AUCD

LEND Program Quality Improvement (LPQI) Network: Tutorial for Program Directors and Administrators

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AUCD

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1. Introduction

Goal: The goal of the LEND Program Quality Improvement (LPQI) Network is to help individual programs improve the quality of LEND training in core competencies (e.g. family-centered care, interprofessional teaming) by: (1) using standardized measurement tools, (2) developing a voluntary inter-institutional database, (3) providing feedback to programs to use for quality improvement, and (4) identifying programs that demonstrate changes consistent with "best practices."

Need: Most LEND programs currently use a variety of internal data to judge the effectiveness of specific training efforts. Measurement of trainee progress in core LEND competencies such as interprofessional teaming or leadership skills varies among the LEND programs, however, and there is no simple way to judge short-term program effectiveness except through documentation of trainee improvement within a LEND program. Although each program can demonstrate gains in trainee outcomes, it may be that some training methods are more effective than others. The current NIRS system appropriately tracks broad long-term outcomes for LEND trainees, but does not provide data to judge the effectiveness of specific training practices. The proposed LPQI Network would allow participating LEND programs to judge the effectiveness of components of their curriculum by comparison to national averages.

History: The LPQI Network began in 2013 when some LEND directors began to wonder how we could harness the power of the AUCD network to improve the quality of our training programs. At LEND director meetings in 2014, a majority of LEND programs participated in discussions of what tools to use and how to implement a national database, as well as the rule for transparency and data-sharing. In 2015 and 2016, four LEND programs implemented pilot studies using an established trainee self-report measure (CCM) and a newly developed faculty observation measure (I-FOR). The first pilot suggested that both instruments were generally acceptable to trainees and faculty. The second pilot was a year-long formal research study of the two measures, focusing on feasibility and the metrics of each instrument. An analysis of 80 trainee/faculty data points is currently underway.

All stages of the project were shared for input from the LPQI Advisory Group, which consists of more than 20 LEND leaders. In addition, LPQI pilot leaders shared updates at every LEND directors meeting and with MCHB leaders starting in 2014. The online Application was designed by AUCD staff with input and testing by LEND training directors and administrators. The entire system is linked to NIRS and is being piloted in a user-friendly format starting in 2016-17, with the goal of network-wide participation by all interested LEND programs in 2017-18.

Key Elements

A. Participating LEND programs will use two common tools, one trainee self-report (CCM) and the second a faculty observation tool (I-FOR) to enter baseline and follow-up data on long-term trainees into a database maintained by AUCD and linked to NIRS (the "LPQI Application"). The first pilot year (2016-17) will focus on the core MCH competencies of interprofessional teaming and family-centered / culturally competent care. Leadership, advocacy, and other competencies can be added in the future.

B. The "LPQI Application" will automatically analyze the data from participating LEND programs to determine change in baseline for each competency area (mean change and effect size) for both trainee self-report (CCM) and faculty observation (I-FOR). Each LEND program will have access to reports on their own program's performance. These reports will also include information so that LEND programs to compare their outcomes with aggregate national data. LEND programs will not have access to outcomes of other individual programs.

C. Participating LEND programs will use each year's LPQI data reports to determine areas for improvement, devise and implement a quality improvement plan, and measure outcomes in subsequent years.

D. AUCD will provide annual reports on national outcomes, analyzing aggregate data by trainee discipline, intermittent vs. continuous training, etc. AUCD will not identify scores or "rank" of individual LEND programs.

E. Starting with data at the end of Year 2 (2017-18), AUCD will begin identifying the approximately 10-20% of LEND programs that have demonstrated relatively large change in each MCHB competency area during the last year. This list would be available to LEND programs looking for models to help with their QI efforts. AUCD would not rank programs, and would not publicize lists of programs.

F. Participating LEND programs can voluntarily share their individual program outcomes with MCHB as part of their annual progress report. This will allow programs to put outcomes in context (e.g. high baseline scores of LEND trainees led to low change – "ceiling effect") and describe how they are addressing outcome data (e.g. QI plan).

G. The LPQI Network is a technical assistance tool offered by AUCD to LEND programs. It is not endorsed by or required by MCHB.

2. Dictionary

T1 data period: Designated time (set by individual programs using the LPQI Application) in the beginning of the training year during which trainees report baseline knowledge and skills related to specific competency areas

T2 data period: Designated time (set by individual programs using the LPQI Application) several months into the training year during which faculty rate current knowledge and skills of trainees related to specific competency areas

T3 data period: Designated time (set by individual programs using the LPQI Application) in the end of the training year during which trainees report current knowledge and skills and faculty rate current knowledge and skills of trainees related to the same competency areas as T1 and T2, respectively

CCM: "Core Competency Measure"; trainee self-report measure developed by the Children's Hospital of Philadelphia LEND program, completed for interdisciplinary care (6 items) and family-centered / culturally competent care (8 items) as part of LPQI at T1 and T3

I-FOR: "Interdisciplinary and Family-Centered Care Observation Rubric"; faculty observation tool specific to the LPQI initiative that was originally adapted from competencies in the Pediatric Milestones Project and refined based on a review of MCH Leadership Competencies, completed for interdisciplinary care and family-centered /culturally competent care as part of the LPQI at T2 and T3

Fiscal Year

The definition of "Fiscal Year" for the LPQI Application will match the definition of "Fiscal Year" in NIRS; it begins July 1 and ends on June 30. Collected data from previous Fiscal Years will be available for review but will be locked for modifications to users with all security levels, with the exception of AUCD Administrators.

