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**TO:** Local Health Department Immunization Staff  
**FROM:** Beth Rowe-West, R.N., B.S.N., Immunization Branch Head  
**SUBJECT:** Immunization Assessment Process Using the North Carolina Immunization Registry (NCIR)  
**DATE:** March 15, 2010

The purpose of this memo is to outline the 2010 annual immunization assessment process and to provide information necessary for tracking this year’s cohort. This year’s assessment in the Local Health Departments (LHD) will examine the immunization records of children who are active in your LHD as well as those who reside in your county and were born between 10/02/2007 and 10/01/2008. The assessment will evaluate the percentage of children who are up-to-date (UTD) with the complete 4:3:1:2:3:1 series (4DTaP, 3IPV, 1MMR, 2Hib, 3HepB, and 1VAR).

**This year’s annual assessment is very similar to last year’s assessment. The only change is that the birth date range for the clients to be assessed is from 10/02/2007 to 10/01/2008, and the date for the data extract will be on Saturday, October 2, 2010.**

On **October 2, 2010**, all data that has been entered into the NCIR will be used to determine the number of children who have received the required vaccines. In order for the results of the assessment to provide an accurate measure of all children’s protection against vaccine-preventable diseases, it is extremely important that each child has a **complete** immunization history **documented** in the NCIR.

As was described in your 2010-2011 LHD agreement addenda, you will be provided with an overall county assessment rate as well as an organization (LHD) assessment rate. All children with dates of birth between 10/02/2007 and 10/01/2008 who have your county recorded as their county of residence will be included in your overall county assessment rate. To determine your organization rate, all children with dates of birth between 10/02/2007 and 10/01/2008 who have an “active” status recorded within your organization will be assessed.

Children may be made “inactive” for your LHD using the client status field under the “Client Information” tab if they fall into one of the following three categories: Moved or Going Elsewhere, Unable to Locate, or Deceased. Please see the included document entitled “Exclusion (Inactive Clients) Criteria Requirements using the NCIR” for information about which children to exclude (by making them “inactive”). Also when excluding a child please consider the following:

- Be sure that the exclusion criteria requirements explanation is the standard used by all staff in your agency, as staff from different programs (including WIC, CSC, etc.) may use this field.
- Please note that if a client's immunization history is updated by your staff after the client has been coded as inactive, the client's status will automatically become active again for your LHD.

The Immunization Branch will utilize the Centers for Disease Control and Prevention's (CDC) Comprehensive Clinic Assessment Software Application (CoCASA) to calculate each LHD and each county annual age-appropriate immunization rate. CoCASA software also has several valuable reports which are helpful for identifying children who are not up-to-date. You can obtain CoCASA software from the CDC's website which is <http://www.cdc.gov/vaccines/programs/cocasa/default.htm>. A data extract obtained from the NCIR can be used within CoCASA to view the immunization histories of children who are included in this year's annual assessment cohort.

The Vaccine Administered Log (VAL) is another resource that can still be used to assist LHDs with their tracking efforts. The information recorded on these forms should only be used to update existing client records within the NCIR. **You should not be creating "new" clients using the information from the VALs. If you cannot positively identify the client using the name and date of birth on the VAL, you should contact the provider for additional information.** When using VALs to update the NCIR, it is very important to obtain the child's complete immunization history. Entering only 2<sup>nd</sup>, 3<sup>rd</sup>, or 4<sup>th</sup> doses in a series of shots does not create a complete record, and therefore will not increase your assessment rates. Until all providers in your county have access to the NCIR, we will continue to send you copies of VALs. By helping private providers learn to use the NCIR to track their active clients who reside in your county, your overall county rate will steadily increase.

Accompanying this memo is information about the annual assessment process, the requirements for each of the exclusion (inactive) categories, information about age specific immunization assessment options using the NCIR, and some tips for systematic tracking using the request reminder report which can help improve your assessment rates.

If you have any questions, please contact your Regional Immunization Nurse. As always, the Immunization Branch appreciates your commitment to assuring the health of North Carolina's children.

Enclosures (6)

CC: Immunization Central Office Staff  
Regional Immunization Nurses  
SMT  
Dennis Harrington  
Joy Reed



## Information for the 2010 Annual Age-Appropriate Immunization Compliance Rate Assessment

The 2010 Annual Age-Appropriate Immunization Compliance Rate Assessment for LHDs will be calculated using data obtained from the North Carolina Immunization Registry (NCIR). In order to enhance the accuracy of the assessment, we are continuing to provide the opportunity to identify children who should be excluded from the assessment as well as those who require additional tracking and follow-up.

The following information is intended to help in completing this task. Please make sure that all appropriate staff have an opportunity to review this information.

