Ema APM Program - Claims Processing Specialist (Healthcare Insurance)

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Ema APM Program - Case Prompt

Ema is a universal AI employee, with multiple personas across roles and industries to revolutionize how people work. As a PM at Ema, you will regularly encounter deep, impactful enterprise problems where one of Ema's personas can work collaboratively with existing employees to multiply their productivity. Identify one such gap in existing businesses and propose an Ema persona to provide outsized gains to the team she would be a part of. Address the following prompts:

- Why did you choose this problem? What is the potential impact of solving it?
- How will your persona use GenAI to solve the problem? What does the end to end user journey of working with this persona look like?
- How will you test your persona and validate your hypotheses quickly?
    - Demonstrate the feasibility of your use case via sample prompts and responses on synthetic data.
- How do you measure the success of your solution?
- What are some potential pitfalls of your solution?

What's the problem?

Claims Processing Specialists in healthcare (USA) manage a high volume of claims daily, facing challenges with manual tasks like medical coding and data entry. These processes are error-prone, leading to frequent claim denials and delayed reimbursements, which strain financial stability and increase administrative costs for healthcare providers. Specialists must navigate complex regulatory requirements, further complicating the workflow. The inefficiencies in manual processing not only impact operational efficiency but also diminish the quality of patient care. Addressing these challenges through automation and error reduction is essential.

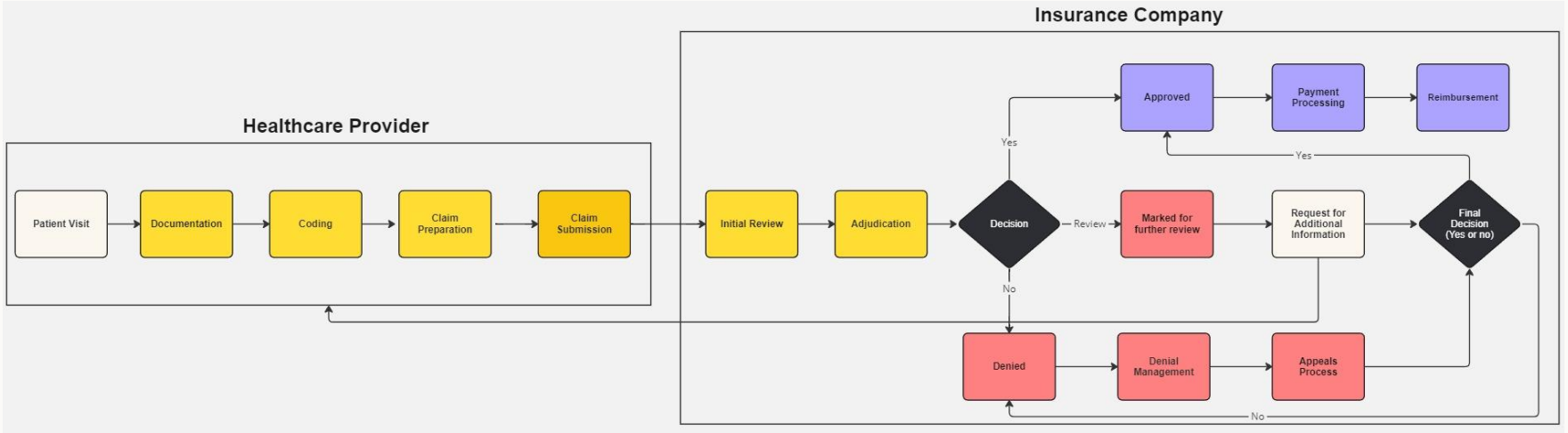
Why solve it now?

High Administrative Costs: Manual claims processing is costly and inefficient, contributing to the high administrative burden in healthcare.
Error Reduction: Automating parts of the claims process can significantly reduce errors, leading to fewer claim denials and faster reimbursements.
Increased Productivity: By automating repetitive tasks, Claims Processing Specialists can focus on more complex cases and other important duties, improving productivity.

