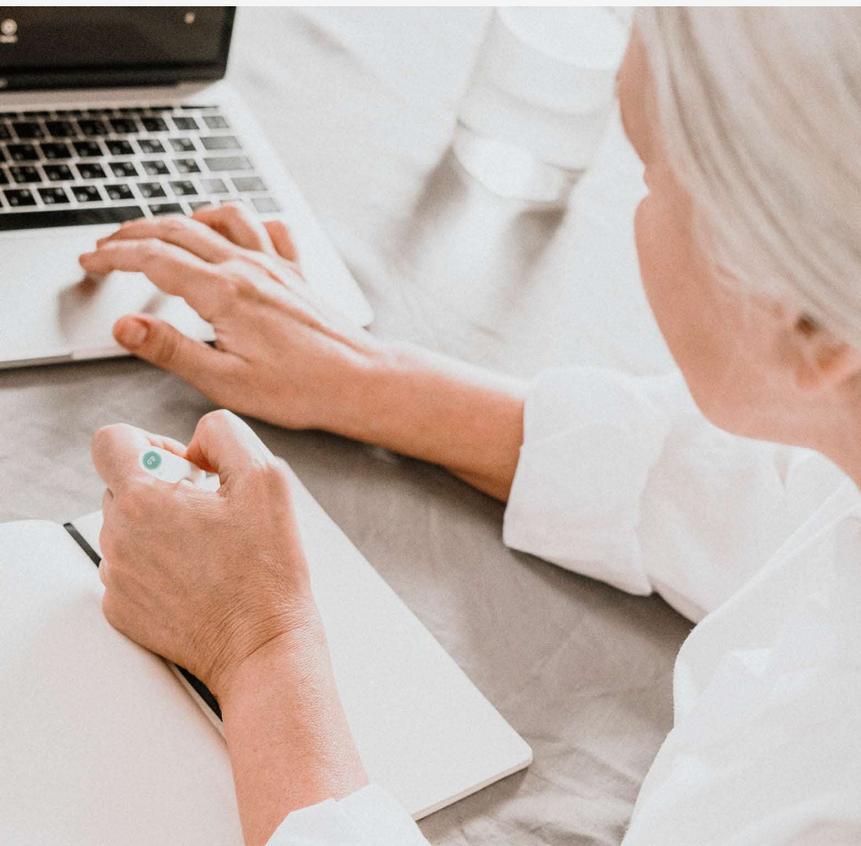# MORE THAN MEETS THE AI

OPERATIONALIZING THE LATEST TOOLS TO DELIVER VALUE IN RCM

AI TOOLKIT OF TODAY (ABSTRACTED)

MACHINE LEARNING (ML)
Broad set of algorithms that teach computers (machines) how to find patterns in data so they can make predictions and evaluate different options

ROBOTIC PROCESS AUTOMATION (RPA)
Software (bots) programmed to automate repetitive tasks across applications that can leverage OCR, Speech Recognition, Machine Vision, and other technologies

LARGE LANGUAGE MODELS (LLM)/NATURAL LANGUAGE PROCESSING (NLP)
Think ChatGPT. A type of machine learning uses neural nets to understand and generate communication, documents, images, and other data.

APIs – THE "ARMS AND LEGS" OF AI
NOT AI, but key linkages that allow us to connect to payers (EDI), EMR systems (FHIR), and other data provider/receiver partners

WHAT ARE THE OPPORTUNITIES TO INTEGRATE AI INTO YOUR FRONT-TO-BACK WORKFLOW PROCESSES?

AI FROM FRONT TO BACK

>01
PATIENT INTAKE

TECH

PATIENT INTAKE STACK
Scheduling Optimization
AI Order Management/OCR
Intake Forms and Communications
AI Insurance Benefits Verification
AI Authorization Management
Liability Estimation
Patient Payment Processing
Intake Workflow

>02
REVENUE INTEGRITY

TECH

REVENUE INTEGRITY STACK
AI DRG & Coding Audit

>03
REVENUE COLLECTION

TECH

REVENUE COLLECTION STACK
Collection Workflow
Vendor Management
AI Denials Management
AI Claims Status Network
AI Custom Bots

