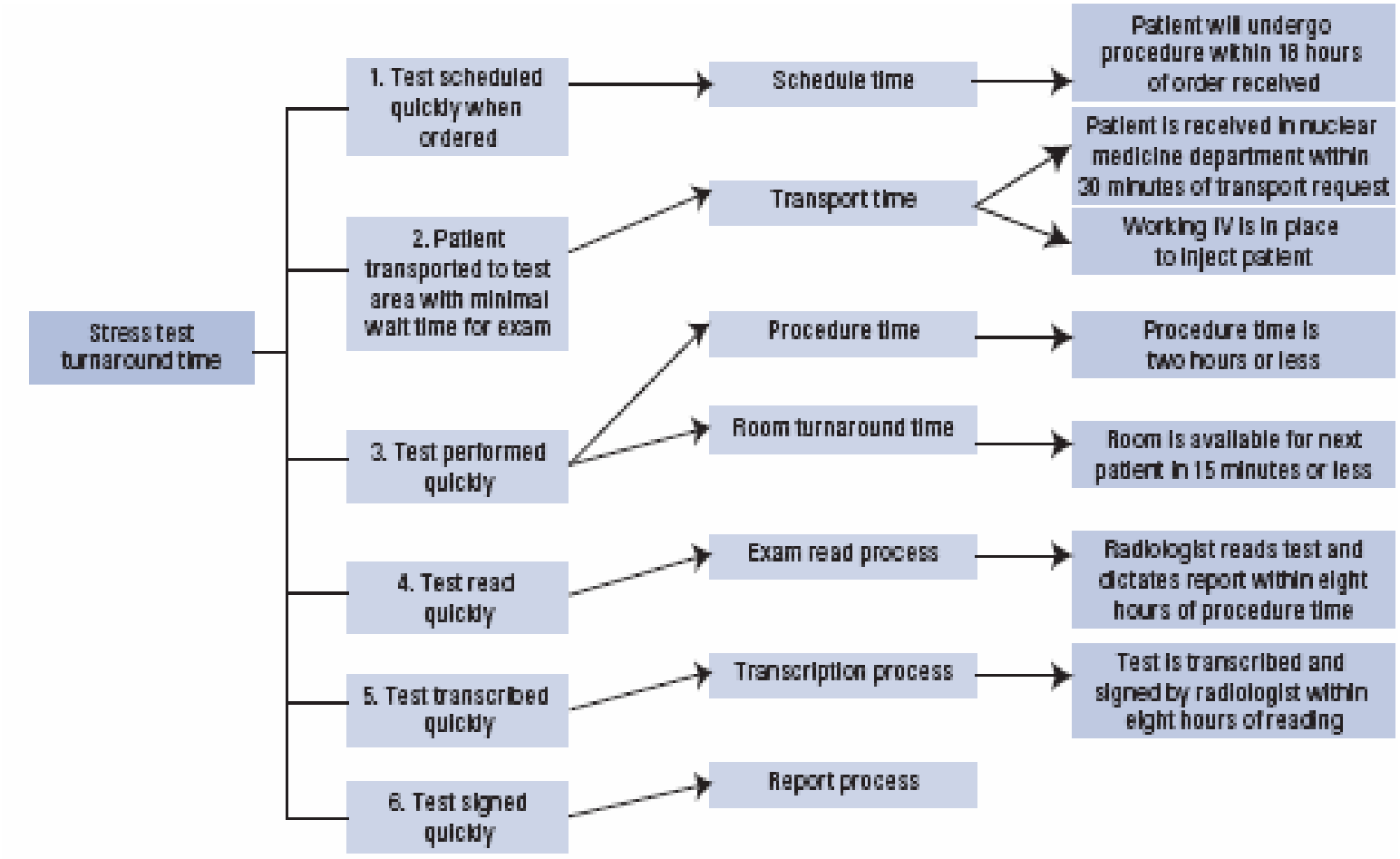
What is CTQ?