3. Key Administrative Contacts

For general Application or LPQI questions, please contact:

Natalie Martinez
Data Support Manager
nmartinez@aucd.org or (301) 588-8252 ext. 221

If you have technical problems or need to report Application errors, please contact:

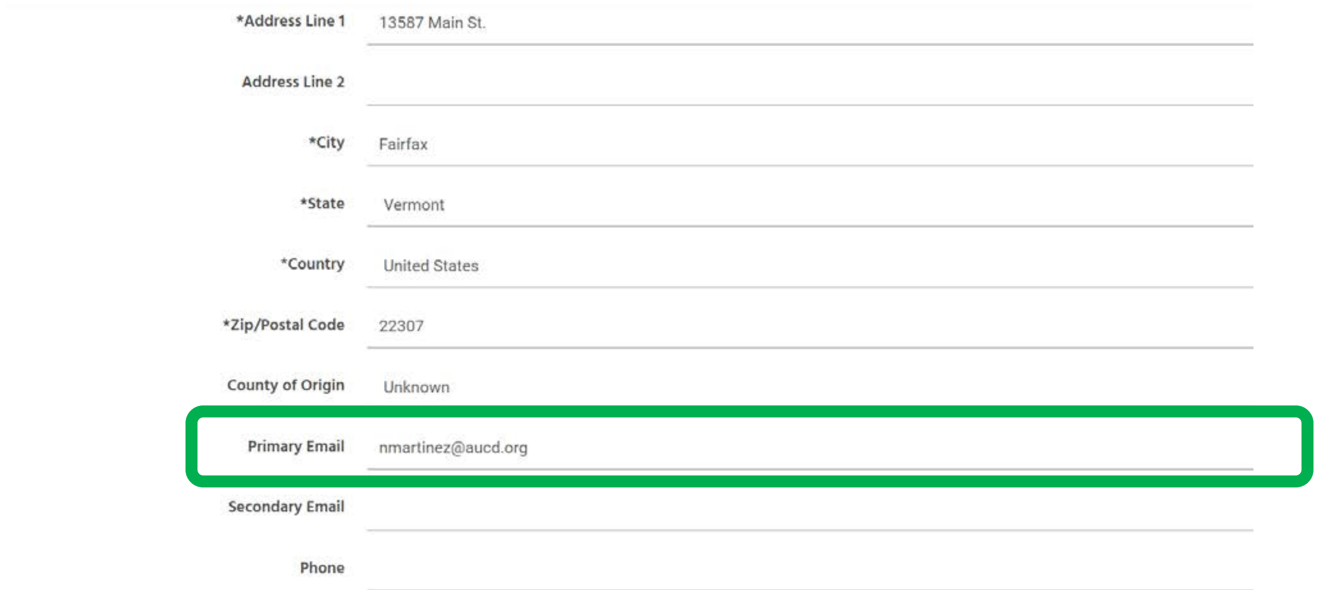
Oksana Klimova
Director, Web Services
oklimova@aucd.org or (240)821-9378

4. Prerequisite Requirements

Before you begin using the LPQI Application, there are a few requirements your program must meet:

1. The LPQI Application is based on NIRS Trainee and Faculty datasets. Be sure that your program is enrolled in the NIRS system. If you are not using NIRS, contact to Ben Kaufman (see "Key Administrative Contacts" above) for instructions on how to enroll.

2. Trainees dataset
    a. All participating trainees should be entered in NIRS before you will be using LPQI application for current fiscal year.
    b. The LPQI application uses two pieces of data from each Trainee profile (name and e-mail address) to communicate with Trainees during the two data collection periods where they must provide self-report data (T1 and T3). It is critical for communication purposes that these two fields (both are circled in the screenshot below) are complete in each Trainee profile – even though the e-mail field is <u>not</u> listed as mandatory in NIRS.


*Address Line 1 13587 Main St.
Address Line 2
*City Fairfax
*State Vermont
*Country United States
*Zip/Postal Code 22307
County of Origin Unknown
Primary Email nmartinez@aucd.org
Secondary Email
Phone

3. Faculty dataset
    a. A Faculty profile can be added to LPQI at any time during the fiscal year before T2 data collection begins.
    b. The LPQI Application uses following fields from NIRS Faculty accounts: name, e-mail address, and login information (all of which are mandatory in NIRS). With this information, the Application allows for administrators to communicate with Faculty during the data collection (trainee observation) periods and provides a password-protected environment for doing so.
    c. Administrators and Program Directors will have "Admin" access levels. Faculty can be assigned any other access levels.

