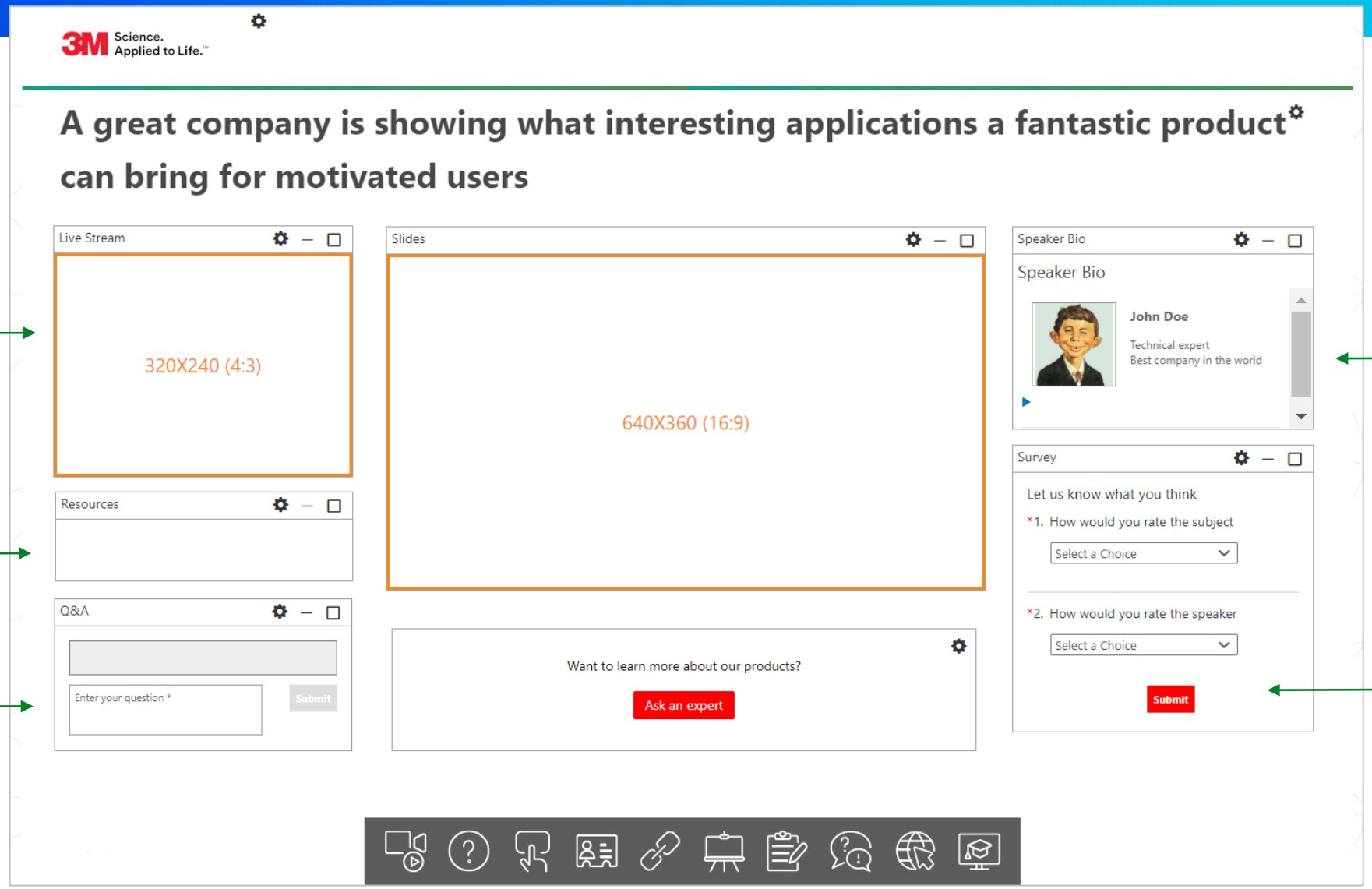
# On24 for a better webinar experience!




Media player

Resources

Have a question? Let us know here!

Meet our speaker!

We want to hear from you survey!

Menu Bar



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3M Science. Applied to Life.™

3M CDI Innovation Webinar Series

# NLU, clinical content and documentation integrity

March 2023

# Housekeeping

- On24 Webinar Platform for a better user experience!
- Use Google Chrome and close out of VPN/multiple tabs
- Check speaker settings and refresh if you are having audio issues
- Ability to move engagement sections
- Ask questions!
- Certificate of Attendance available to download for live webinar sessions
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# Meet our speakers

**Dannie Greenlee MS, BSN, RN**
NLU CDI Content Manager

**Josh Amrhein, MHA**
NLU Program Manager


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# Agenda

- Introduction
- Primary goals
- AI technology in documentation
- Content Governance
- Use Case: Heart Failure
- Summary

# Primary goals

Achieve compliant documentation through AI

Decrease documentation burden on providers

Increase efficiency, accuracy and consistency across workflows

Expand CDI team's encounter coverage

Intelligent prioritization, driven by AI

- Clinical Factors
- Patient and visit-focused factors
- Event-driven factors



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# Game-changing cloud-based AI technology

**Applies semantic reasoning and contextual understanding** to data aggregated from EHRs, etc.

**Continuously** and automatically reviews, **analyzes, monitors and improves** all your documentation, all the time driving consistency and efficiency.

Uses **standard ontologies** as well as **clinical concepts and value sets** from across the medical record.