>04
BUSINESS INSIGHTS & ADMINISTRATION

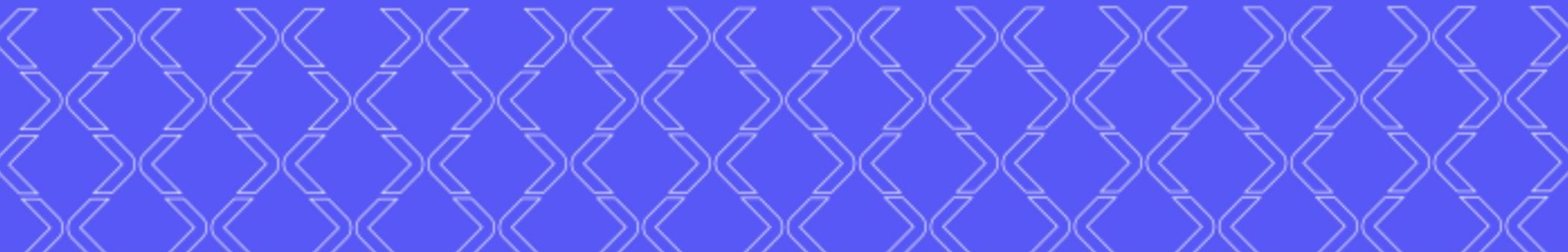**TECH**

BUSINESS INSIGHTS STACK
Reporting
Contract Management
Valuation
Cost Accounting

NOW YOU KNOW WHERE IN YOUR WORKFLOWS YOU CAN IMPLEMENT AI

BUT HOW DO YOU OPERATIONALIZE IT?

NOW YOU KNOW WHERE IN YOUR WORKFLOW TO IMPLEMENT AI

BUT HOW DO YOU
OPERATIONALIZE IT?

DEEP AND COMPLETE
INTEGRATIONS

INSURANCE BENEFIT VERIFICATION

IF YOU WANT TO:

Increase the speed
and accuracy of insurance verification
by understanding exactly what services are covered
by the policy.

Increase the accuracy and automation of patient liability
estimation
by knowing which benefit applies to the
scheduled service.

USE:

ML + APIs =

Algorithmically evaluate which benefits
were applied for each case from your
historical 271s to build a mapping for
each payer's benefit response categories
to the scheduled CPT/service template
allowing for more accurate and
automated Financial Clearance.

AUTOMATICALLY PICK THE RIGHT BENEFITS FROM THE 271
TO GET THOROUGH AND MORE ACCURATE ESTIMATE

AUTHORIZATION MANAGEMENT

IF YOU WANT TO:

Automate identification
of pre-authorization necessity, requirements and
submission of documentation to initiate authorization.

Answering medically complex questions
related to the patient's medical history and associated

USE:

ML + LLM + RPA + APIs =

ML to predict the likelihood of success
based on medical necessity and diagnostic
criteria. LLMs can read the medical history
and formulate responses to expected
questions. APIs for submission and RPA to
navigate authorization websites where APIs
are not available.

AUTOMATE AND INTEGRATE AUTHORIZATION
WORKFLOWS TO ELIMINATE THE OBVIOUS

REFERRAL MANAGEMENT

IF YOU WANT TO:

Digitize order inflow from faxes and **automatically create accurate orders and referrals within the EMR.**

Automate patient outreach for scheduling and initiation of insurance verification and authorization processes.

USE:

RPA + ML =

Automated workflows sitting on inbound feeds (eFax, others) to act based on information found in documentation. ML empowered OCR to continually improve the number and kinds of documents you can automatically process over time. APIs or RPA to enter data in your EMR with data integrity.

IMPROVE PATIENT CARE, PATIENT EXPERIENCE AND CAPTURE MORE REVENUE FROM YOUR REFERRALS

DRG AND CODING AUDIT

IF YOU WANT TO:

Review every detail—from documentation accuracy to billing practices—
revealing errors, documentation opportunities, inefficiencies, and potential revenue leaks that might otherwise be missed by manual review or other audit tools.

USE:

LLM + NLP + ML + APIs =

Evaluate EMR data at the time of initial coding (and prior to bill drop) via and AI Coding (LLM + NLP) utility and evaluate for material changes to codes and sequences that would affect grouping. Use LLMs to provide an evidence trail and summary for each newly added code ensuring rapid review and acceptance/rejection. LLMs can also segment coding and CDI opportunities. Integrate audit results back into coding before initial claim.