### **Assessment Date:**

The final review date for each county's immunization assessment will be **Saturday, October 2, 2010**. On that date, the Immunization Branch will obtain data from the NCIR which will be used for determining the number and percentage of children up-to-date for the following required vaccines: **4 DTaP; 3 Polio; 1 MMR; 2 Hib; 3 HepB; and 1 Varicella**. Any clients and any immunizations added prior to this date will be included in the assessment. Clients and immunizations added after this date will **not** be included in the assessment.

### **Children to be assessed:**

Any child that has client information in the NCIR and whose date of birth is between 10/02/2007 and 10/01/2008 will be included in the 2010 Annual Age-Appropriate Immunization Compliance Rate Assessment. Local Health Departments now have the capability to generate their own client specific reports to use in tracking this year's cohort.

**The Request Reminder Report within the NCIR should be used to obtain a listing of clients who are recommended or overdue for immunizations.**

Each LHD will be evaluated on the immunization status of all children in their respective organization and county (as documented in the NCIR). Therefore, it is important to ensure that each child has a **complete** immunization history accurately documented in the NCIR. This includes immunizations administered by other providers. Documentation of complete historical immunization data will result in a higher immunization rate for your organization, as well as for your county.

### **Reports:**

After the assessment process has been completed, your Regional Immunization Nurse will provide a report that will indicate the number of two year old children in the NCIR listed as residing in your county, as well as those identified as "active" within your organization and the percentages of those children who are up-to-date. The Regional Immunization Nurse will provide this information no later than February 28, 2011.

## Exclusion (Inactive Clients) Criteria Requirements Using the NCIR

For the 2010 Annual Immunization Compliance Rate Assessment, clients may be excluded from your local health department (LHD) assessment cohort by having their client status set to 'inactive' or 'permanently inactive-deceased'.

Using the client status field in the NCIR on the "Client Information" screen, you may set the client's status to "inactive" for your organization if he/she fits into one of the following categories:

**Deceased:** (set NCIR status to "permanently inactive-deceased") any client the LHD has confirmed as deceased. This must be documented in the client's medical record.

**Moved or Going Elsewhere:** (set NCIR status to "inactive") any client the LHD has confirmed as receiving immunization services elsewhere. This must be documented in the client's medical record. The documentation must include the estimated date of transfer of service **and** the new service provider (as specific as possible).

**Unable to locate:** (set NCIR status to "inactive") the expectation is that LHDs will make reasonable efforts to locate a client who may be in need of immunizations. However, tracking resources should be allocated in an efficient manner. Therefore a LHD may identify a client as "unable to locate" if **all** three of the following conditions are met.

1. The client has not received any service from the LHD in the last 6 months.  
**AND**
2. All available telephone numbers, if any (primary and emergency) are no longer valid for the client (either the phone is disconnected, or the family no longer resides at that number).  
**AND**
3. A postcard or letter has been returned and no other address is known; **or** a certified letter is returned; **or** a home visit validates that the client does not live at the assumed address; **or** there is no address entered for the client, in which case the LHD has no adequate means of contacting the client.

This must be documented in the client's medical record. The documentation must include:  
the date the phone number was verified as no longer valid,  
and the date the address was validated as being no longer valid (as specific as possible).

Please note: Within the NCIR, you should change a client's County of residence and address information if you have obtained updated information. Otherwise **do not change** clients' address information or county of residence.

Clients whose status is "inactive" on the date of the assessment will not be included in calculating the LHD assessment rate.

All clients with the corresponding county of residence (regardless of their client status within your organization) will be included in calculating the county assessment rate.

## Age specific Immunization Assessment Options Using the NCIR

The Immunization Branch uses the Request CASA Extract function within the NCIR in conjunction with the CDC's CoCASA software to calculate immunization rates. Assessment of immunization rates is required by the federal government which provides funding for North Carolina's Universal Childhood Vaccine Distribution Program (UCVDP). Immunization rates can be further classified as being either immunization "coverage" rates or immunization "compliance" rates.

- An Immunization "Coverage" rate refers to the percentage of a specific defined population that has protection (either by vaccination or natural immunity) against vaccine preventable diseases.
- An Immunization "Compliance" rate refers to the percentage of a defined population that has documented protection against vaccine preventable diseases.

If all applicable information is documented for the specified population, then the immunization coverage rate and the immunization compliance rate are equivalent. If all information is not documented then it is impossible to obtain a true immunization coverage rate, and therefore impossible to determine who is at risk for becoming ill from a vaccine preventable disease.

Immunization rates for specified age groups of children can be obtained from the NCIR. Authorized personnel within each organization have the ability to generate reports that display immunization rates.