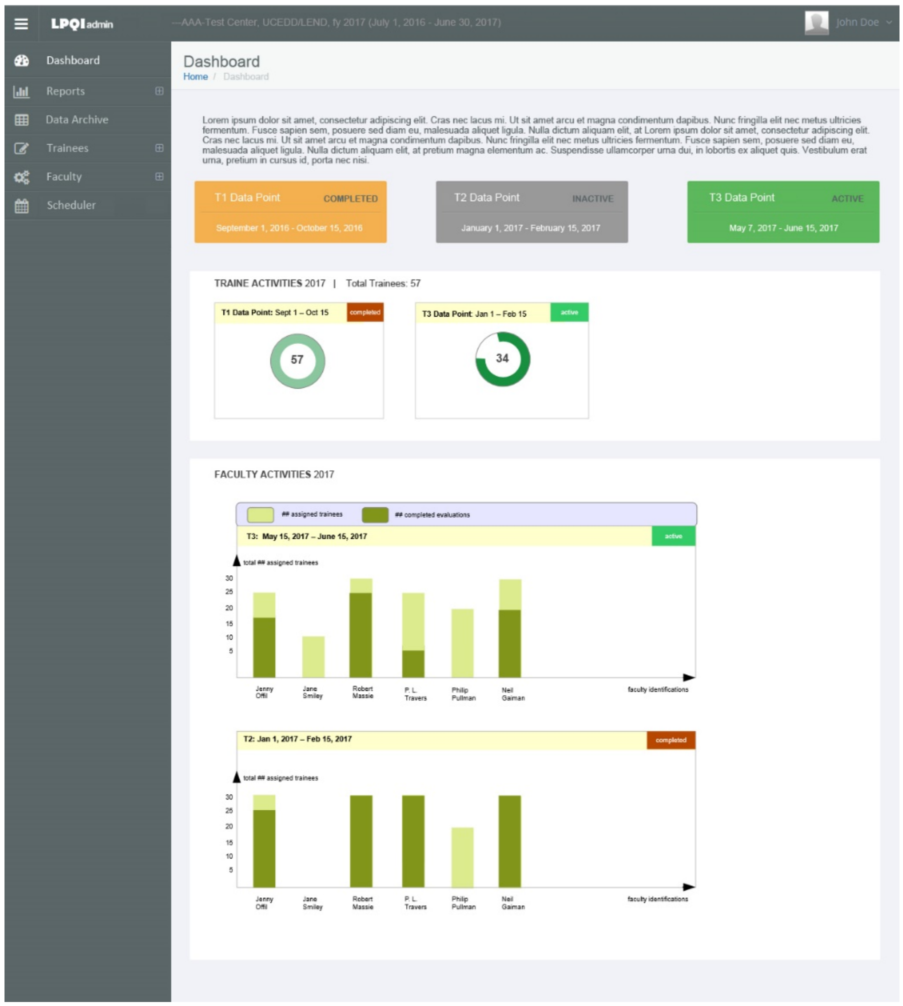

*Login
*Password
Login and password must be at least 6 characters long. Letters, numbers, and symbols may be used. Not case sensitive.
*First Name
*Last Name
*University Email
*Access Level Admin
*Datasets
Trainees
Projects
Activities
Products
Goals
Directory

4. Note that to be included in reporting, Trainees and Faculty should submit data for both the T1 and T3 (Trainees) or the T2 and T3 (Faculty) data periods. As a general rule, any submissions that are missing one data point or the other will not be included in calculations.

5. Step-By-Step Instructions for Using the LPQI Application

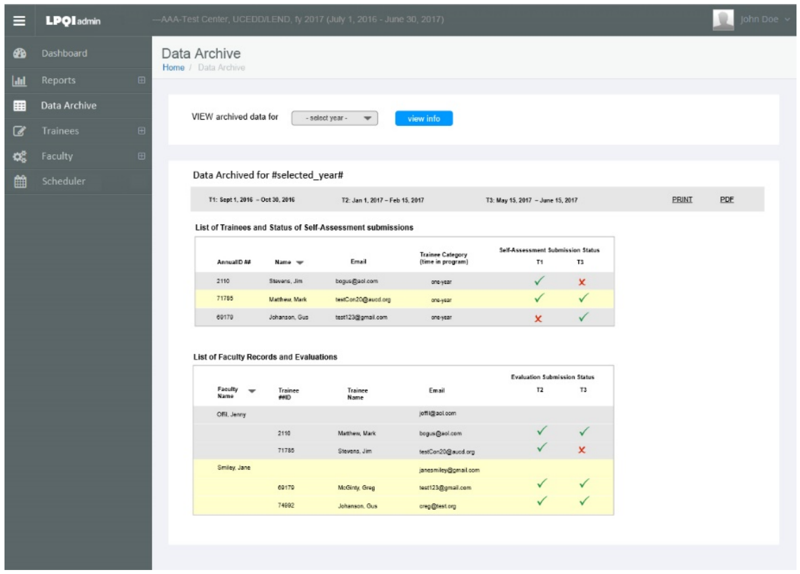
5.1 Application Overview

5.1.1 Dashboard

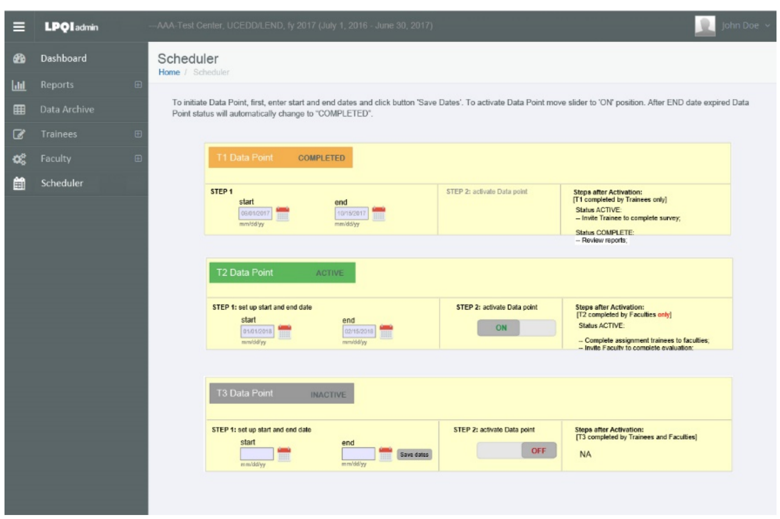
<table>
<tr>
<td>Screenshot</td>
<td>


</td>
</tr>
<tr>
<td>Functional Description</td>
<td>Upon logging in to the portal, each program's administrator will be directed to the Dashboard page, which contains the following information:
• Data point reminder calendar for current Fiscal Year
• Trainee Activities: a graphical representation of submission progress for self-report data
• Faculty Activities: a graphical representation of submission progress for observation data</td>
</tr>
</table>

5.1.2 Data Archive

Screenshot	
Functional Description	The administrator can select past years (once available) and view CCM / I-FOR data for one year at a time.

