

Intelligent Character Recognition (ICR) Review

Arapahoe County

Overview

Intelligent Character Recognition (ICR) is currently used by Arapahoe County to support automation of paper SNAP Periodic Reports (PRs) and CDHS/HCPF Renewals (RRRs). The goals of ICR are to reduce manual data entry, decrease data entry errors, improve audit outcomes, and streamline high-volume workloads while allowing counties to maintain control over their business processes.

Arapahoe County participates alongside **54 of 64 Colorado counties** using ICR through the CBMS/Hyperscience platform.

How Arapahoe County Uses ICR

Arapahoe County currently uses ICR to:

- Automatically initiate SNAP PRs and CDHS RRRs
- Route cases to appropriate PR and RRR queues
- Extract reported data from paper forms
- Automatically generate case comments
- Identify missing signatures and generate speed letters
- Support clerical review of handwriting exceptions
- Process select “no change” SNAP PRs without worker intervention

ICR is most effective when documents are complete, legible, and report no changes.

Administrative vs. Caseworker Experience

There is a clear difference in how ICR’s benefits are experienced at different operational levels.

From an **administrative perspective**, ICR provides meaningful time savings. Automation reduces the number of steps required to initiate and process work and allows some cases—particularly no-change SNAP PRs—to be completed without any worker involvement. This supports workload management, timeliness, and staffing efficiency.

From a **caseworker's perspective**, the time savings are less visible. Caseworkers are still required to review all data entered by ICR, even when the system completes the data entry accurately. Because full verification remains the worker's responsibility, ICR does not always feel like a time-saving tool at the individual case level.

How Much Work ICR Completes

SNAP Periodic Reports

Statewide SNAP PR outcomes align closely with Arapahoe County's experience:

- Over **70,000 SNAP PR documents processed**
- **99.7% automated data extraction**
- **99.5% accuracy** on handwritten data
- “No change” PRs can be processed through authorization without worker intervention

For Arapahoe County, SNAP PRs with no reported changes represent the highest-value use of ICR and the clearest efficiency gain.

CDHS Renewals (RRRs) – Arapahoe County

November–December Data

Arapahoe County CDHS renewal data from the CBMS ICR Automation Statistics spreadsheet shows that ICR is actively performing renewal initiation work during the **November and December processing period**.

During these months, ICR:

- Identified received CDHS paper renewal documents
- Initiated renewals in CBMS when they had not already been started by a worker
- Correctly recognized renewals already initiated by staff and avoided duplicate automation
- Identified missing signatures and supported follow-up actions when required

While CDHS renewals continue to require worker review and verification, the data confirms that ICR is **consistently performing the initial renewal start step for a substantial**

portion of Arapahoe County CDHS workloads, reducing clerical and administrative effort during peak renewal months.

Medical Assistance (MA) Renewals – Arapahoe County

November–December Data

Arapahoe County-specific MA renewal data further demonstrates ICR's local impact:

- **Approximately 65% of MA paper renewals were automatically started by ICR**
- ICR:
 - Identified received renewal packets
 - Initiated renewals in CBMS when not already started by a worker
 - Detected missing signatures and generated required follow-up actions

Although full MA data extraction is not yet implemented, this confirms that ICR is performing the **majority of renewal initiation work** for Arapahoe County MA cases during high-volume months.

Accuracy of ICR vs. Accuracy of Client-Provided Data

ICR demonstrates **very high technical accuracy** when capturing and updating case data. However, it is important to distinguish between:

- **ICR accuracy** – how accurately the system captures and enters what is written
- **Client data accuracy** – whether the information provided by the client is correct

When a client provides incorrect, outdated, or incomplete information, ICR will still accurately enter that information. Any resulting case errors are **not caused by ICR** and would also occur in a fully manual process.

Error Correction and Revert Functionality

Arapahoe County – December Analysis

To better understand how often ICR-entered data must be removed, Arapahoe County reviewed **December revert button usage**. This data reflects the number of times workers removed ICR updates from a case during verification.

December Revert Data Summary

During December:

- **659 total documents** were processed by ICR
 - **534 CDHS RRRs**
 - **125 SNAP PRs**
- The revert button was used **83 times**
 - **65 times on CDHS RRRs**
 - **18 times on SNAP PRs**
- These actions affected **58 distinct documents**
 - **49 CDHS RRR documents**
 - **9 SNAP PR documents**

Revert Usage Rates

When compared to total ICR volume:

- **CDHS RRRs:** Revert used on approximately **12%** of documents
- **SNAP PRs:** Revert used on approximately **14%** of documents
- **Overall:** Revert used on approximately **13%** of ICR-processed documents

Analysis of Revert Data

This data highlights several key findings:

1. **Most ICR updates do not need to be undone**
Approximately **87% of ICR-processed documents in December** did not require the revert function, indicating that ICR updates are generally appropriate.
2. **Revert usage reflects verification, not system failure**
Reverts typically occur due to:

- Incorrect or outdated client-reported information
- Clarification required during eligibility review
- Worker judgment during case verification

3. Revert functionality reduces risk and correction time

The revert button allows workers to quickly remove ICR-entered data, preventing downstream errors and reducing manual correction effort.

4. SNAP PRs continue to show strong performance

Even with occasional reverts, SNAP PRs—particularly no-change cases—remain the most efficient and effective use of ICR.

What Percentage of ICR Documents Require Fixes

Based on statewide metrics and Arapahoe County data:

- **SNAP PRs (No Change):** Minimal or no fixes required
- **RRRs (All Programs):** Approximately **40%** require some level of manual review or correction
- **Only ~13%** of December ICR documents required the removal of ICR-entered data

Most fixes are **process-driven rather than system errors.**

Benefits Observed

- Reduced manual data entry
- Administrative-level time savings
- Improved timeliness and consistency
- Automated case comments
- High data accuracy and audit confidence
- Worker control through revert functionality
- Responsive BRC and vendor support

Challenges and Limitations

- Caseworkers must still fully review ICR-entered data
- Handwriting exception review can be slow
- MA automation remains limited to renewal initiation
- Efficiency gains vary by program and document type

Conclusion and Recommendation

ICR should continue to be used by Arapahoe County.

December revert data confirms that **ICR updates rarely need to be removed**, and when they do, corrections can be made quickly and safely. Combined with strong SNAP PR automation and renewal initiation for both CDHS and MA programs, ICR delivers measurable administrative efficiencies while preserving worker control and case accuracy.

ICR should continue to be viewed as a **workload reduction and consistency tool**, not a replacement for staff review. Continued use, paired with targeted enhancements, supports long-term operational efficiency and audit confidence for Arapahoe County.