# Introduction

The physical delivery of health care is a complicated process, and one which can have implications for the organization’s finances and its patients’ health. For those reasons, organizations try to make their delivery as efficient as possible. For example, hospitals routinely analyze how patients flow from one department to another – such as from the ER to a room in one of the units, or from Surgery to Med-Surg to discharge. The goal is to make sure that patients get treatment in a timely fashion and then discharged or moved to a more appropriate floor as soon as possible.

In this activity, you will observe the flow of patients in an ER.

# Email From Quality Assurance

**Independence Medical Center is a critical access hospital in Independence, Iowa. You are a recently hired project manager in the hospital’s Quality Assurance department, and you’ve been given an assignment: Find out why patient satisfaction has been going down in recent months.**

## Email from Chad Williams, Director of Quality Assurance

Subject: Survey Numbers

Hey there! I’m in charge of Quality Assurance and I hear from Albert Lynton that you’re in charge of the project to figure out our problem with patient satisfaction. Albert (he’s our director of operations) asked me to send you the survey numbers so you know what we’re seeing.

So here’s the scoop: In the last 8 months, our patient sat has tanked. We’re talking 93 percent satisfaction at the beginning of that time to **79 percent** now. Ouch!

We’re still at 90 percent satisfaction with treatment outcomes, so at least there’s that. And we’re at 85 percent with the quality of the environment – beds, food, that sort of thing.

But here’s where we’re hurting: communication and wait times. We’re at 65 percent for communication (by providers, that is, our docs and nurses), and **49 percent** for wait times.

Now, here’s a breakdown of those who said they were dissatisfied with their wait time:

* 47 percent of those who completed the survey were treated in the ER.
* 38 percent were admitted from the ER to the floor (to Med-Surg, the ICU, and other departments).
* 15 percent of the patients who completed the survey were parents of pediatric patients.

Other facts you might want to keep in mind: 73 percent of the hospital’s admissions come through the Emergency Room, and nearly half (46 percent) of these admissions occur between 6 p.m. and 4 a.m.

Good luck, and let me know if you need anything!

––Chad

# The Emergency Room

**You decide to use a common technique for figuring out problems in patient flow: shadowing patients as they come through the ER.**

## Ruby Martindale, Linda Mueller, and Stephanie Foster

Ruby Martindale: We’re going to have to divert all ambulances to Buchanan County. We are at capacity, and by that I mean we are beyond capacity.

Linda Mueller: When can I see a doctor?

Ruby Martindale: Any time now! (to another nurse) Who’s attending today? Aren’t there any doctors we can pull in?

Stephanie Foster: No, they’re still doing rounds.

Ruby Martindale: What? It’s 3:00! How many patients do we have still here who could have been moved?

Stephanie Foster: I don’t know, but Med-Surg is under capacity. So probably several.

## Message over the hospital PA system:

Dr. Fabiola, please call the ER. Dr. Fabiola, please call the ER.

## Debra Green and Beverly Mitchell

Debra Green: That’s his third page. I wonder where he is?

Beverly Marshall: I don’t know, but Mr. Tensleep, the one with the confusing lab results, isn’t going anywhere until we can consult with him.

## Winston Sutherland and Heather Taylor

Winston Sutherland: Let’s get an EKG on Ms. Mueller.

Heather Taylor: But she’s not showing any cardiac risk factors.

Winston Sutherland: Let’s get one anyway. She’s driving me nuts and I’m not giving her a single excuse to sue us. Besides, the last patient who didn’t have any risk factors went home on my okay, and he was back here three hours later.

Heather Taylor: Well, it will have to wait. There are quite a few elective surgeries today, and several of the patients needed a preoperative EKG.

Winston Sutherland: Oh, right. It’s Monday. I should have known we’d get backed up. Remind me again why they don’t spread those out?

Heather Taylor: Don’t get me started.

# The Fishbone Diagram

## Email from Chad Williams, Director of Quality Assurance

Subject: Template for You

How did your observations go? I hope you learned what you needed to. Meanwhile, here’s a template for you to use as you pull together your ideas for improving patient satisfaction. I think this is a useful tool, and I use it myself regularly.

**Attachement:** [The Fishbone Diagram.docx](https://media.capella.edu/CourseMedia/VilaHealth/BHA4110/patientFlow/docs/The%20Fishbone%20Diagram.docx)

### Now, please answer the following questions.

**Question 1:** Generated from customer feedback on their perceptions of hospital care, this important and regularly utilized indicator for measuring quality in health care produces data relative to patient experiences, allows for benchmarking, and encourages hospitals to work towards improving the quality of care they deliver.