5.2 Step 1: Schedule (Set up T1, T2, and T3 data periods for current fiscal year)

Screenshot	
Functional Description	Each program will set up its own schedule for the current fiscal year. All three data collection periods (T1, T2, T3) will remain empty until dates have been specified. 1. Administrators can establish start and end dates for each of the three data collection periods; these are unique to their program. The settings for each period can be edited and saved until it has

been activated (i.e. opened for data collection).

2. Once activated (i.e. when the slider is moved to the "ON" position), date settings are locked for that period and are no longer editable – even by an administrator.

3. The activation process will trigger the following actions:
   - Open pubic page for Trainee self-report (T1 and T3)
   - Instructions for administrators will appear in the "Steps after Activation" box (for T1 and T3)

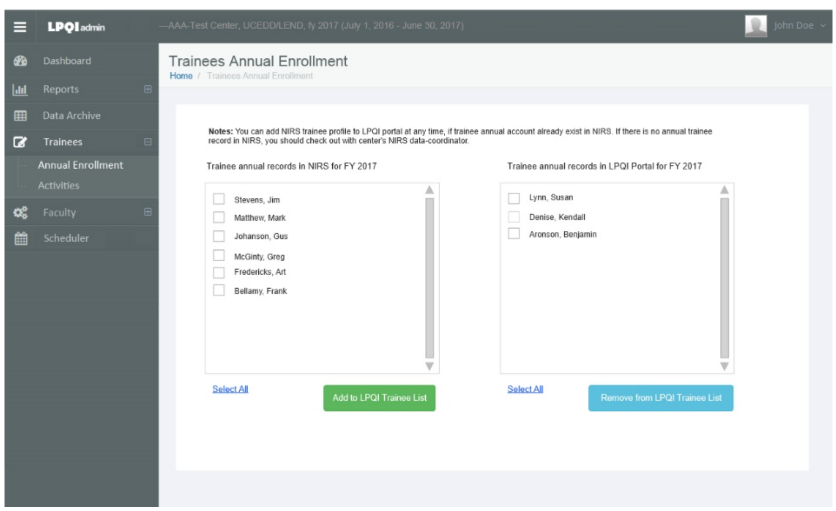
4. When an activated data collection period ends, the status will automatically change to "Completed" and trigger following actions
   - Hide the on/off display switch
   - The administrator will be able to review reports

5. Note that T1, T2, and T3 can overlap with each other.

5.3 Step 2: Trainees: Enrollment in LPQI and Activities

5.3.1 Trainee Annual Enrollment

Screenshot



Functional Description

Each Fiscal Year, the program's administrator will add a cohort of Trainees into NIRS; in the LPQI Application, this list will auto-populate (long-term Trainees only) on the left side of the "Trainees Annual Enrollment" page (see screenshot above).

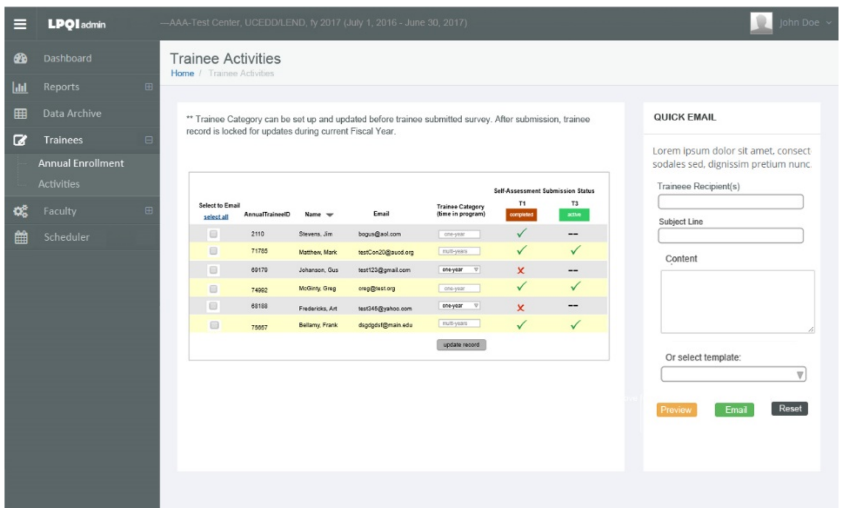
The administrator can move Trainees to and from the LPQI participant list on the right. When a Trainee completes the CCM at any point, their record gets locked and their name cannot be removed from participant list.

If at any point a Trainee's record is deleted from the NIRS database during Fiscal Year, their submitted records will stay in the system. If no records have been submitted yet, that Trainee will be automatically removed from

	the participant list.
Notes	To participate in the LPQI Program, a Trainee must first be enrolled in NIRS. Your data manager can add Trainee records into NIRS database current Fiscal Year at any time, but it is advised that these records be established before the Fiscal Year begins. If you do not see a specific Trainee listed in the left side list ("Trainee annual records in NIRS") please reference the instructions for how to add Trainee records in NIRS.

5.3.2 Trainee Activities

Screenshot



Functional Description

Once a Trainee has completed the CCM for a specific data collection period, a green checkmark will be displayed. If a Trainee has not completed the CCM for a specific data period, it will either show a red "X" (if the period has been closed) or dashes (if the period is still active).

You will have two options for assigning Trainees to a "Trainee Category": (1) one-year, and (2) multiple-year. By default, all Trainees will be assigned to the "one-year" category. Administrators can edit that accordingly and save it by clicking "update record" button. "Trainee Category" should be set up correctly before Trainees are invited to complete the CCM for the first time. Once they've submitted data, their Trainee record is locked for updates during the current Fiscal Year.