FILTER CODING AND CDI OPPORTUNITIES TO THOSE THAT WILL MAKE THE BIGGEST DIFFERENCE

DRG AND CODING AUDIT

AI AUDIT RESULTS: 44% RETROSPECTIVE AND 77% PRE-BILL FINDINGS RATE – AFTER OTHER TOOLS IN PLACE

RETROSPECTIVE AUDIT RESULTS

% Audit Hit Rate	**44%**
Potential **CMI Impact** (extrapolated per year)	**.53%**
Average Revenue Impact per IP Case	**$4.4k**
ROI for coder review time (20 mins to per case at $50/hr for audit)	**$35k for $300 of auditor time**

PRE-BILL AUDIT RESULTS

% cases identified with accurate pre-bill suggestion (e.g. could be a missed code or CDI query)	**84%**
Average Revenue Impact per identified case	**$5.3k**

SAMPLE OF AI FINDINGS

- Diagnosis and procedural findings that were missed in very detailed operative notes
- Maternal delivery complications
- Incorrect PDX assignments
- Severe protein calorie malnutrition qualifier cases

HIT RATE SUMMARY

Expected Post-Bill Audit Hit Rate: **1 in 4**
Actual Post-Bill Audit Hit Rate: **1 in 3**

Expected Pre-Bill Audit Hit Rate: **1 in 2**
Legacy Tool Avg Pre-Bill Audit Hit Rate: **1 in 30**
Actual Pre-Bill Hit Rate*: **Better than 1 in 2**

* Based on current findings

DENIALS MANAGEMENT

IF YOU WANT TO:

Predict the probability of overturn
to route workflows and optimize the distribution of appeals to team members

Complete automated reviews of medical records
to assess the documentation and results for indications of medical necessity per the payer criteria

Automate the creation
and submission of appeal letters and packets
to eliminate printing and accelerate resolution