- CTQ stands for Critical To Quality
- Focuses on key *metrics* of customer satisfaction
  - Taken from VOC and Kano Model
  - Moves qualitative to quantitative
- Next logical step from VOC and Kano Model
- Creates a map for Key Performance Indicators (KPI)
- Translates information from Kano model into drivers for improvement
  - Creates a system to measure specific drivers

CTQ Tree – Wait Time



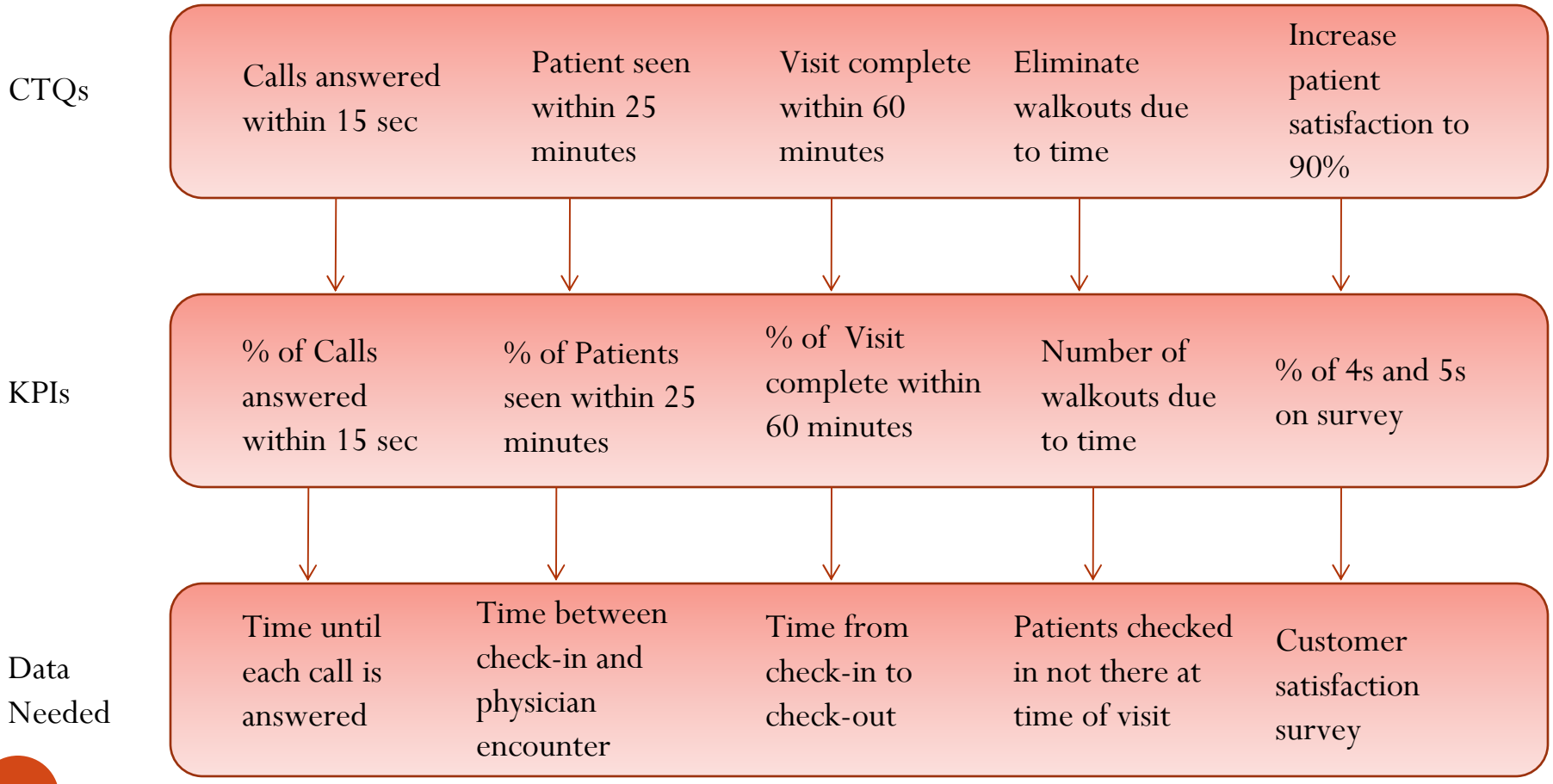
CTQ Tree – Stress Test Turnaround



No quantification so we stop when we get into measures