Quick E-mail Tool:
By selecting checkboxes, administrators can add Trainee e-mail addresses into the "Trainee Recipient(s) field. Administrators can select one of the e-mail templates or send a custom e-mail by manually typing text into the subject line and content fields.

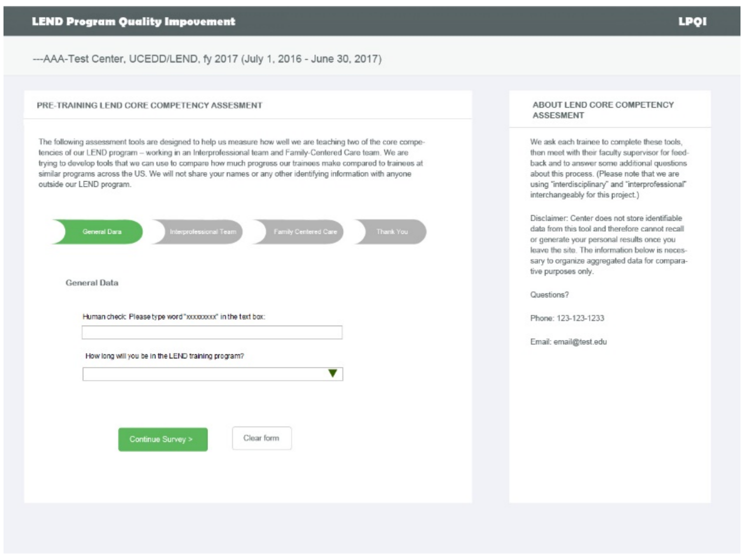
We will provide two templates:

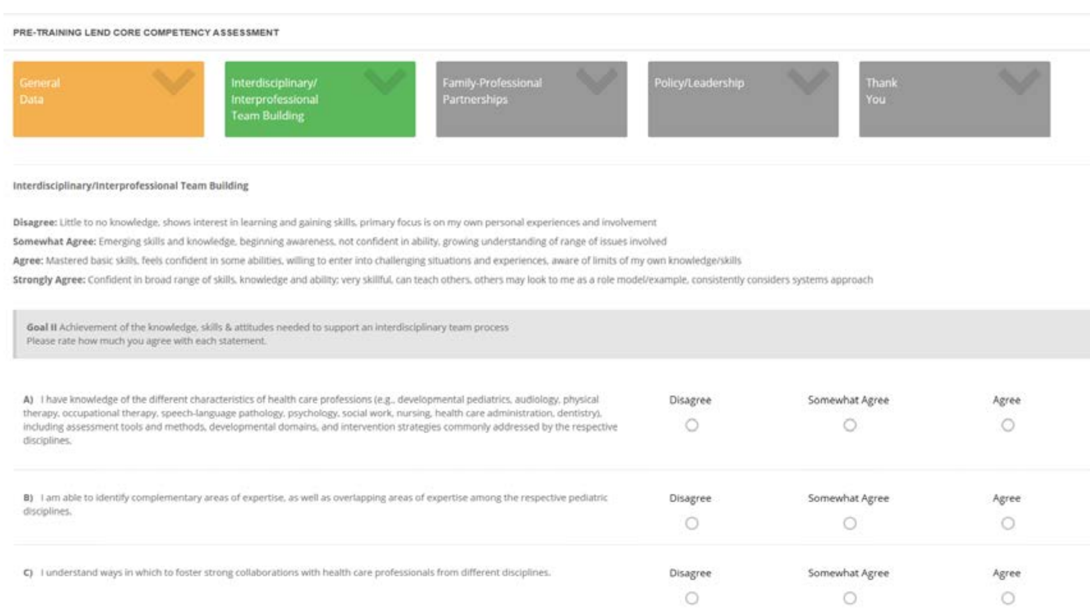
a) Trainee invitation to complete the CCM. Body text will contain a link to a publicly available individual start page (available during active data collection periods only) for T1 and T3. The URL will contain a unique Trainee ID number that will be captured in the LPQI Application upon CCM completion. *The LPQI Application will not store identifiable data from this submission and therefore cannot recall or generate personal results (therefore, administrators will not be able to access individual Trainee answers)*. Administrators will only see whether a Trainee has completed the CCM or not, and reports will display only aggregated data.

b) Reminder about the approaching deadline for CCM completion.