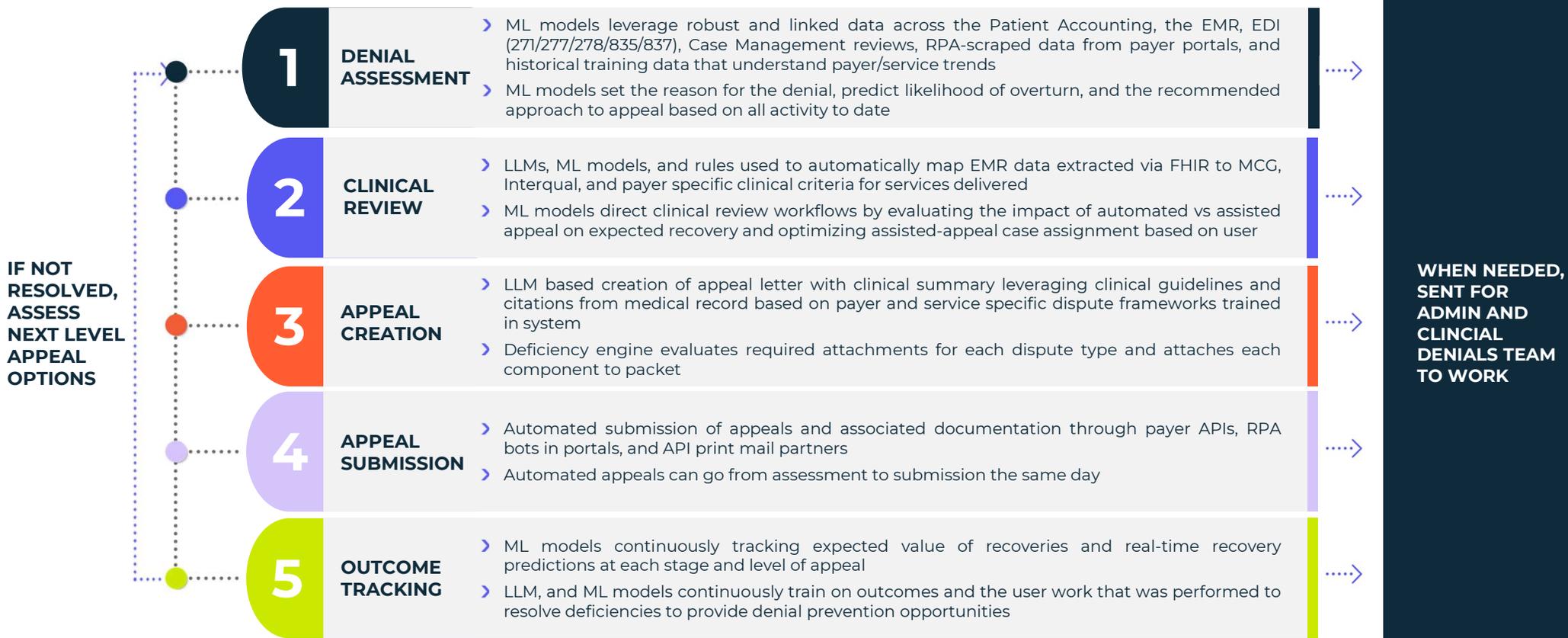**USE:**

ML + LLMs + RPA + APIs =

A comprehensive Denials Management process that covers evaluation and automation.

COMBAT THE VOLUME OF DENIALS BY AGREGRATING ALL THE DATA, CULLING TO WHAT IS IMPACTFUL, AND CREATING EFFICIENCY THROUGH AUTOMATION

AN AI-INFUSED DENIALS MANAGEMENT PROCESS

IF NOT RESOLVED, ASSESS NEXT LEVEL APPEAL OPTIONS

1 DENIAL ASSESSMENT
- ML models leverage robust and linked data across the Patient Accounting, the EMR, EDI (271/277/278/835/837), Case Management reviews, RPA-scraped data from payer portals, and historical training data that understand payer/service trends
- ML models set the reason for the denial, predict likelihood of overturn, and the recommended approach to appeal based on all activity to date

2 CLINICAL REVIEW
- LLMs, ML models, and rules used to automatically map EMR data extracted via FHIR to MCG, Interqual, and payer specific clinical criteria for services delivered
- ML models direct clinical review workflows by evaluating the impact of automated vs assisted appeal on expected recovery and optimizing assisted-appeal case assignment based on user

3 APPEAL CREATION
- LLM based creation of appeal letter with clinical summary leveraging clinical guidelines and citations from medical record based on payer and service specific dispute frameworks trained in system
- Deficiency engine evaluates required attachments for each dispute type and attaches each component to packet

4 APPEAL SUBMISSION
- Automated submission of appeals and associated documentation through payer APIs, RPA bots in portals, and API print mail partners
- Automated appeals can go from assessment to submission the same day

5 OUTCOME TRACKING
- ML models continuously tracking expected value of recoveries and real-time recovery predictions at each stage and level of appeal
- LLM, and ML models continuously train on outcomes and the user work that was performed to resolve deficiencies to provide denial prevention opportunities

WHEN NEEDED, SENT FOR ADMIN AND CLINCIAL DENIALS TEAM TO WORK

DENIALS MANAGEMENT

IMPACT OF AI-INFUSED DENIALS MANAGEMENT PROCESS

RESULT FINDINGS

53% improvement in average monthly clinical denial recoveries, in the 6 months since go-live, including a more current periods, where prevention efforts have reduced inflow.

Avg Monthly Clinical Denials Recovery $ prior to MMX	$607,826
Avg Monthly Clinical Denials Recovery $ after MMX	$929,497
Avg Monthly Recovery Improvement	$321,671
Annualized Improvement	**$3,860,051**

DENIAL PREVENTION RESULTS

- We dedicated our attention to front end mitigation and eliminating false denials from our data.

- Our valid **denied claim dollars** as a % of gross revenue **decreased by 3%** during those 6 months, which equated to the **elimination of more than $1.1M in monthly denial** "noise."