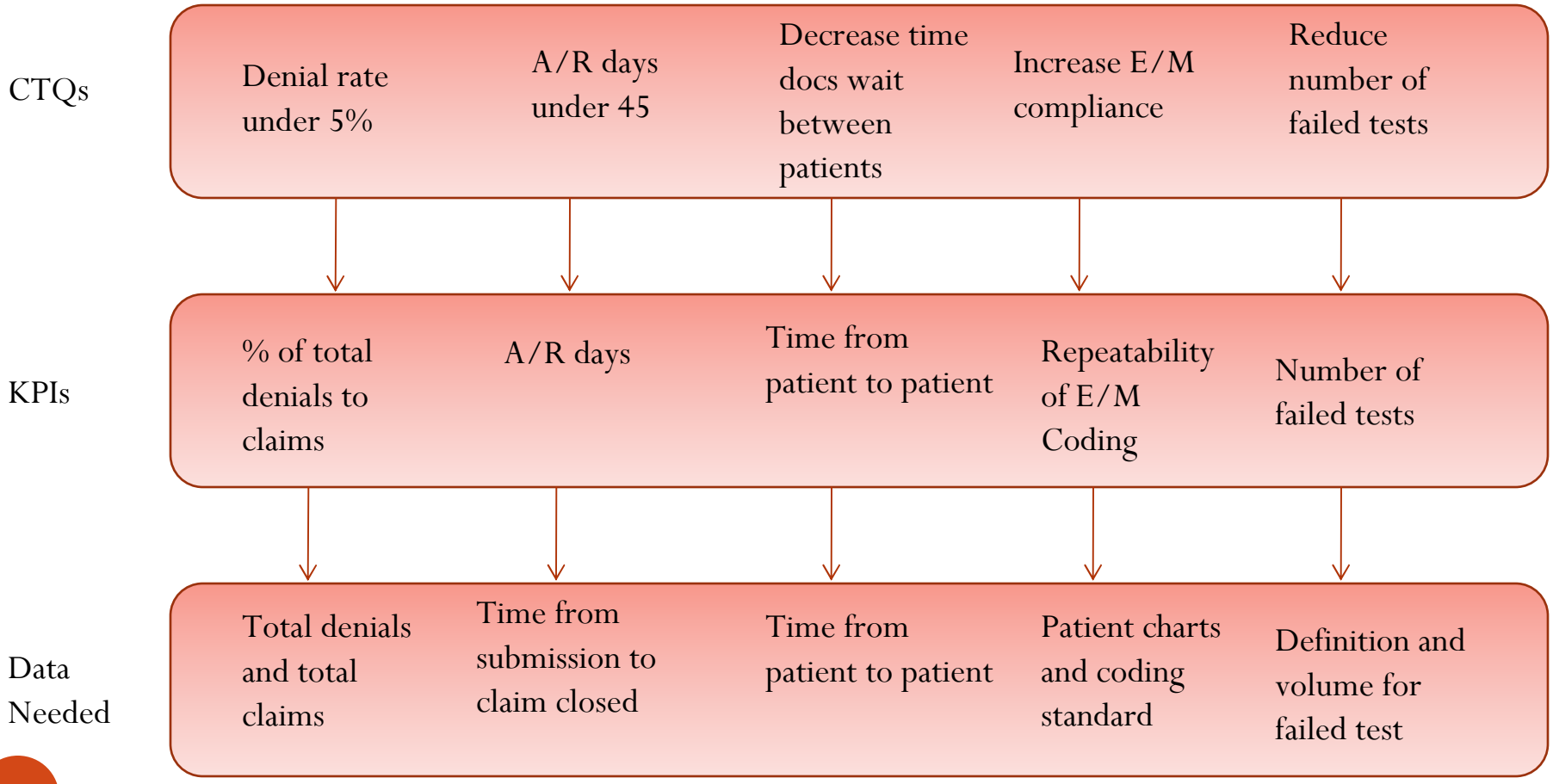
Key Performance Indicators (KPI)

- Taken from the CTQ tree



Key Performance Indicators (KPI)

- Taken from the CTQ tree



Total Practice Improvement

Deployment Platforms

Presented by:

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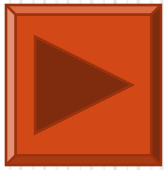


Deployment Platforms

You never change something by fighting the existing reality. To change something, build a new model that makes the existing model obsolete."