*Local Health Department (LHD)* personnel can generate immunization rates:

- 1). for clients who are "active" within their specific organization,
- 2). for clients who reside within their specific county (as indicated by county of residence),
- 3). or for a combination of their organization's active clients and clients who reside within the county.

*Private Provider* personnel can only generate rates:

- 1). for their specific organization.

Within the NCIR, the "assessment report" enables users to quickly view the overall immunization status of specific age groups of clients.

In order to increase immunization rates, you should use the NCIR **Request Reminder Report** to identify clients with missing immunizations so that their records can be updated.

For help understanding immunization rates, please contact your Regional Immunization Nurse, or your Regional Immunization Consultant: <http://www.immunizenc.org> for contact information.



## The NCIR Assessment Summary Report

The NCIR Assessment Summary Report, which is located under the reports menu and named “assessment report”, will enable you to view a summary of the immunization status of a particular group of clients, including clients who will be included in this year’s assessment cohort.

For detailed information on this report see section 10 of the NCIR user manual, starting on page 10.18. To view the immunization status of this year’s annual assessment cohort, select the assessment month (10) and year (2010) for the “Evaluation date”.

Each time you generate the report use **10** as the month and **2010** as the year.

The first page of the report contains a table that shows the immunization status of clients in 4 different age groups. The 24-35 month age group corresponds with this year’s assessment cohort and the up-to-date status will reveal your clients’ up-to-date status. *Please note: At this time, this section of the report does not include Varicella in the assessment; however it can still be used as a quick overall estimate of your clients’ immunization status.*

If you have questions about this report, please contact your Regional Immunization Nurse or your Regional Immunization Consultant; see <http://www.immunizenc.org> for contact information.



Immunization Status		
Age(months)	Up-to-Date <sup>1-4</sup> (UTD)	Late <sup>1-4</sup> UTD@Assessment
<b>36 - 72 Months of Age</b>		
72	20.7%	20.7%
24	74.5%	93.0%
12	86.2%	93.0%
7	73.1%	93.0%
<b>24 - 35 Months of Age</b>		
24	68.3%	72.9%
12	81.4%	87.1%
7	69.6%	87.1%
<b>12 - 23 Months of Age</b>		
12	57.3%	60.6%
7	45.5%	60.6%
<b>&lt; 12 Months of Age</b>		
7	36.8%	40.3%

- 1) UTD by 7 months equals 3 DtaP, 2 HepB, 2 Hib, 2 Polio
- 2) UTD by 12 months equals 3 DTaP, 2 HepB, 2 Hib, 2 Polio
- 3) UTD by 24 months equals 4 DTaP, 3 HepB, 3 Hib, 1 MMR, 3 Polio
- 4) UTD by 72 months equals 5 DtaP, 3 HepB, 4 Hib, 2 MMR, 4 Polio

Late UTD equals the same benchmark for the age group, but it is assessed on the date the report was run.

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# The Request Reminder Report

NCIR Authorized personnel within each organization also have the ability to generate a reminder/recall request. This is the most useful report for tracking children who are recommended or overdue for an immunization(s). The report also has the ability to generate letters and mailing labels for those clients. (Please see section 10 of the NCIR user manual, starting on page 10.4 for further info.)

**Please NOTE:** any child who does not have a "responsible person" documented in the client information screen will be considered "omitted" from reminder/recall. If you generate the report and see "[omitted clients](#)" as a link, those clients need additional responsible person address information in order for a reminder letter and label to be created. Please update this information.

To generate a request reminder for this year's annual assessment cohort:

1. Select the vaccine groups; DTaP; HepB; Hib; Polio; MMR; and Varicella.
2. Enter the date criteria using the birth date range from 10/02/2007 to 10/01/2008;

*Note: To also include clients who will be coming due and thus eligible for immunizations before the assessment date, enter 10/02/2010 in the Target date range To: option.*

The report output can be narrowed (by changing the birth date range) to focus on a more specific age group. Narrowing the birth date range may make the 'client query listing' more manageable for tracking. (Due to the national Hib shortage, you may want generate a report without Hib in order to concentrate on those client who are missing vaccines other than Hib. Then generate another report using only Hib to see if any of those clients are eligible to receive Hib).

In addition to generating a list of clients, individual letters, and mailing labels, the "Reminder Request Process Summary" that is displayed can also be used to determine how many clients are active within a specific organization and how many of those clients are in need of immunizations; see Steps 3-5 below.