Secondary research

1. A survey of healthcare finance executives found that about 23% of claims submitted to commercial insurers are not paid on the first submission, often due to administrative errors or incomplete information (CareCloud).
2. On average, 60% of healthcare claims are paid correctly the first time, leaving 40% requiring rework, appeals, or additional documentation. This process is costly and time-consuming for both insurers and healthcare providers (HFMA).

The current process



For details of all step please refer to the *sheet*

What are the bottlenecks for healthcare provider?

1. **High Volume and Repetitive Tasks:** Claims Processing Specialists handle daily tasks such as reviewing patient records, extracting information, and entering data into claims forms.
2. **Manual Coding:** Assigning ICD-10 and CPT codes manually to claim insurance is time-consuming and error-prone.
3. **Data Entry Errors:** Minor mistakes can lead to claim denials, necessitating additional administrative work.
4. **Regulatory Complexity:** Healthcare regulations are complex and constantly changing.

What is the potential impact of solving it?

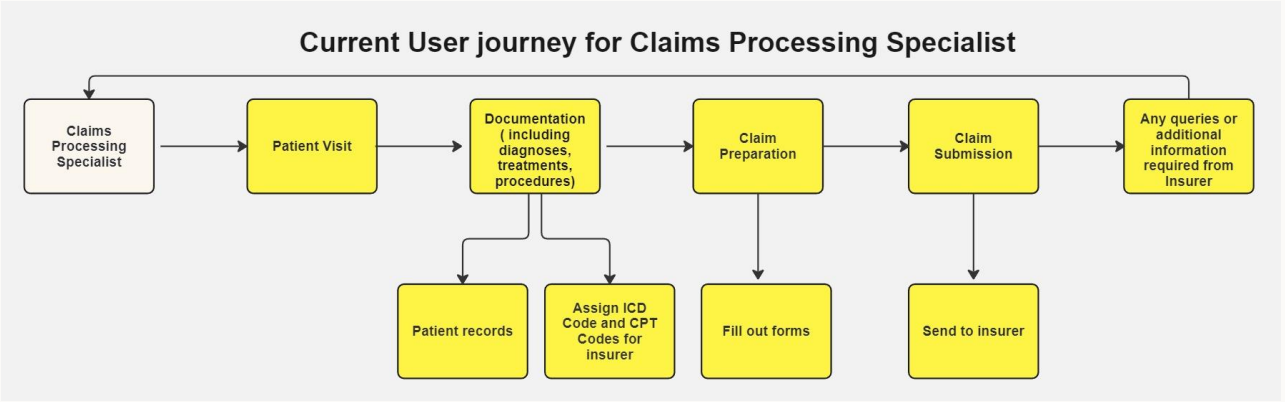
What value it will generate for healthcare provider?	What value it will generate for their business?
Cost Savings: Lower administrative expenses and reduced financial strain.	**Financial Stability**: Improved cash flow and reduced financial disruptions.
Better Patient Care: More time and resources available for patient treatment.	**Competitive Advantage:** Enhanced reputation through better patient care and efficiency.
Operational Efficiency: Streamlined processes and fewer errors.	**Scalability**: Ability to handle higher volumes with consistent quality and performance.

Goal for health providers:

1. **Reduced Error Rates**:Automation can significantly reduce the occurrence of errors in claims processing. Research shows that automation of administrative tasks can lead to error reductions by up to 95% (Source: McKinsey).
2. **Faster Claim Processing**: Automated systems can process claims faster than manual methods, leading to quicker reimbursements. Studies indicate that automation can reduce processing times by 50% or more (Source: Deloitte).
3. **Lower Administrative Costs:** By automating repetitive tasks such as data entry and coding, healthcare providers can lower administrative costs associated with claims processing.