R. Buckminster Fuller (1895-1983)
Inventor, architect, engineer, mathematician, poet and cosmologist

What is a Deployment Platform

- Tools are useless without a way to effectively use them
- A platform is a means or a way to efficiently express an opinion or a mode of doing something
- Deployment means to put something into use systematically and/or logically
- Therefore, in this case, a deployment platform is a means of putting the tools for TPI into use systematically or logically

Finding the Right Deployment Platform

PDCA/PDSA

FOCUS

DMAIC

IDEA

Kaizen

Common Steps in Every Project

- Define the issue
- Create the Benchmarks
- Find the cause(s)
- Recommend, test and implement the solutions
- Validate the results

PDS(C)A

Plan
Do
Study (Check)
Act

The Deming Cycle

- The Deming Cycle, or PDCA Cycle (also known as PDSA Cycle), is a continuous quality improvement model consisting out of a logical sequence of four repetitive steps for continuous improvement and learning
  - PLAN: plan ahead for change. Analyze and predict the results
  - DO: execute the plan, taking small steps in controlled circumstances
  - CHECK (STUDY): check (study) the results
  - ACT: take action to standardize or improve the process.

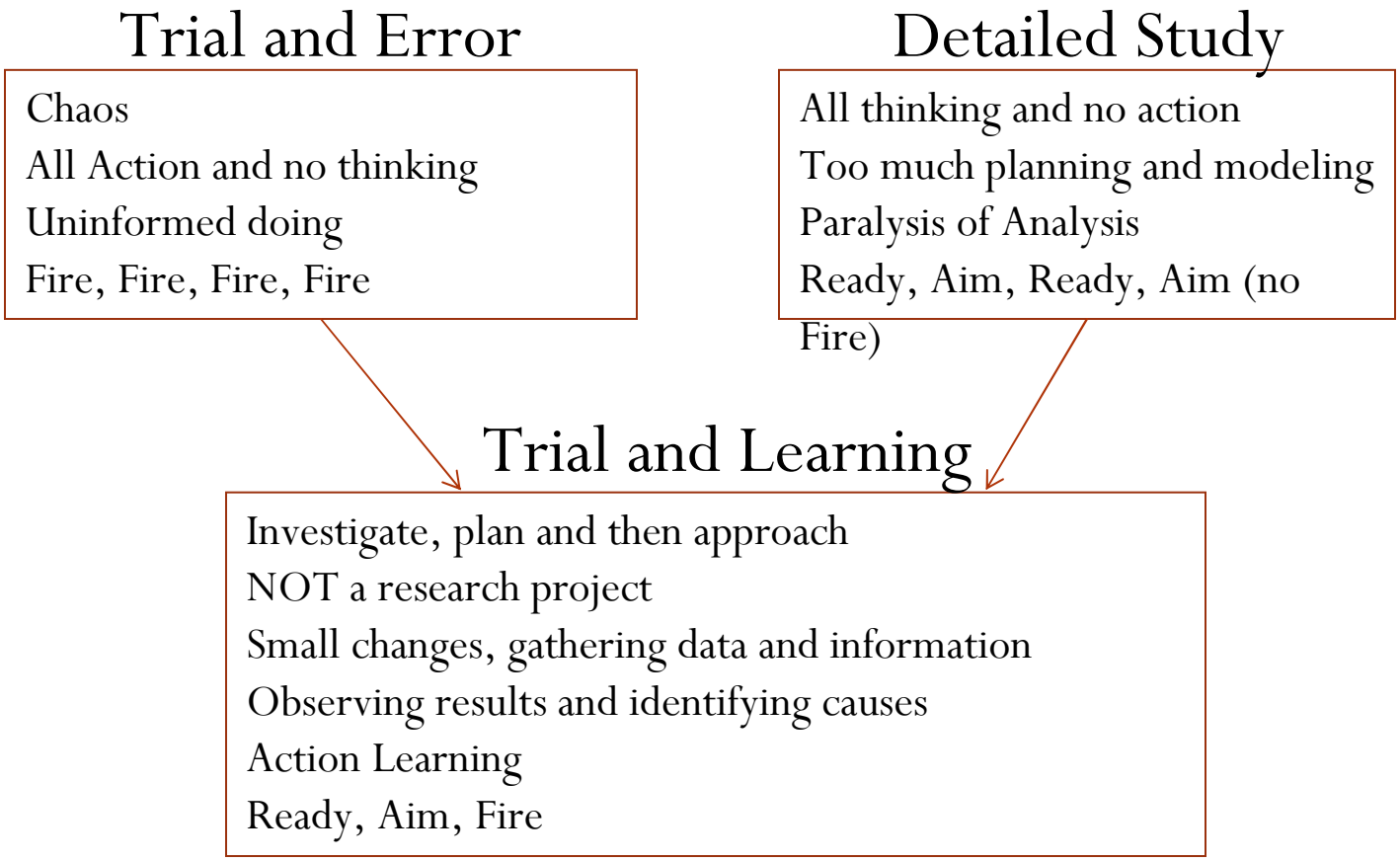
Why Use PDSA?