- Decline in front end denials through appropriate reclassification coupled with increased recoveries through our use of AI enabled technology and services.
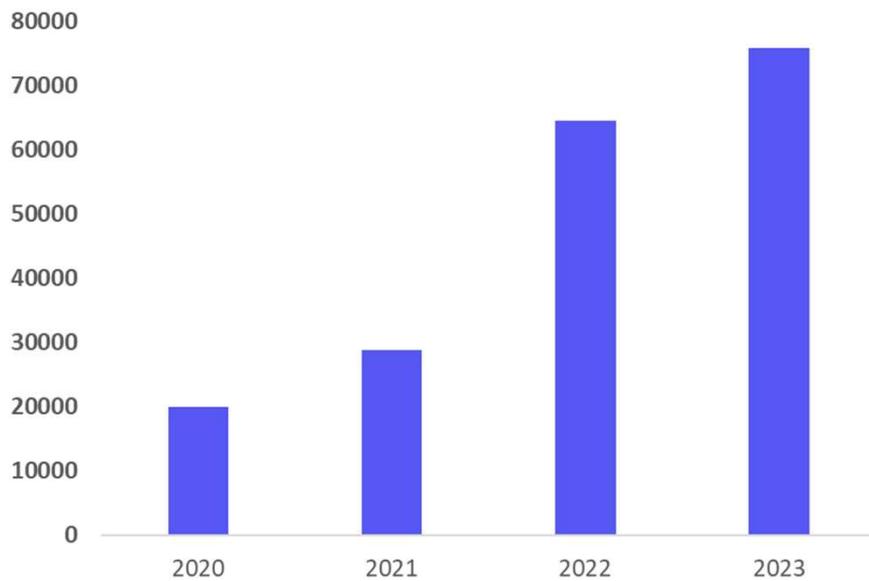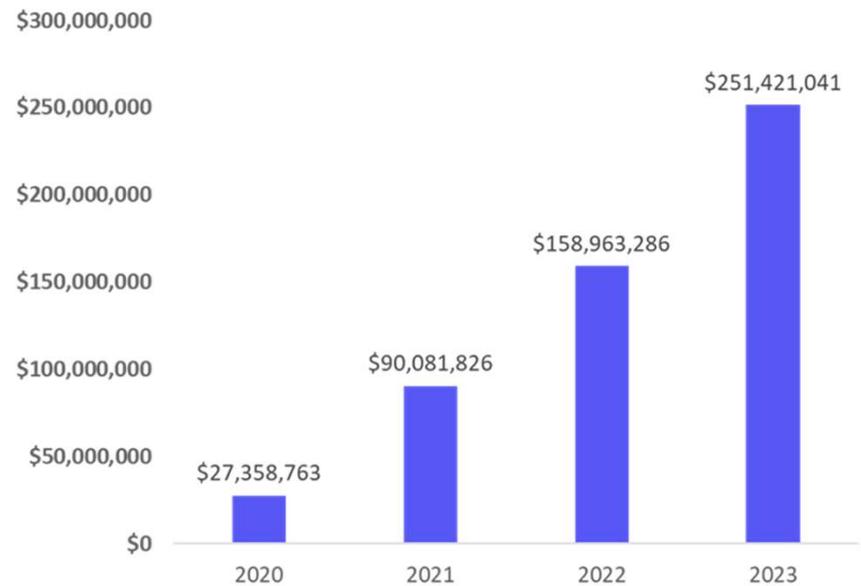
CLAIMS STATUSING

IF YOU WANT TO:

Get a better claims status than a 277 provides,
that allows you to see the reason for the denial as well as the internal payer codes that clarify exactly why the claims was denied.

Allow staff to cover a portfolio 11% larger than they would without enhanced statuses.

USE:

RPAs + APIs =

Workflows that consider detailed status information easily for those payers that offer up the information through APIs and bots that screen scrape and then use iOCR to extract the relevant information for payers that don't.

OPTIMIZE HOW YOU USE YOUR PRECIOUS HUMAN RESOURCES BY OFFLOADING STATUSING ACTIVITY

CUSTOM BOTS

IF YOU WANT TO:

Achieve cost savings
while driving improved productivity and quality
in functions that cross disparate systems.

Improve time to resolution and compliance for rote (and even not so rote) tasks.

USE:

RPA =

Custom bots build in UI Path, Power Automate, Automation Anywhere, or any other RPA toolset to build bots across Cash Posting, Follow-up, Denials, Release of Information, Reporting, Reconciliation, and other areas.

EVERY ORGANIZATION HAS UNIQUE CHALLENGES. CUSTOM BOTS CAN AUTOMATE ACROSS SYSTEMS

THANK YOU

GAURAV GUPTA
SVP, PRODUCT STRATEGY & PERFORMANCE MANAGEMENT
GGUPTA@MED-METRIX.COM