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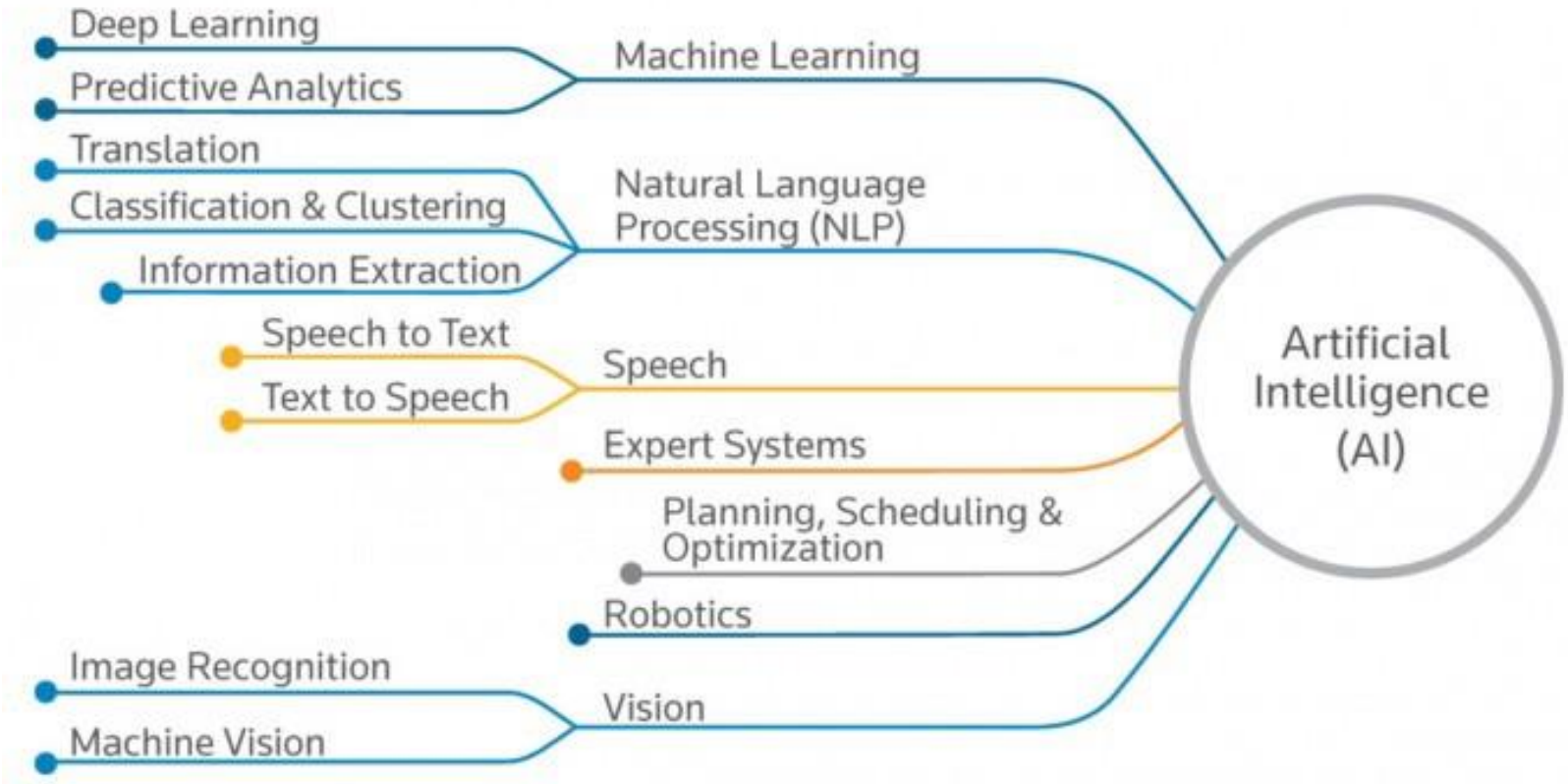
# Artificial Intelligence




Source: Becoming Human: Artificial Intelligence Magazine
*What is Artificial Intelligence (AI)*, Sanket Garbhe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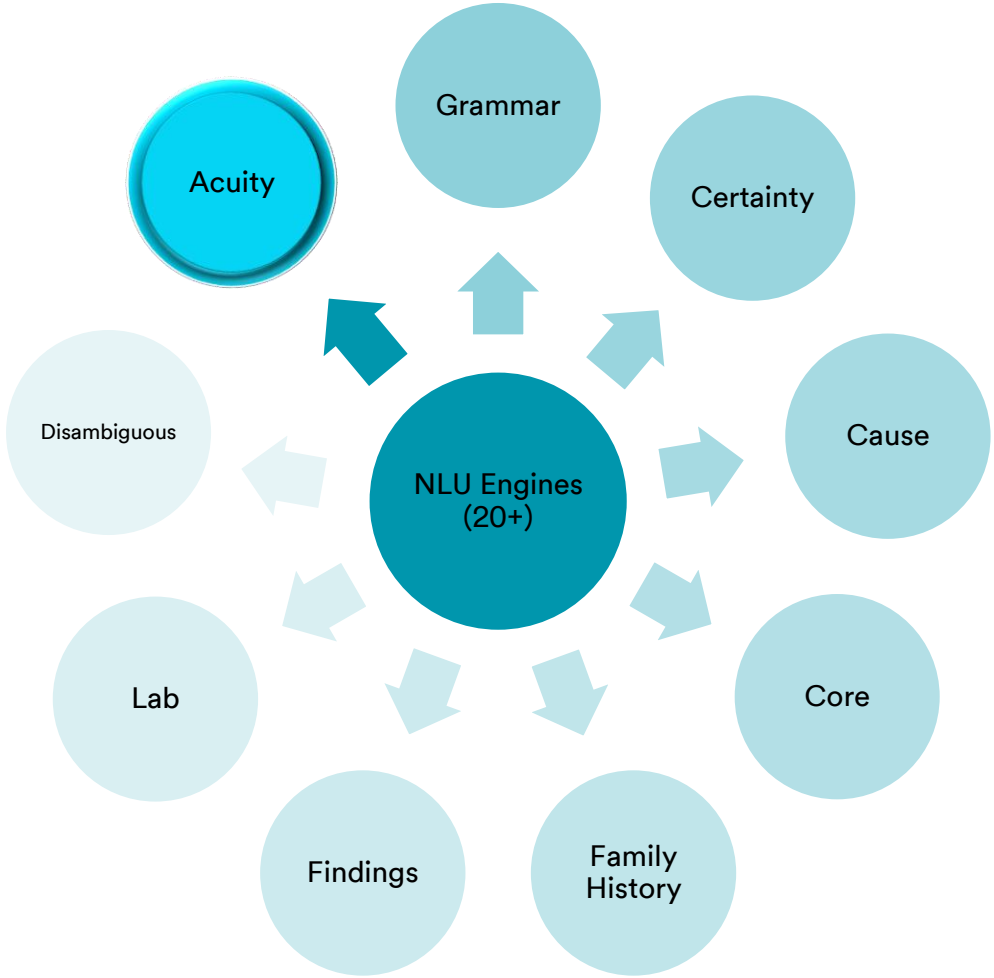
# NLU engines