- Low-risk way of trying out ideas
- Demonstrate the benefits earlier on
- Gain buy-in from the team
- Help uncover undesirable results early on
- Answers these three questions:
  - What are we trying to accomplish?
  - How will we know that a change is an improvement?
  - What change can we make that will result in an improvement?

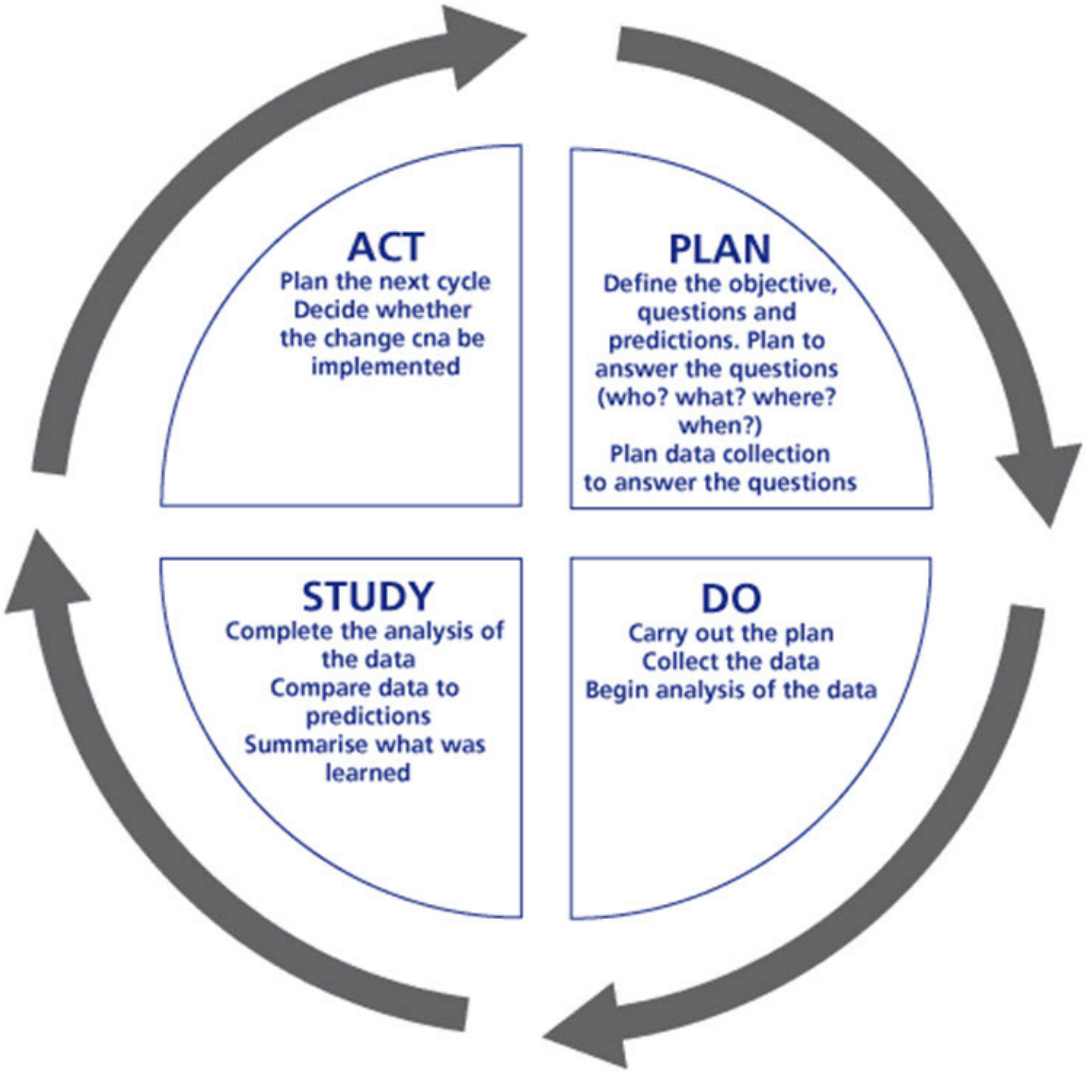
PDSA is not a Full Blown Plans!

