**UHC Project**

**Business Requirements Document (BRD)**

**Document Version:**

**Date:**

**Submitted by:**

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1.1 Project Overview

* The current process of auditing MNS (Medical Non-Standard) plans for renewal involves manually toggling between the CIRRUS system and the sources of truth, which have a very inconsistent format.
* This auditing process is essential to ensure that the CIRRUS system remains up to date, as it serves as the primary source for generating ID cards.
* The current manual auditing process is time-consuming and it also increases the potential of error.
* Therefore, some level of automation is required to establish accuracy and consistency between the CIRRUS database and the sources of truth, thereby ensuring that accurate information from CIRRUS is used in the ID card generation process.

# 1.2 Project Scope

* The auditing process focuses on comparing MSN plan details extracted from CIRRUS with the sources of truth.
* There approximately 331 plans with total of 30 fields to audit, and the sources of truth include a BARTRACK Report (for Oxford Book of Business) and other reports for other books of business.
* Below is a list of the fields that need to be audited:

|  |  |
| --- | --- |
| FAMILY DEDUCTIBLE OON | EMERGENCY ROOM COPAY |
| IND DEDUCTIBLE OON | SPEC COPAY |
| FAMILY DEDUCTIBLE INN | BRANDING ENTITY |
| IND DEDUCTIBLE INN | Network Description |
| FAMILY DEDUCTIBLE TIER 1 INN | Member Service Telephone # -- |
| IND DEDUCTIBLE TIER 1 INN | Provider Service Telephone # |
| FAMILY OOP OON | Pharmacist Telephone # |
| IND OOP OON | PLAN FUNDING TYPE |
| FAMILY OOP INN | NETWORK SCHEDULE |
| IND OOP INN | PLAN PHONE |
| FAMILY OOP TIER 1 INN | RX PHONE |
| IND OOP TIER 1 INN | CLAIM ADDR |
| PRODUCT NAME | CARRIE NAME |
| PCP COPAY | GATED Logo |
| URGENT CARE COPAY | COINSURANCE |

* The client presented the names of 31 fields that need to be audited. Out of those 31 fields, majority can be fetched through the source of truth. Only exceptions are:
  + Urgent Care- Fetched from Portfolio Grid (Standard Plan value)
  + A few hard coded fields that will be the same for all the plans. These include: Brand Entity, Member Service Telephone, Provider Service Telephone, Plan Phone, Claim Address, etc.
* Consideration will be given to managing multiple benefit plans within a single group during the auditing process.
* The aim is to first standardize the different formats of sources of truth using scripts or bots for real-time auditing. In the next phase, the auditable and non-auditable fields will be consolidated for manual auditing.
* The CIRRUS Database will be used for production, and the primary auditing tool will be the source of truth, primarily the BARTRACK report, with other books of business having their own sources.

# 1.3 Stakeholders

* **UHC's Counterparts:**
  + **Project Owner:** Pat O’Brien and Andrew Bollard
  + **Business Lead:** Juditta Theonis
  + **Business User:** Vanessa Otis
* **EXL's Counterparts:**
  + **Project Owner:** Durre Sadaf
  + **Project Manager:** Prashant Kapahi
  + **Technical Team:** Shreshtha Pattadar, Subhadeep Choudhury, Abhinay Singh

# 2. Business Objectives

* The primary goal is to automate the auditing process to ensure accurate alignment of MSN plan details extracted from the CIRRUS production environment with information from the sources of truth.
* This aims to minimize errors and discrepancies in membership ID cards issued prior to plan renewals, saving time and reducing the potential for human error during manual audits of required fields.
* Ideally, audits should be conducted 15 days before renewal to ensure timely processing.
* Our objective is to issue correct ID cards to all group members by accurately updating the relevant plan details in the CIRRUS production environment, which is used to generate the ID Cards.
* Additionally, the auditing process must account for mid-year changes that occur before the renewal period.

# 3. Current Process Overview

## 3.1 Manual Audit Process:

* **Review the Bartrack Report:**
  + Begin by examining the Bartrack report to identify the specific client or group requiring auditing. This report serves as a primary source of truth for data pertaining to various books of business .
  + Pay special attention to the latest updates in the plan, as changes made by clients before renewal may not immediately reflect on ID cards.
* **Access Optum Cirrus Database:**
  + Access the Optum Cirrus database and navigate to the Benefits section, specifically focusing on Benefit Plans.
  + Utilize the query function to filter and retrieve active plans using the Plan ID obtained from the Bartrack report.
  + Retrieve all relevant data necessary for auditing purposes.
* **Auditing Process:**
  + Review the required field values by comparing the data obtained from the Bartrack report with the corresponding information retrieved from the Cirrus database.
  + Perform manual tallying of field values, such as copayments for example, and update the CIRRUS database in case of any mismatch in values. Note any discrepancies and address them accordingly to maintain data integrity.
  + On average, the audit process takes 15-20 minutes per plan.
  + *Note-* The Bartrack is the source of truth containing updated data, but the CIRRUS may not be always updated. Therefore, it is necessary to perform checks on the CIRRUS database since CIRRUS data is used to print ID Card information during plan renewals.
* **Auditing Urgent Care Plans:**
  + Auditing for urgent care is different as it follows the source of truth for standard plans as given in the portfolio grid. No other sources of truth for nonstandard plans are used to audit this particular field.
* **Timeline for Auditing:**
  + The sales department typically inputs data 30 days before renewal of plans. Completion of auditing tasks needs to be done by the 15th of the previous month before renewal to ensure timely updates and issuance of ID cards.
  + *Note:* Benefit plan addresses and phone numbers are hardcoded and remain constant. This information is crucial for maintaining consistency across plans and groups.