## Acuity Engine

Grammar based engine that assigns acuity to findings

- Acute onset
- Acute to sub-acute
- Acute on chronic
- Chronic
- Sudden onset





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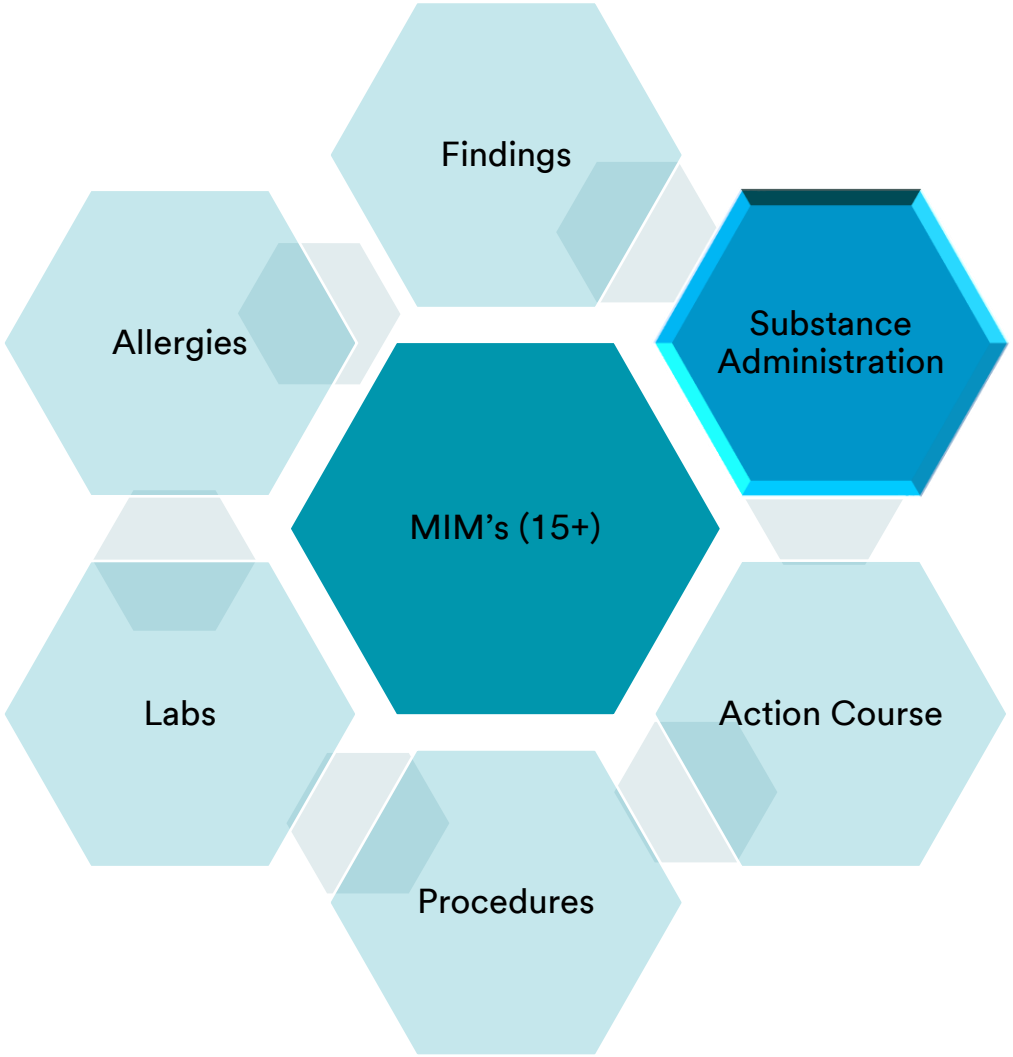
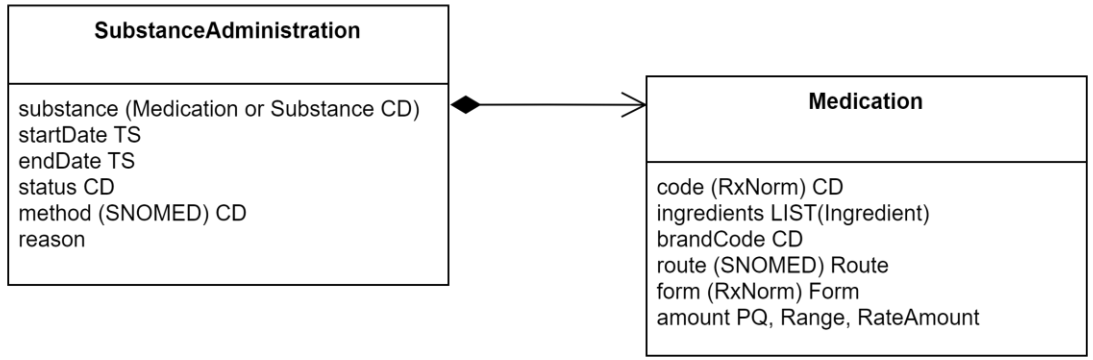
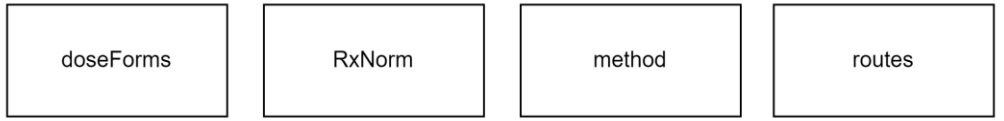
# M*Modal Information Models (MIMs)