About Claims Processing Specialist Persona

Name: Jane | **Age:** 28 | **Occupation:** Claims Processing Specialist



Goals:

1. Efficiently manage and process a high volume of insurance claims.
2. Ensure accuracy in coding and data entry to minimize claim denials.
3. Stay updated with the latest coding guidelines and healthcare regulations.
4. Improve turnaround time for claim submissions and approvals.

Needs:

1. Access to reliable and up-to-date coding resources (ICD-10, CPT).
2. User-friendly software for streamlined data entry and claim form preparation.
3. Tools to quickly identify and correct errors in claims.
4. Continuous training and updates on regulatory changes in the healthcare industry.

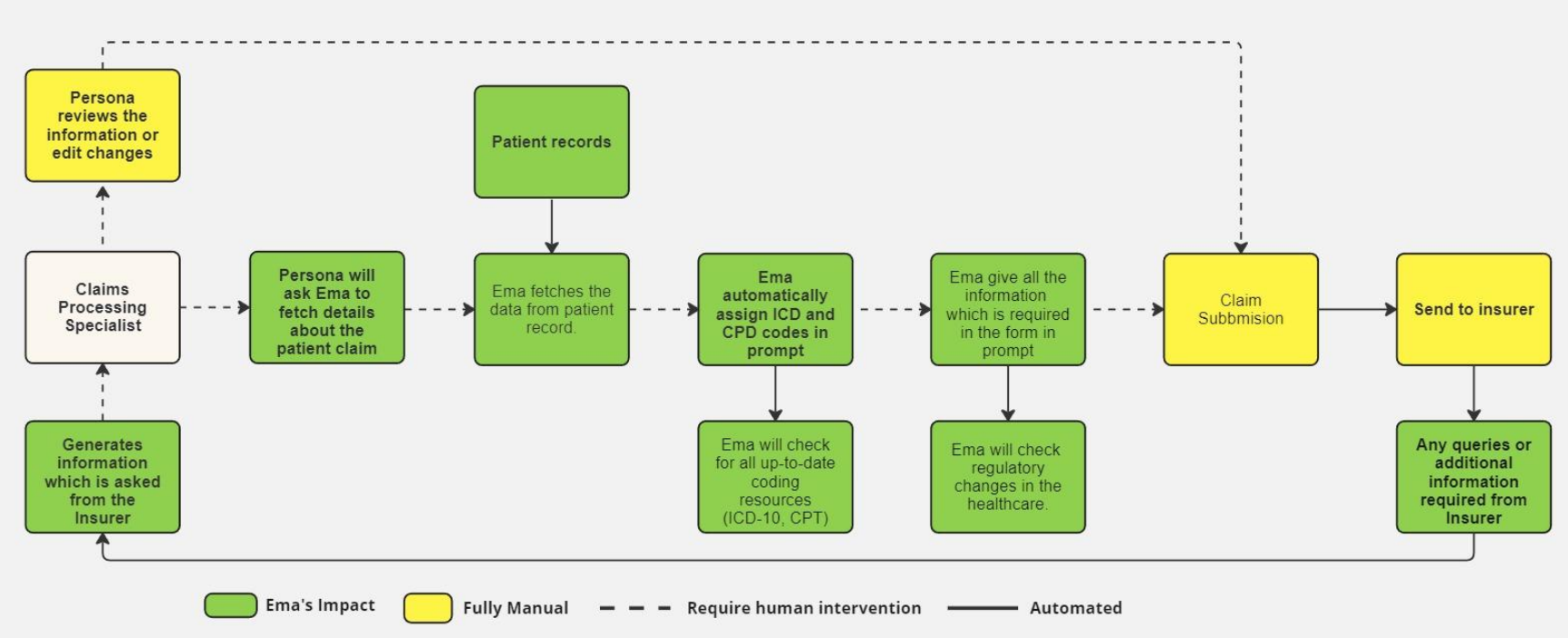
How our persona can use GenAI to solve the problem?