- PDSAs are small in scale
- So if you are …
  - Thinking months – think weeks; thinking weeks – think days; thinking days – think hours
  - Thinking facility – think unit; thinking unit – think teams; thinking teams - think ONE team
  - Thinking all patients – think a type of patient; thinking a type of patient - think a sample; thinking sample - then 3-5 may be enough

Trial and Learning



PDSA is Simple, Graphical and Logical



Plan – Do – Study - Act

- Purpose of the test?
- What change idea are you trying?
- Indicators of success?
- How will data be collected?
- How many subjects tested?
- What is the time frame?
- What do we hypothesize will happen?

Plan – Do – Study - Act

- Conduct the test
- Document any problems with unintended consequences

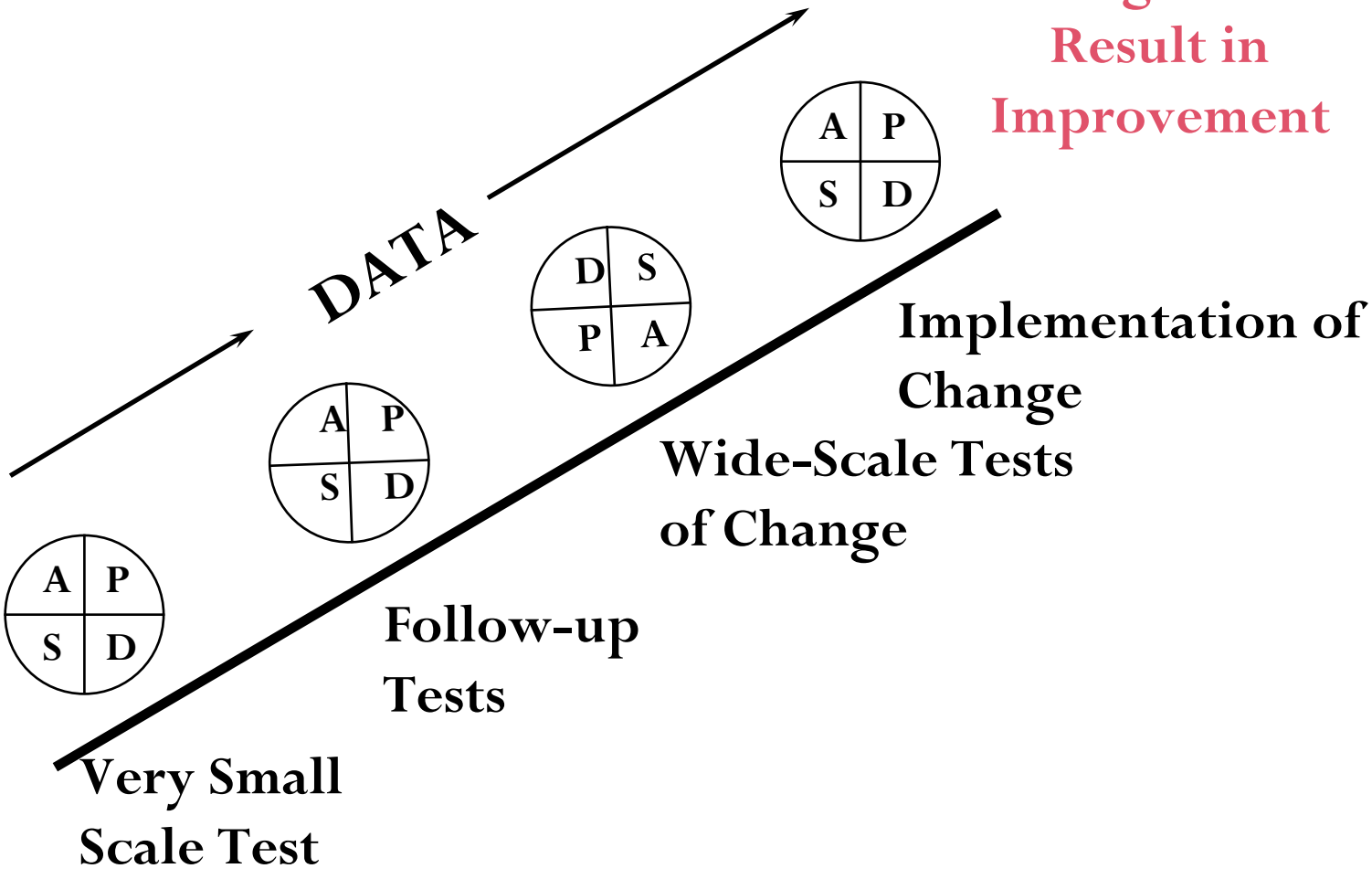
Plan – Do – Study - Act

- Analyze the data
- Study the results
- Compare the data to your predictions
- Summarize and reflect on what was learned

