What is MIIC?
The Minnesota Immunization Information Connection (MIIC), is the statewide immunization registry of Minnesota. MIIC began operations in 2002.

How Are MIIC Services Provided in Minnesota?
MIIC is divided into 11 different regions throughout the state. Each region has a MIIC Regional Coordinator that is responsible for providing direct services to partners within their region.
A workgroup of the MIIC Regional Coordinators collaborated to develop a new, more user friendly Patient Follow-Up feature that would replace an outdated reminder/recall feature in MIIC.

**Goal of Patient Follow-Up Feature**
Move an Immunization Information System (IIS) from a passive data repository to an active tool that supports immunization strategies and assists with achieving high immunization rates in the community.

**Benefits of Active Use of an IIS With an Effective Reminder/Recall System**
- Improves denominator for up-to-date (UTD) rates (identifies if patients are still in the community)
- Identifies gaps in reporting
- Identifies data quality issues
- Encourages IIS documentation of immunization refusals (can assist with identifying changing trends in immunization receptiveness)
- Allows for rapid response, at the community level, to disease threats
- Promotes more timely reporting (provider has a reason to report the data when the tools in the IIS directly support clinical practice)
Selecting an Age Range of Patients for Follow-up

Since reminder/recall is a periodic task (i.e., monthly/quarterly) the old feature was problematic because users did not remember how to run a request or how to complete it so the output was unusable. The new Patient Follow-Up is easy to use and navigate. The outputs are more functional and usable than those in the old feature.

- Difficult to understand
- Need to calculate date ranges based on age wanted, which can be confusing
- Birth Date vs. Target Date - users confused between both and would get incorrect reports if entered wrong

- Uses age range instead of date range
- Ability to set age range in months or years
- As of Date allows for easy replication of reports
Selecting Vaccine Groups for Patient Follow-up

- Need to select individual vaccines from pick list and add to vaccine list
- Easy to select/deselect vaccines wanted for report
- Primary series is pre-selected

Select the Vaccine Group(s)...

- Use All Vaccine Groups
- Use Vaccine Groups Selected

Vaccines:
- DTaP
- HepB
- Hib
- IPV
- MMR
- Meningococcal
- Pneumococcal
- Polio
- Rotavirus
- Varicella

Add ▲  ▼  □  □
Remove □
Reviewing What Vaccines are Needed

The new Patient Follow-Up Immunization Report is formatted to make it easy for the user to quickly identify patients needing vaccines.

- Difficult to determine what is needed
- Staff need to think through each patient and vaccines needed.
- Quick and easy view of what is needed (displays NEEDS by all vaccines due/overdue)
- Age at a glance allows user to easily determine vaccines needed based on clinic schedule
- Chart number and phone number will be displayed if submitted by provider
- Reminder Sent and Remove Patient are working tools for user
The former Reminder/Recall tool did not allow for management of patient lists. New features were developed in Patient Follow-Up to meet user needs by allowing easy access to their data and the ability to easily manage their cohort.

- By clicking on the column header the information can be sorted chronologically or alphabetically.
- Allows user to easily see when last vaccine was given and where vaccine was received (possibly moved or gone elsewhere).
- Yellow highlight quickly displays records with incomplete or undeliverable address information.
- Clicking on patient “Last Name” takes you directly to the immunization record.
- Checkboxes allow for mass removal of patients.
- No Reminder - removes patient from R/R list but association remains with organization.
- Not our Patient - removes patient from R/R list and removes association with organization (removed from patient denominator).
Additional Patient Follow-Up Information

**Patient Follow-Up Features**

- **Variety of reports**
  - Provider Reports - this report produces a cohort that have an association with the organization
  - List Based Reports - this report is developed from a specified cohort (based on roster/list in IIS)

- **Types of reports**
  - Overdue Reports - all clients with overdue vaccines
  - Recommended Reports - all clients with vaccines that are currently recommended
  - Overdue/Recommended Reports - all clients with vaccines that are overdue or recommended
  - All Reports - all clients associated with an organization, regardless of their immunization status

- **Variety of outputs**
  - Client Contact Report - this report includes name, date of birth, last shot date, last provider, city, and state information (working tool for user to manage their patient database)
  - Immunization Report - this report includes name, contact information, age, and immunization history (including if NEED vaccine and listing of Invalid doses) of each patient in cohort
  - Mailing Labels - produce standard mailing labels for cohort
  - XML Extract – allows the user to download client and immunization data from MIIC (i.e., used for building customized reports not otherwise available in MIIC or extracting data for updating other record systems)
  - Mail Merge - produce document used for Mail Merge
Additional Patient Follow-Up Information

Future Enhancement/“Wish List”
- Expansion of age cohorts and vaccine groups available
- Implement a modified schedule for recall in an outbreak situation
- Ability to select number of doses based on vaccine (i.e., list all kids with primary PCV7 series but no record of a PCV13 dose or list all kids with one dose of HepA but no second dose)
- Include additional outputs/reports
  - Letter/Postcard Output – this output would allow the user to develop their own letter/postcard format
  - List of patients based on comments entered into IIS (i.e., refusal, medical exemption lists)
  - List of patients with bad addresses in IIS
  - List of potential duplicate records in IIS
A workgroup of MIIC Regional Coordinators collaborated to develop the new, more user friendly Patient Follow-Up feature for the Minnesota statewide immunization registry presented in this poster presentation. Please feel free to contact us with questions and comments.

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