## MIM




## Value Sets



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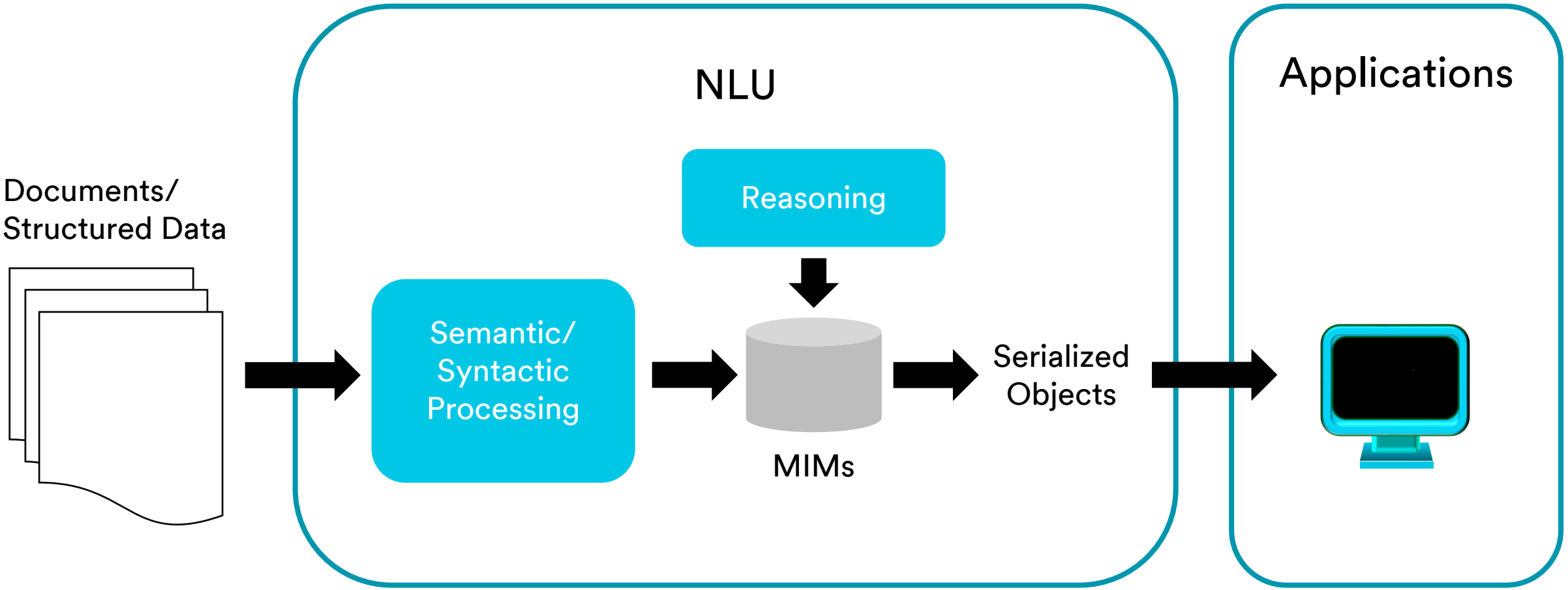
# MIMs in NLU





