



# Leading the Charge

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# Overview

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# Background

- Epic Systems Co. is a leader in healthcare information technology (HIT)
- Over **250 million** patients have a record in Epic's electronic health record (EHR) software
- Quarterly release cycle
  - February, May, August, September



# Background

- Quality Assurance on the inpatient pharmacy team
- Small team of 18 testers; only 5 focused on medication charging
- What is Medication Charging?
  - Generating the correct numbers to send downstream
    - Cost of medication + markups
    - Quantity dispensed
    - Unique identifier (NDC) of product



# Pain Points

## Day to Day

- Testing breadth
- Confidence

## Long-term

- Knowledge transfer
- Workload distribution
- Large backlog caused by bottleneck in QA

# Analysis

## Research

- Reflected on my experience as a new team member and product user
- Consulted with tenured testers to identify common charging problem areas

## Identification

- Ultimately, all issues led back to a **lack of education and documentation**

# Analysis

## Scope

- Recommended build
- User roles
- Common charging workflows
- Recurring bugs

## Idea Sourcing

- Collaborated with my team to identify what had and hadn't worked before
- Consulted other pharmacy area leads
- Examples from other roles, like R&D and Technical Services

# Solutions

## Standard Test Cases (STCs)

- Imported into test plans via an Excel macro
- Covered common inputs and special workflows that often resulted in bugs
- Ensured appropriate breadth of testing

## Introductory Testing Guide

- Documented on an internal wiki
- Communicated complex charging workflows in a simple, easy-to-follow format



# Impact

## Improved testing efficiency & quality

- STCs ensured all charging areas are at minimum considered by the tester with each code change
- More confident testers = more creative testers
- Less bugs and smaller testing backlog, allowing for more enhancement features in each release

# Impact



## Increased knowledge transfer

- Testing guide documented common user personas, workflows, buggy areas, edge cases, recommended build, and historical issues
- Allows non-charging testers to help with workload as needed
- Cross-functional education

# Impact

## Lasting Use

- Assists with onboarding of new team members
- Both are still in use today and updated as needed with each release



# Thank You!

Questions?