#### ****Correct!****

Demonstrating the organizations ability to be respectful of, and responsive to the needs of their consumers which will in turn improve the quality and safety of the care being delivered, decrease costs and increase provider satisfaction as well. Organizations who seek to remain relevant in the industry, improve business operations, continue to capture market share and continue quality improvement efforts, should always be focused on establishing patient safety as an improvement priority. Patient safety should never fall off the improvement radar as organizations can quickly suffer from the implications of declined satisfaction if they are not monitoring the needs of their consumers.

**Question 2:** Commonly referred to as a cause and effect diagram, this visual tool categorizes potential causes of a problem.

#### ****Correct!****

The fishbone diagram (or cause and effect diagram) is a visual tool utilized to highlight potential causes of a problem in order to determine its root causes. The tool itself breaks down the problem into causes under each of the following categories: methods, people, materials, equipment, and environment.

Pareto charts are utilized in quality management to identify the most common causes of defects.

**Question 3:** The front-line staff member is a critical member to the performance improvement (PI) team, as they offer valuable insight into daily operational functions where variation and waste generally occur.

#### ****Correct!****

The front-line staff member is generally closest to the process the PI team is seeking to improve. Including them will provide the team with valuable insight into the process and what areas need improvement. In addition, success of the implemented improvement will require buy-in from those who are going to be impacted most by the change. Including them in the improvement process will generate a sense of ownership and buy-in amongst those on the front line.

**Question 4:** This systematic improvement methodology focuses on removing waste from the value stream without forfeiting productivity.

#### ****Correct!****

The lean methodology focuses on making rapid improvements towards the goal of delivering value, eliminating waste, establishing flow and pursuing perfection. Reducing unnecessary and wasteful steps is key towards creating a dramatic improvement in flow in the value stream resulting in improved efficiency and speed - the main goal of the methodology.

**Question 5:** A plan created by the organization to move from their present operations to a more advantageous point in the future in the face of uncertainty, competition and constant change.

The strategic plan is created by the organization to highlight the desired future state. The plan includes goals, objectives, and tactics necessary to achieve the desired state. This form of planning works from the desired end backwards to the current status.

**Question 6:** Demonstrating outstanding scores in patient satisfaction distinguishes an organization from its competitors providing for a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ advantage.

**Correct Answer:** Competitive

#### ****Correct!****

Creating and maintaining a competitive edge in the health care industry is a topic of focus for many organizations as change is constant requiring organizations to be innovative and agile in their operations. Given that reimbursements are tied to patient satisfaction, quality, and outcomes any organization wishing to remain relevant in the industry would make patient satisfaction a priority within their strategy. Demonstrating the organizations ability to be respectful of, and responsive to the needs of their consumers which will in turn improve the quality and safety of the care being delivered, decrease costs and increase provider satisfaction as well. Organizations who seek to remain relevant in the industry, improve business operations, continue to capture market share and continue quality improvement efforts, should always be focused on establishing patient satisfaction as an improvement priority. Patient satisfaction should never fall off of the improvement radar as organizations can quickly suffer from the implications of declined satisfaction if they are not monitoring the needs of their consumers.

**Question 7:** According to the Institute for Healthcare Improvement (IHI), the six major bones included on the fishbone diagram include; measurements, materials, people, machine, methods and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Correct Answer:** Environment

The environment bone will highlight key elements that may contribute to an error including patient acuity at the time of the error, staffing ratios, conditions (time, temperature, culture of the unit etc.).

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**Question 8:** The Value Stream Map is a tool utilized in the lean methodology and analyzes the current state for a series of events that takes a product or service from its beginning through to the end.

#### ****Correct!****

Value stream mapping is an effective tool utilized in lean six sigma projects to help visualize a patients path to treatment in an effort to improve the service an minimize delays. Delays in care are considered wasted time in health care as time spent with the patient equates to dollars reimbursed. A key component to the value stream map is identifying the ideal state.

**Question 9:** This five-step model is a core tool utilized in Six-Sigma improvement projects:

**Correct Answer:** DMAIC

#### ****Correct!****

The DMAIC (define, measure, analyze, improve, and control) is a five-step process utilized in the Six Sigma method which is focused on eliminating defects and waste resulting in improved quality and efficiency. The data driven strategy requires use of all five steps in order to ensure the best possible results.

**Question 10:** By improving \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ organizations can realize monetary savings on staffing, decreased wait times, and increase provider and patient satisfaction as patients are efficiently transferred between.

**Correct Answer:** Patient Flow

#### ****Correct!****

Barriers to seamless patient flow may include staffing, limited inpatient bed availability and delays in radiology and laboratory study processing. Failing to address barriers to patient flow result in increased organizational costs, diminished patient & provider satisfaction and delays in rendering care. Barriers to patient flow exist between facilities as well due to lack of collaboration, communication, and established process. Facility to facility transfers in care will continue to rise given the increase of baby boomers entering into retirement and seeking services from the industry. Organizations who are proactive in addressing potential inefficiencies and barriers to patient flow between facilities will reap the benefits of seamless patient throughput.