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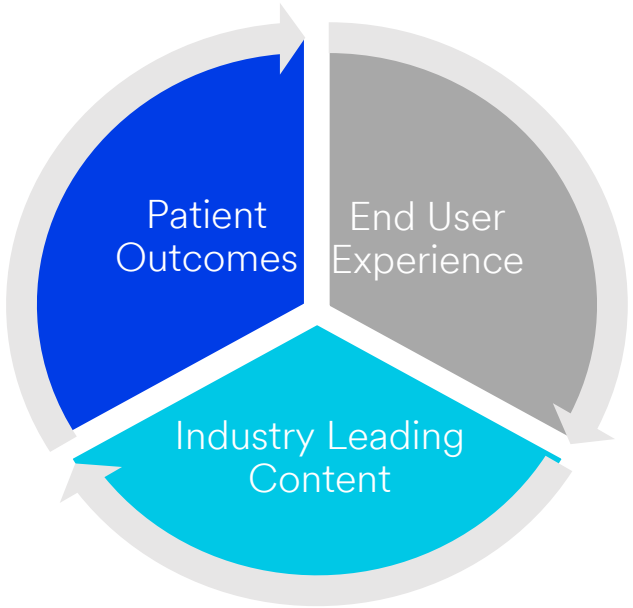
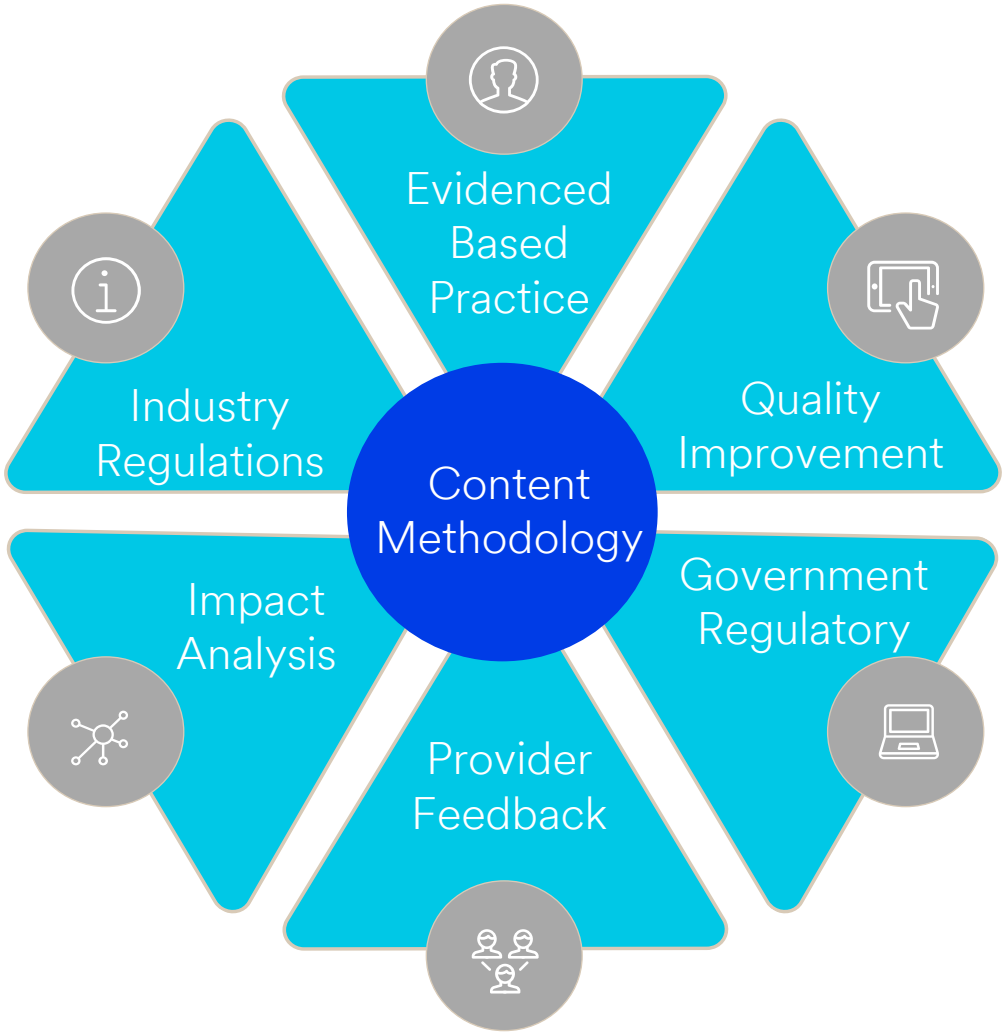
# Content governance




## Detail

- Up To Date
- Data Driven Analytics
- AHIMA & ACDIS Guidance
- CMS, Coding Clinic
- Outcome Feedback Loops
- Define Value Impact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# Customization request process

Adoption specialist assigned for life of project

- Customer meetings with adoption, weekly, bi-weekly, daily as needed
- On site visits as needed
- Works with customer to determine nudges for go-lives and specialties
- Submits customer requests (enhancements, issues, bugs)
- Tests with customer in product

Content coach supports adoption and customer

- Joins weekly calls if content discussions are needed
- Triage's customer requests following content workflow
- Discuss content needs with adoption to best support customer


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# Clinical content team

Medical providers document in CLINICAL terms

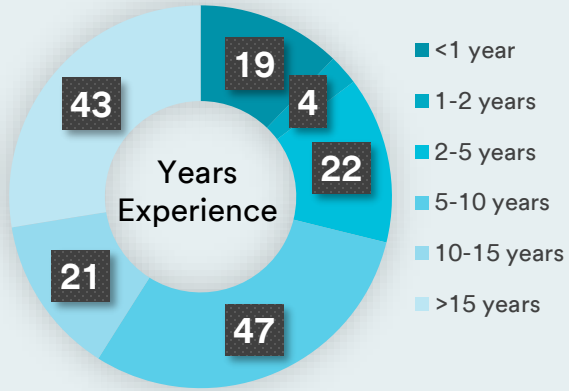
Coding & compliance need specificity in DIAGNOSIS terms

**A CDI program creates a bridge between this gap.**

**Who builds the bridge?**

20+ Variety of Credentials
(MD, PhD, PharmD, MS/MSN, MLS, MSW, RN, BS, CPC, CCS, CCDS, RHIA)