1. **Data Extraction:**
   - Claims Processing Specialist uploads patient records into Ema's system.
   - Ema extracts relevant data, including diagnoses and procedures, using natural language processing (NLP).
2. **Automated Coding:** Ema assigns appropriate ICD-10 and CPT codes to the extracted data.
3. **Claims Form Preparation:** Ema populates the claims forms with the coded information and other necessary details.
4. **Error Checking:** Ema runs real-time error checks, highlighting any discrepancies or missing information.
5. **Review and Submission:** The Claims Processing Specialist reviews the prepared claim, makes any necessary adjustments, and submits it to the insurance company.
6. **Learn from top-performing claims specialists → Analyse Patterns**
Ema can analyze patterns used by top specialists, recommending similar practices to others. It can also suggest additional steps to improve health claims for patients.

Future use cases for healthcare administration:

1. **Generate Discharge documents:** Ema can automatically generate detailed discharge summaries by extracting relevant information from patient records
2. **Generate Personalized Post-Care Plans:** Ema can create customized post-care plans based on individual patient

User journey with Ema

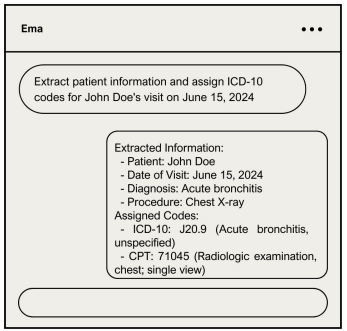


Testing and Validation

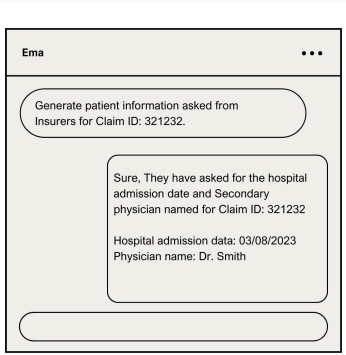
1. **Pilot Program:**Implement Ema in a small-scale pilot program within a healthcare organization to test its effectiveness.
2. **Feedback Loop:** Collect feedback from Claims Processing Specialists on usability and performance.
3. **Iterative Improvements:** Use feedback to make iterative improvements to Ema's functionality and user interface.
4. **A/B Testing**: Conduct A/B testing by having one group of Claims Processing Specialists use Ema while another group continues with the manual process and compare their performance.

Feasibility Demonstration

Field	Information
Claim ID	321232
Patient Name	John Doe
Date of Birth	April 22, 1975
Gender	Male
Visit Date	June 15, 2024
Diagnosis Code	J20.9
Procedure Code	71045
Service Description	Radiologic examination, chest; single view
Physician	Dr. Smith
Clinic	Downtown Clinic
Hospital Admission Date	March 04, 2024



Sample Prompt 1: Data Extraction and Coding



Sample Prompt 2: Fetching Information from the patient records

Success Metrics

Category	Metric	Description
Adoption	Average number of prompts per user	Measures how often users initiate prompts or requests.
Adoption	Number of Claims Processed	Total claims processed each month
Accuracy	Total number of wrong responses reported per user	Tracks the total instances of incorrect responses provided to each user.
Engagement	User Satisfaction	Feedback score from claims specialists using the AI system
Business	Cost Savings	Reduced operational costs due to improved efficiency
Efficiency	Average time for getting a response	Indicates the average duration to receive a response after a user initiates a request.
Efficiency	Claims Processing Time	How long it takes to process each claim from start to finish
Efficiency	Error Rate	Percentage of claims that have errors
Efficiency	Claim Approval Rate	Percentage of claims approved on the first attempt

Potential pitfalls

1. **Integration**: Integrating Ema with multiple ERH (electronic health record) platforms will be a challenge that needs to be addressed.
2. **Data Security:** The healthcare sector is confidential about their patients data, getting them onboard is a challenge and Ensuring patient data privacy and security is crucial when using AI for claims processing.