Plan – Do – Study - Act

- Refine the change, based on lessons learned from the test
- Prepare a Plan for the next PDSA cycle

Ramp Up Your PDSAs

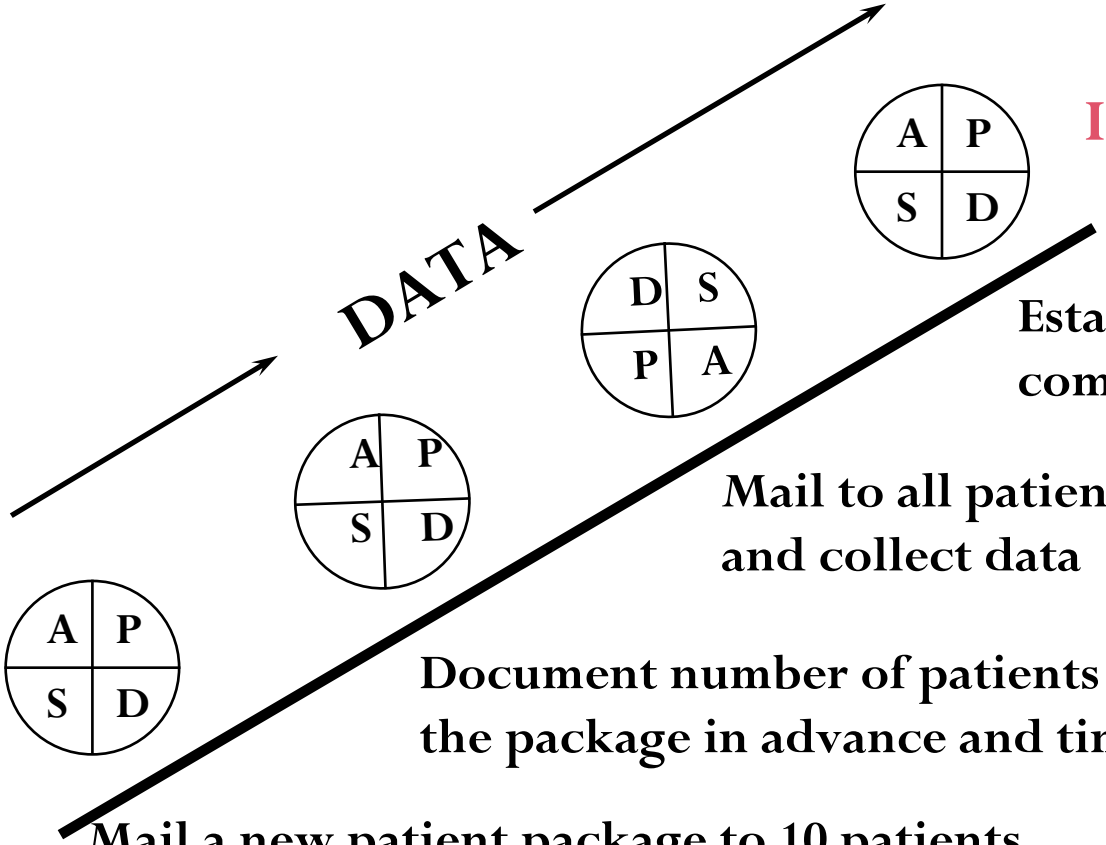


- Hunches
- Theories
- Ideas

PDSA Example

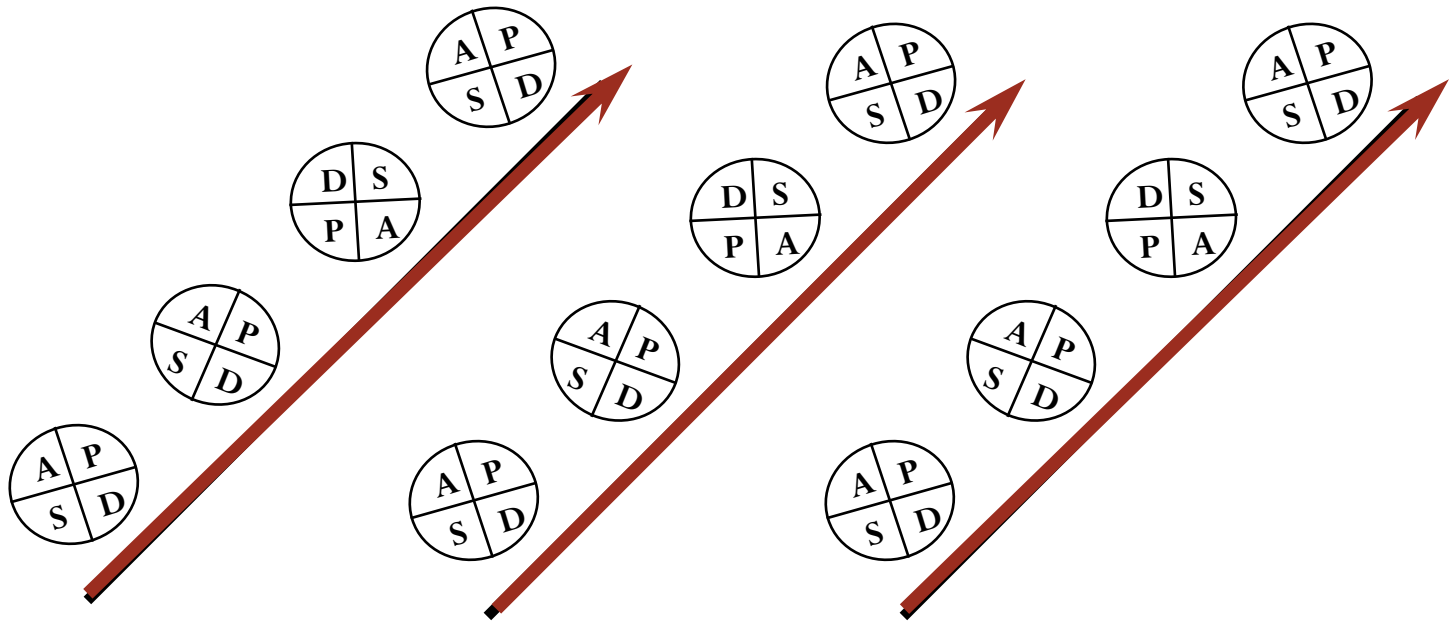
New Patient Wait Time

Changes That Result in Improvement



- Hunches
- Theories
- Ideas

Try Multiple Ramps Simultaneously



Redesign intake package

Test mailing the package

One reminder phone call 48 hours prior to visit

PDSA Pitfalls . . .

- Making the test of change too large, too quickly
- Not writing down the PDSA, and not reviewing it with the team
- Not making a prediction … we learn more by being surprised than by being correct!

The Two Worst Times for TPI

- When times are bad
  - During bad times, money is tight and survival is king
  - The Eorr Syndrome
- When times are good
  - During good times, money is flowing and resources are focused on doing the same things
  - No sense of urgency or mission

The Two Best Times for TPI

- When times are bad
  - You can't afford to keep losing money
  - Sets you up for the rebound when things get better
- When times are good
  - High profitability is normally accompanied by higher waste and poorer quality
  - Creates an attitude of being 'unsinkable'

Does Process Improvement Always Work?

- NO
- In addition to a lack of buy-in by senior management and owners, here are the biggest reasons for failure
  - Lack of a specific target or goal
  - Failure to define what constitutes success
  - Ignoring the chaos that may be created during interactions
  - Confusing improvement in a process with improvement of the system
  - Assuming that the final output will actually result in the final goal
  - Failure to associate how improvement moves toward the vision for the organization
- Not all goals are appropriate for process improvement

Is Process Improvement Enough?

- NO
- "a competitive strategy based solely on cost will lead to predictably disastrous results" {*Michael Porter, Competitive Advantage,1998*}
- When all else is equal, it is cultural and philosophical issues that predict success in the market place
- After continuous process improvement becomes part of the culture, it is time to move on to other areas of improvement

For More Information

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