**The Clinical Content Team**



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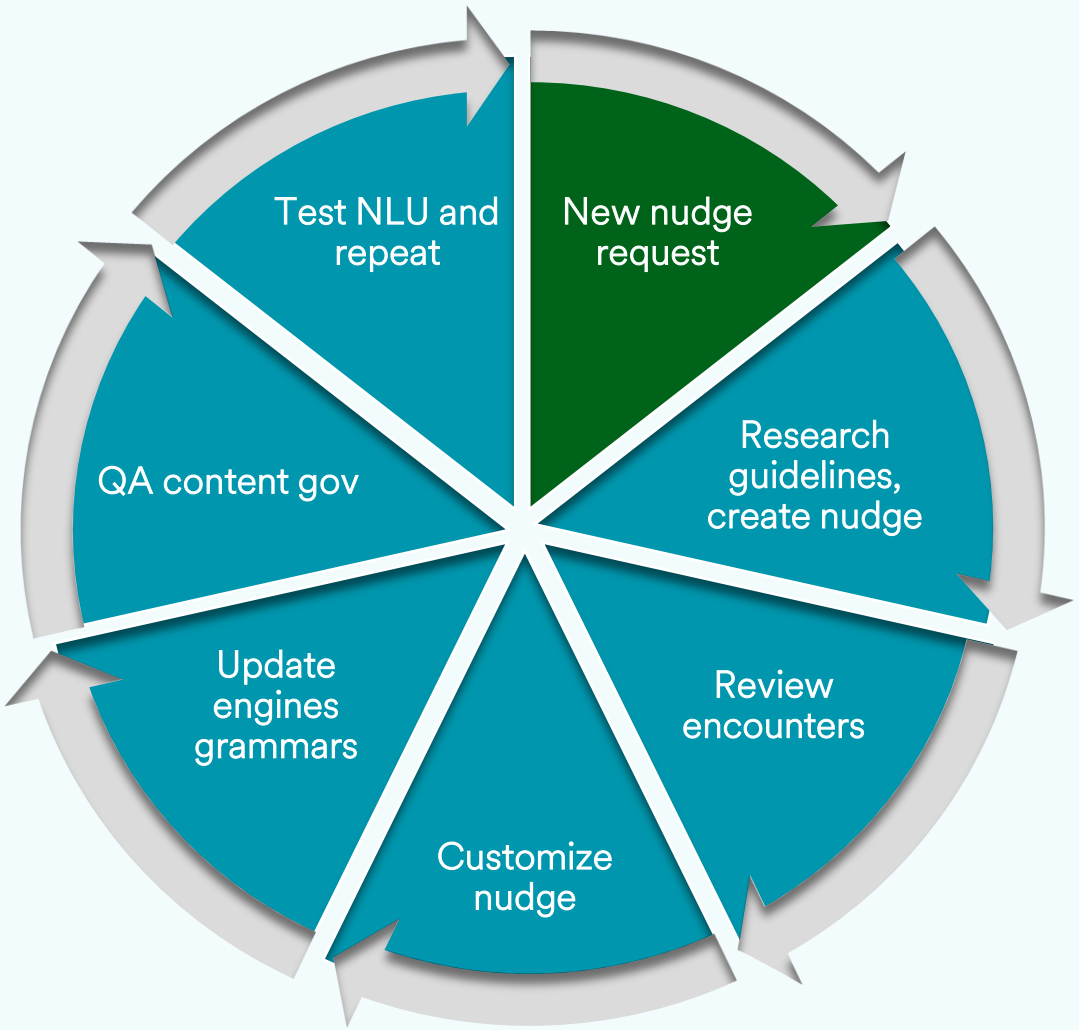
# Content workflow diagram




Q1 2023 3 Releases

Q2 2023 3 Releases

Q3 2023 3 Releases

Q4 2023 6 Releases

Q1 2024 6 Releases

# Quantity Recommendations

**To avoid burnout for providers and CDI specialists, 3M has established the following best practices:**

**Evidence Sheets**

At Go-Live:

10-11 potential conditions from the approved conditions list

30 Days Post Go-Live

Add 3-5 additional conditions

60 Days Post Go-Live

Add 3-5 additional conditions

**Nudges**

At Go-Live:

3-5 specialty-specific groups

10-11 nudges per group

3 Months Post Go-Live

Up to 10 specialty-specific groups

10-12 nudges per group

**For each nudge, the same condition should be enabled for Evidence Sheets. **



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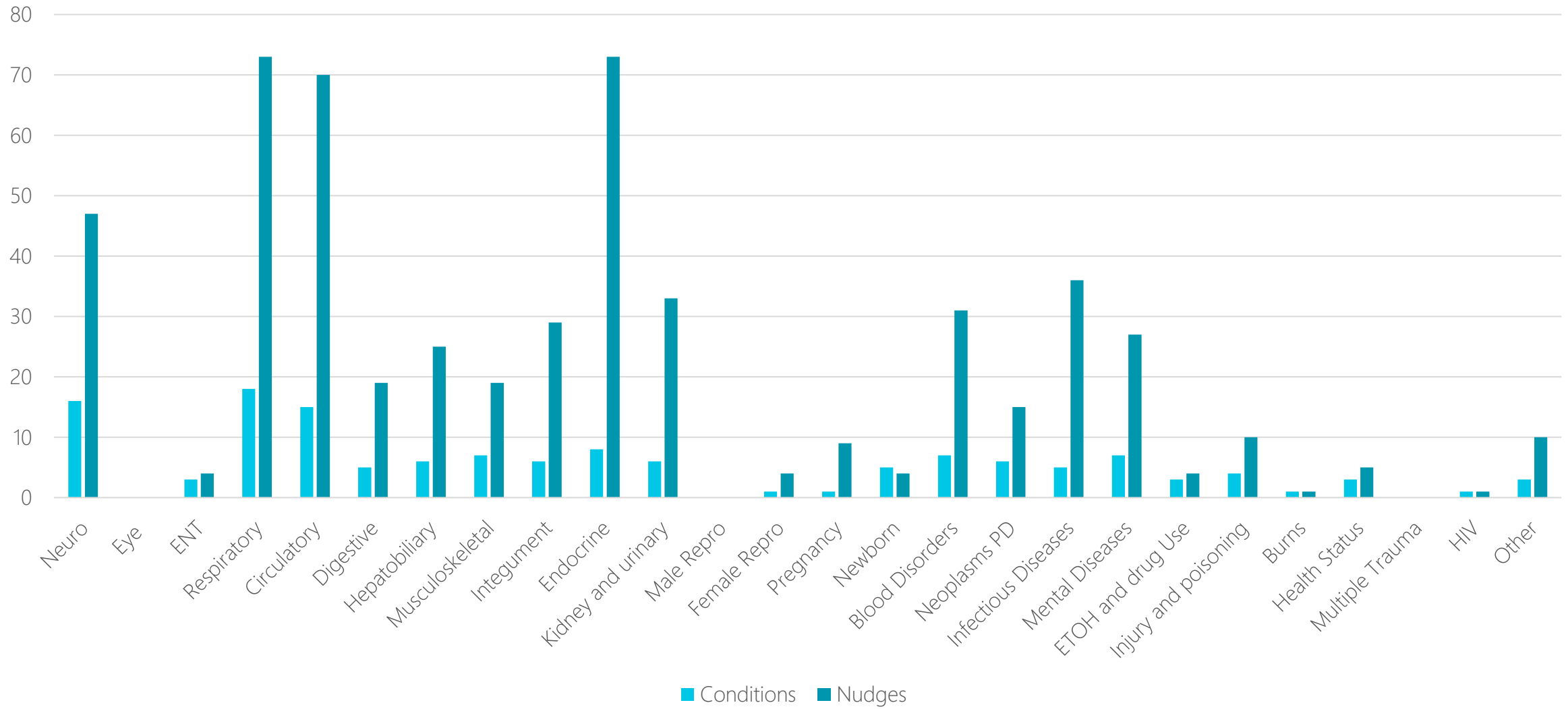
# Areas of coverage



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# Heart failure overview

## MDC 05 Circulatory System

**Condition:** Heart Failure

**Nudge count:** 9

## CDI Guidelines

- Code to specific type and acuity
- Specify stage of HF if possible
    - ACC/AHA classification used as reference
- **3M coding and reimbursement references, coding clinics, ACDIS/AHIMA references

## Clinical Guidelines

- EF variable (<40, <55, custom)
- Criteria examples
    - Neck vein distention, rales, S3 gallop, neck vein distention etc.
- **Up to date, Merck Manual


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# Heart failure nudge

Documentation of heart failure (+/- evidence of heart failure) without documentation of type and acuity of heart failure

## Nudge Details

**Condition:**

- Documentation of HF
- (+/-) evidence of diastolic HF
- (+/-) evidence of acuity

**Requirement:**

- Documentation of systolic/diastolic HF
- Documentation of acute/chronic
- (+/-) grade

## CDI Messages

**Rule Satisfied Message:**

- Acuity and type of heart failure were properly documented

**Unsatisfied Message:**

- There is documentation and evidence of heart failure but type and acuity were not documented

## Provider Message

**Title:** Heart Failure

- Please document the type and acuity of heart failure


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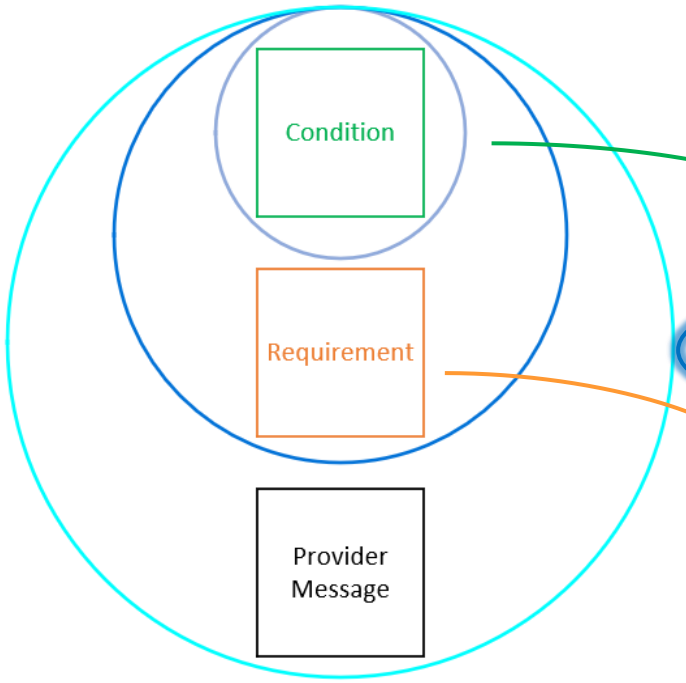


CDI Notification

CDI Opportunity

Provider Nudge

**Rule 10000** — Documentation of heart failure and clinical, lab, medication or echo evidence of heart failure without documentation of the type and acuity of heart failure

### Condition

| | | |
|---|---|---|
| Parameter | NLU | **Temporality** (*include*) – present, past |
| Parameter | Customer | **Temporality** (*exclude*) – past |

- Evidence of ejection fraction less than or equal to 40% — Parameter | Customer | <= 50% | Parameter | Customer | <= 55%
- Evidence of BNP/proBNP greater than 500
- Evidence of acute heart failure medications
- Presence of heart failure