## 3.2 Challenges faced

* The manual comparison between CIRRUS data and the sources of truth inevitably leads to potential errors and inconsistencies. Discrepancies arise when fields do not align, and there is a lack of systematic error identification. Moreover, reliance on a single individual for accuracy introduces additional risk.
* The inconsistent storage format of sources of truth adds complexity to the manual matching process and increases the scope of error as the user has to keep going back and forth between different tabs, thereby reducing efficiency of the manual auditing process.
* Auditing must take place within a quick span of time, ideally 15 days before renewal, to ensure timely processing. Additionally, instances of late renewal require prompt auditing to accelerate the process.
* Bringing in some automation would help to save time and effort on this tedious manual auditing process, ensuring accuracy and efficiency while auditing.

# 4.Proposed Solution (WIP)

* **2-step approach**
  + Our solution is a 2-step approach, where we first try to automate the auditing of each of the fields required to be audited.
  + In the next step we create a GUI application to audit only those fields which weren’t covered in the automation.
  + This would save time on the audit process for each plan and largely reduce manual effort, while also ensuring that all the fields are correctly audited.
* **Standarization of sources of truth**
  + It is attempted to transform various formats, such as embeddings, PDFs, and screenshots, into a standardized format using scripts or bots.
  + Converting diverse data types into a uniform format will be useful for efficient analysis and auditing, enhancing overall data accuracy.
* **Auditing using GUI screen**
  + Users are presented with a panel where two sections are visible:
    - Left side: Contains 30 fields, each accompanied by corresponding textboxes displaying values for both source of truth and Cirrus categories.
    - Right side: Features a file path search button for locating the Source of Truth data file.
  + Each field value retrieved from the source of truth and Cirrus systems is compared with the displayed source of truth data file. Any discrepancies identified would prompt us to update the values.

# 6. Assumptions

* The CIRRUS system is the primary source of data for member groups, benefit plans, and renewal dates. The sources of truth, compiled from data entered by the sales team, and considered to be reliable for auditing purposes. Both the CIRRUS system and Bartrack reports are easily available.
* There is no fixed timeline for running the automation for auditing process. Typically the renewals are done on a specific month each year and auditing needs to be one 15 days before renewal, but there might be a need for daily automation during peak renewal periods.
* 90% of the sources of truth lie in the BARTRACK report, which contains plans present in the Oxford Book of Business. The other books of business such as TUFT, AIMS, etc. Have their own sources of truth.
* The BARTRACK Report is an Excel Workbook consisting of standardized tables where each worksheet contains plans for each group/client.
* The format of documents submitted by sales into the sources of truth remains consistent across all renewal periods.

# 7. Risks and Mitigation (WIP)

* **Data Consistency and Accuracy:**
  + Risk: The reliance on consistent CIRRUS reports and inconsistent sources of truth, introduces the risk of error while matching the datasets, potentially leading to inaccurate audit results.
  + Mitigation: Implement robust data validation procedures to ensure consistency and accuracy between CIRRUS and BARTrack data, such as cross-referencing key fields and conducting regular reconciliation checks.
* **Structural Limitations to sources of truth other than BARTrack Reports**
  + Risk: Unstructured sources of truth (especially images) poses a risk to the extraction and detection of key fields and completeness of the audit process and may hinder the ability to perform accurate comparisons.
  + Mitigation: Use a deep learning based model to annotate and label the keys and values in the images, facilitating a smooth text extraction process
* **Dynamic Nature of Embedded Files**
  + Risk: The presence of embedded files within BARTrack reports introduces complexity while extracting data and increases the likelihood of errors during data extraction and validation, potentially impacting the accuracy of the audit process.
  + Mitigation: Develop automated processes for extracting and validating data from BARTrack reports, leveraging OCR and ML algorithms to handle embedded files and minimize the risk of manual errors.
* **Manual Intervention for Verification**
  + Risk: Since ML algorithms are never error free, manual intervention to verify and audit the undetected groups/fields poses a risk of human error and may slow down the audit process, especially during peak renewal periods when daily automation is required.
  + Mitigation: Implement standardized workflows and checklists for manual verification of discrepancies, ensuring that the process is efficient and consistent across all audits, with clear escalation procedures for resolving discrepancies promptly. For example- provide a GUI screen of the fields/groups the automation couldn’t audit and provide all additional details to track the same and reduce manual effort.

# 8. Project Timeline

# 9. Approval

This BRD requires client approval from reviewer and the project owners before proceeding with implementation.

# 10. Revision History

Any revisions or updates to the BRD will be documented and maintained for future reference.

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