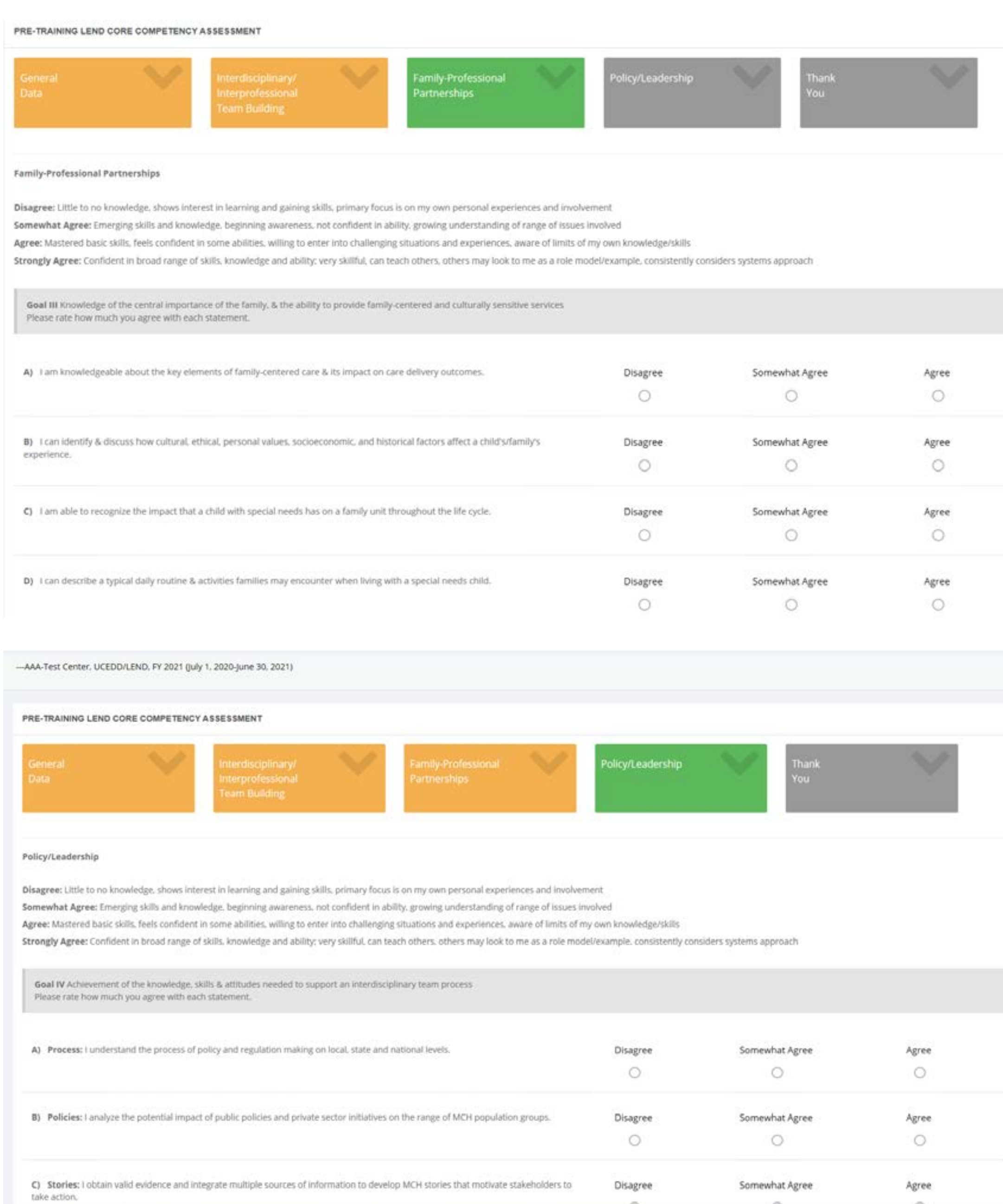
5.3.3 Trainee Self-Report

Screenshot





Note: The screenshot above does not show all questions or choices.



PRE-TRAINING LEND CORE COMPETENCY ASSESSMENT

General Data | Interdisciplinary/ Interprofessional Team Building | Family-Professional Partnerships | Policy/Leadership | Thank You

Family-Professional Partnerships

Disagree: Little to no knowledge, shows interest in learning and gaining skills, primary focus is on my own personal experiences and involvement
Somewhat Agree: Emerging skills and knowledge, beginning awareness, not confident in ability, growing understanding of range of issues involved
Agree: Mastered basic skills, feels confident in some abilities, willing to enter into challenging situations and experiences, aware of limits of my own knowledge/skills
Strongly Agree: Confident in broad range of skills, knowledge and ability; very skillful, can teach others, others may look to me as a role model/example, consistently considers systems approach

Goal III Knowledge of the central importance of the family, & the ability to provide family-centered and culturally sensitive services
Please rate how much you agree with each statement.

	Disagree	Somewhat Agree	Agree
A) I am knowledgeable about the key elements of family-centered care & its impact on care delivery outcomes.	○	○	○
B) I can identify & discuss how cultural, ethical, personal values, socioeconomic, and historical factors affect a child's/family's experience.	○	○	○
C) I am able to recognize the impact that a child with special needs has on a family unit throughout the life cycle.	○	○	○
D) I can describe a typical daily routine & activities families may encounter when living with a special needs child.	○	○	○

—AAA-Test Center, UCEDD/LEND, FY 2021 (July 1, 2020-June 30, 2021)

PRE-TRAINING LEND CORE COMPETENCY ASSESSMENT

General Data | Interdisciplinary/ Interprofessional Team Building | Family-Professional Partnerships | Policy/Leadership | Thank You

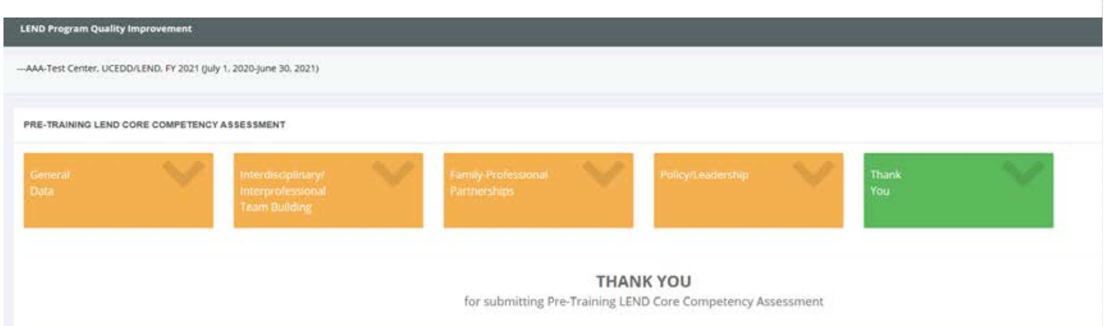
Policy/Leadership

Disagree: Little to no knowledge, shows interest in learning and gaining skills, primary focus is on my own personal experiences and involvement
Somewhat Agree: Emerging skills and knowledge, beginning awareness, not confident in ability, growing understanding of range of issues involved
Agree: Mastered basic skills, feels confident in some abilities, willing to enter into challenging situations and experiences, aware of limits of my own knowledge/skills
Strongly Agree: Confident in broad range of skills, knowledge and ability; very skillful, can teach others, others may look to me as a role model/example, consistently considers systems approach

Goal IV Achievement of the knowledge, skills & attitudes needed to support an interdisciplinary team process
Please rate how much you agree with each statement.