### Requirement

| | | |
|---|---|---|
| Parameter | NLU | **Temporality** (*include*) – present, past |
| Parameter | Customer | **Document Type** (*exclude*) – nutrition and dietetics |

- Documentation of diastolic or systolic heart failure
- Documentation of heart failure grade or NYHA classification
- Documentation of heart failure acuity
- Documentation of right sided heart failure

**Value Sets**

**Concepts**

**Parameters**

### Parameter

| | | |
|---|---|---|
| NLU | • | **Temporality** – past, present, future |
| NLU | • | **Experiencer** – family, patient, other |
| NLU | • | **Certainty** – certain, hedged, hypothetical, maybe, remote, ruled-out, negative, undefined.. |
| NLU | • | **Document Type** – clinical, lab, radiology, medication administration |

| | | | |
|---|---|---|---|
| • | **Evidence** - ejection fraction less than or equal to 40% | Customer | <= 50% |
| • | **Documentation** – acuity of heart failure | Customer | **OR** - right ventricular failure |



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# Encounter reviews

Review Encounters

- Per nudge, per customer and across customers
- Search for grammar, language and NLU patterns/issues
- Disambiguation – acronyms most common issues

| Category | Cause | Comments |
|---|---|---|
| Circulatory | Incorrect evidence | Template issue: O2 triggering instead of flow rate |
| Respiratory | Other | False Positive. Disambiguation: 'pe' 'Immature granulocytes' – (pulmonary edema) |
| Circulatory | Context | Grammar: DVT unlikely – suspected vs ruled out |
| Neuro | Context | Temporality: 'History of the following complications – stroke' – not picking up historical |
| Respiratory | Language | Disambiguation: 'Possible PE' – Pulmonary embolism, vs Pulmonary edema |
| Kidney & Urinary | Language | Disambiguation: 'CKD' client using as CC/KG/Day at ped hospital |


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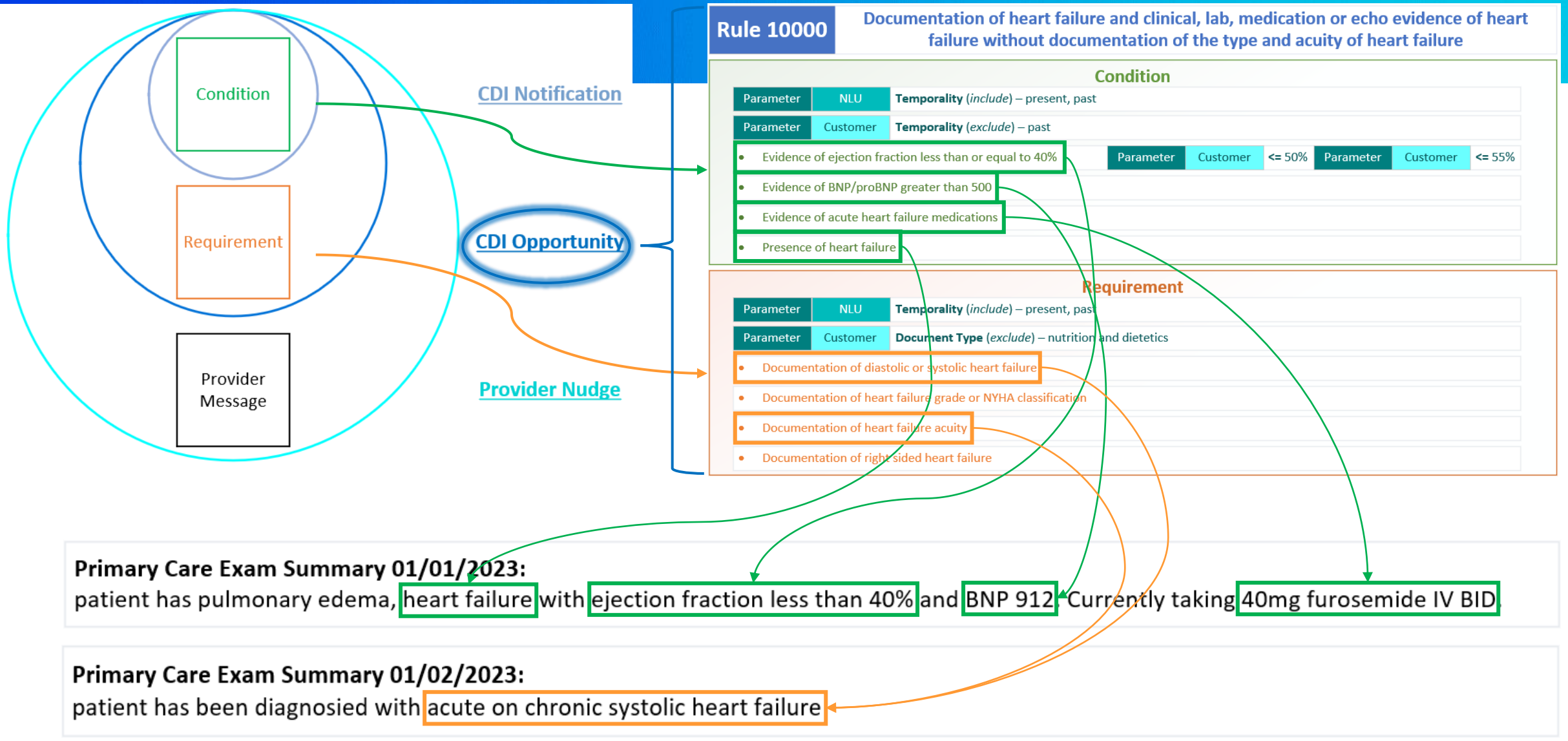



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# Q&A

# That’s a wrap!

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# Thank you