The screenshot displays the NCIR web interface. At the top, it shows the user is logged in as 'Beth Quinn' with the role of 'NCIR System Manager'. The main content area is titled 'Reminder Request Process Summary' and contains a table with the following data:

Step	Criteria Evaluated at this Step	Clients
1	Clients that are active or inactive for TEST ORGANIZATION	238
2	Clients that are active for TEST ORGANIZATION	132
3	Clients from Step 2 that are born between 10/02/2006 and 10/01/2007.	17
4	Clients from Step 3 that meet the following criteria: <ul style="list-style-type: none"><li>• County is not specified;</li><li>• School is not specified;</li><li>• Provider is not specified;</li><li>• Weeks Since Last Notice is not specified.</li></ul>	16
5	Clients from Step 4 that meet the following criteria regarding vaccination status: <ul style="list-style-type: none"><li>• Clients that are Recommended or Overdue for one or more vaccinations as of 03/02/2009;</li><li>• Use the following vaccine groups: DTP/aP, HepB, Hib, MMR, Polio and Varicella;</li><li>• Use tracking schedule associated with each client;</li><li>• Exclude Overdue Reminders is not specified</li></ul>	16
6	Clients from Step 5 that meet the following criteria: <ul style="list-style-type: none"><li>• Have one or more responsible persons;</li><li>• At least one responsible person receives notices;</li><li>• City is not specified;</li><li>• Zip Code is not specified.</li></ul>	8
<b>Total Number of Clients Eligible for Reminder</b>		<b>8</b>
7	Clients from Step 5 that are omitted from Step 6: <a href="#">Omitted Clients</a>	(8)

Below the table is a section for 'Reminder Request Output Options'.

Tips for a systematic tracking process to identify Clients  
who are recommended, overdue, or coming due  
For the 2010 Annual Immunization Assessment

For successful, efficient tracking using the request reminder report option within the North Carolina Immunization Registry (NCIR), local health departments (LHD) should generate reports that can be used for both **recall** letters and **reminder** letters.

A **recall** letter is used to notify clients that are currently recommended or overdue for an immunization(s).

A **reminder** letter is used to remind clients that will be coming due for an immunization(s).

When generating the request reminder report, you should first identify all clients (within the desired cohort) for **recall**; i.e., those who are already recommended or overdue for one or more immunizations. The only required field for this report is the **Birth Date Range**.

In order to narrow the focus of recall, you can select a specific vaccine group(s), such as Hib, or HepB, if you are only interested in clients that are missing a particular vaccine(s). **To meet North Carolina's immunization requirements, two year old clients should be up-to-date (i.e., not recommended or overdue) for the following vaccines: DTaP, HepB, Hib, Polio, MMR, and Varicella.** *Note that clients who show on the resulting client query listing may be missing other vaccines in addition to the selected vaccine(s), but will at least be missing the vaccine(s) that you selected.*

If you generate the request reminder report and no clients (zero) are recommended or overdue (for **recall**), you should then generate a report for **reminder** letters. To do this, in the **Target Date Range –To:** field, put a "target date" in the future, for example one month from the current date. (E.g., if today's date is 03/09/10, put a target date of 04/09/10). If any clients are coming due, which means they will be recommended for an immunization(s) during that time period, they will show on the client query listing and the corresponding letter(s).

If your LHD is a very large organization (for instance, has over 50 active clients needing recall), it may be beneficial for you to narrow the cohort birth date range and only run the recall report for the oldest clients first. This should help you get caught up with recall so that you can then concentrate on reminders.

**To begin the systematic process**, first generate the request reminder report using the birth date range for the oldest clients from this year's assessment cohort; those born 10/02/2007 to 03/01/2008. Send letters or make phone calls to try to contact all the clients who are currently recommended or overdue.

Then the next time you generate the request reminder report, you can use the "**weeks since last notice**" field to prevent letters from being generated for clients who you recently sent a letter (you must enter the number of weeks). The resulting report will only show clients who recently became recommended or became active since the last time you generated the report.

If no clients (zero) are now recommended, then you can generate the report for the same age range of clients (born 10/02/2007 to 03/01/2008) and also use the **Target Date Range –To:** and enter **10/02/2010** as the Target date to determine if any clients need reminders and are eligible for immunization(s) prior to the annual assessment date.

If no clients are due for reminders, then you proceed to the next age group within the cohort; e.g., clients with a birth date range between 03/02/2008 to 06/01/2008. Generate the request reminder report for **recall** for this age group.

In summary, first generate the **recall** listing of clients. If no clients are eligible for recall, then use the **Target Date Range – To** option and generate a **reminder** for clients who will be coming due during the upcoming months.

Continue the systematic process at least monthly until all clients are up-to-date!

If you have questions about this process, please contact your Regional Immunization Nurse or **your Regional Immunization Consultant**; see <http://www.immunizenc.org> for contact information.