	Disagree	Somewhat Agree	Agree
A) **Process:** I understand the process of policy and regulation making on local, state and national levels.	○	○	○
B) **Policies:** I analyze the potential impact of public policies and private sector initiatives on the range of MCH population groups.	○	○	○
C) **Stories:** I obtain valid evidence and integrate multiple sources of information to develop MCH stories that motivate stakeholders to take action.	○	○	○

Note: The above screenshots do not show all questions or choices.



LEND Program Quality Improvement

—AAA-Test Center, UCEDD/LEND, FY 2021 (July 1, 2020-June 30, 2021)

PRE-TRAINING LEND CORE COMPETENCY ASSESSMENT

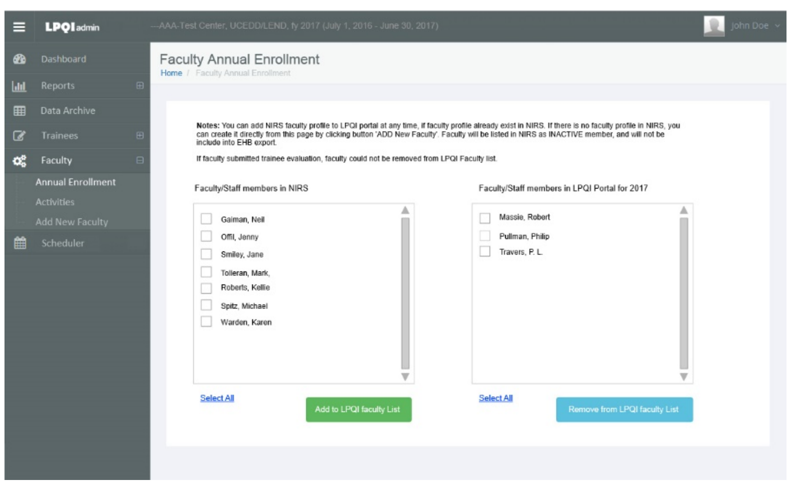
General Data | Interdisciplinary/ Interprofessional Team Building | Family-Professional Partnerships | Policy/Leadership | Thank You

THANK YOU
for submitting Pre-Training LEND Core Competency Assessment

Functional Description	Self-The CCM for T1 and T3 will be available for Trainees whenever a data collection period is active. Once the data collection period ends, Trainees will see a message that the survey is closed. Title for T1 CCM will be: "Pre-Training LEND Core Competency Assessment" Title for T3 CCM will be: "Post-Training LEND Core Competency Assessment" The CCM includes: 1. Page requesting general information from the Trainee 2. Page with Interdisciplinary Teaming questions 3. Page with Family-Centered Care questions 4. Page with Policy/Leadership questions 5. Thank you page Note that all questions require an answer. Trainees cannot move to the next page without selecting an answer for each question.

5.4 Step 3: Faculty

5.4.1 Faculty Annual Enrollment

Screenshot	

Functional Description	Each Fiscal Year, the program's administrator will add a cohort of Faculty members into NIRS; in the LPQI Application, this list will auto-populate on the left side of the "Faculty Annual Enrollment" page (see screenshot above). The administrator can move Faculty to and from the LPQI participant list on the right. When a Faculty member completes the I-FOR at any point, their

record gets locked and their name cannot be removed from participant list.

If at any point a Faculty member's record is deleted from the NIRS database during Fiscal Year, their submitted records will stay in the system. If no records have been submitted yet, that Faculty member will be automatically removed from the participant list.

If a Faculty member does not have a NIRS entry, the administrator can easily add one by clicking button "Add New Faculty" in the LPQI Application. The administrator will be required to complete three fields in the form. Those are mandatory fields for the Faculty profile in NIRS:

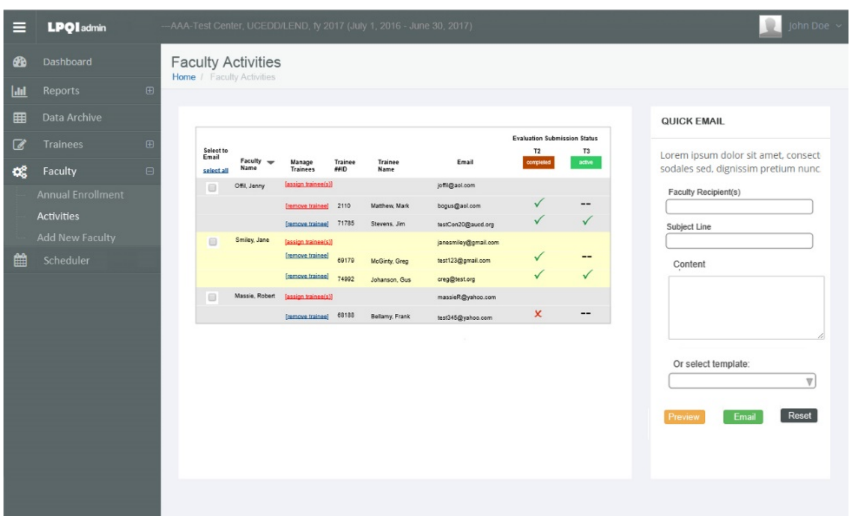
- First name
- Last name
- E-mail

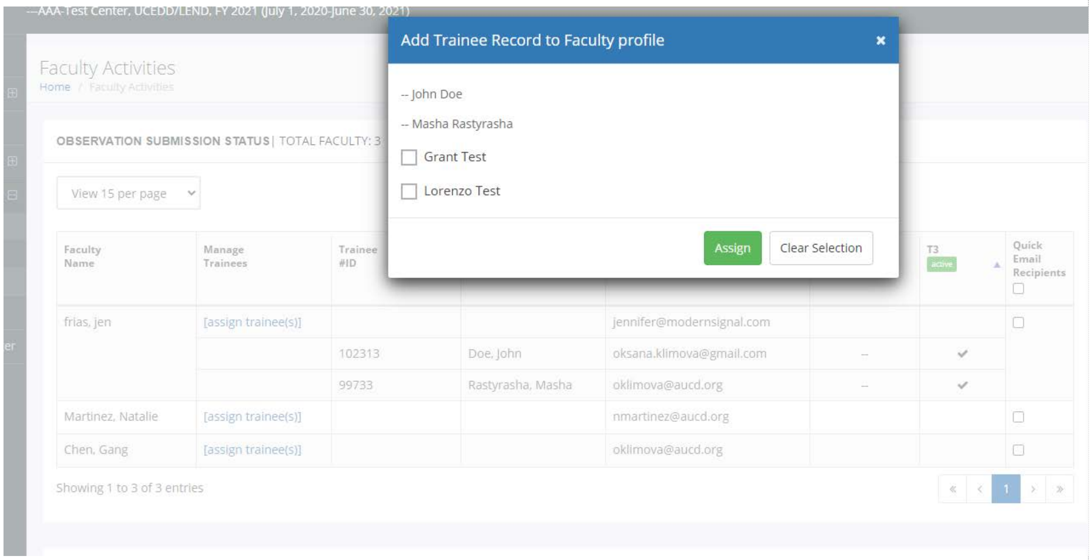
Values for login/username, password, admin level, and datasets will be created automatically:

Login:	First letter of the First Name + Last Name
Password:	Last Name + random combination of 3 digits from 1 to 9
Access Level:	Read/Write Own
Datasets:	Trainees

5.4.2 Faculty Activities

Screenshot





Functional Description

Administrators will be able to assign all participating Trainees to one (and only one) participating Faculty member. By clicking on the “Assign Trainee(s)” link, the administrator will open a new window of a smaller size; it will list all Trainees enrolled in the LPQI Application for the current Fiscal Year. Trainee(s) who were already assigned to other Faculty member(s) will have “—“ next to their names. Trainee(s) who still need to be assigned to a Faculty member will have checkbox next to their names. To assign a Trainee to a Faculty member, the administrator will check as many boxes as appropriate and click the “Assign” button. Those assigned Trainees will then show up in the table above below a Faculty member’s name – each on their own row. That row will have the Trainee’s personal information (name, e-mail, ID number), a “Remove Trainee” link, and indicators of whether or not the Faculty member has completed an I-FOR for that Trainee during a specific data collection period.

Quick E-mail Tool:

By selecting checkboxes, administrators can add Faculty e-mail addresses into the “Faculty Recipient(s)” field. Administrators can select one of the e-mail templates or send a custom e-mail by manually typing text into the subject line and content fields.

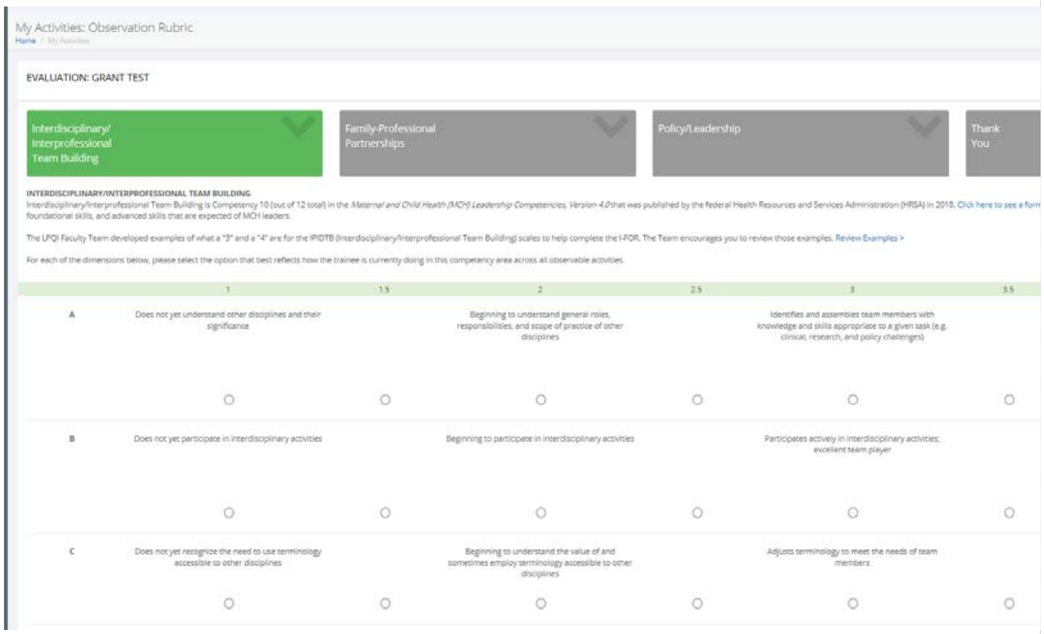
LPQI will provide two templates:

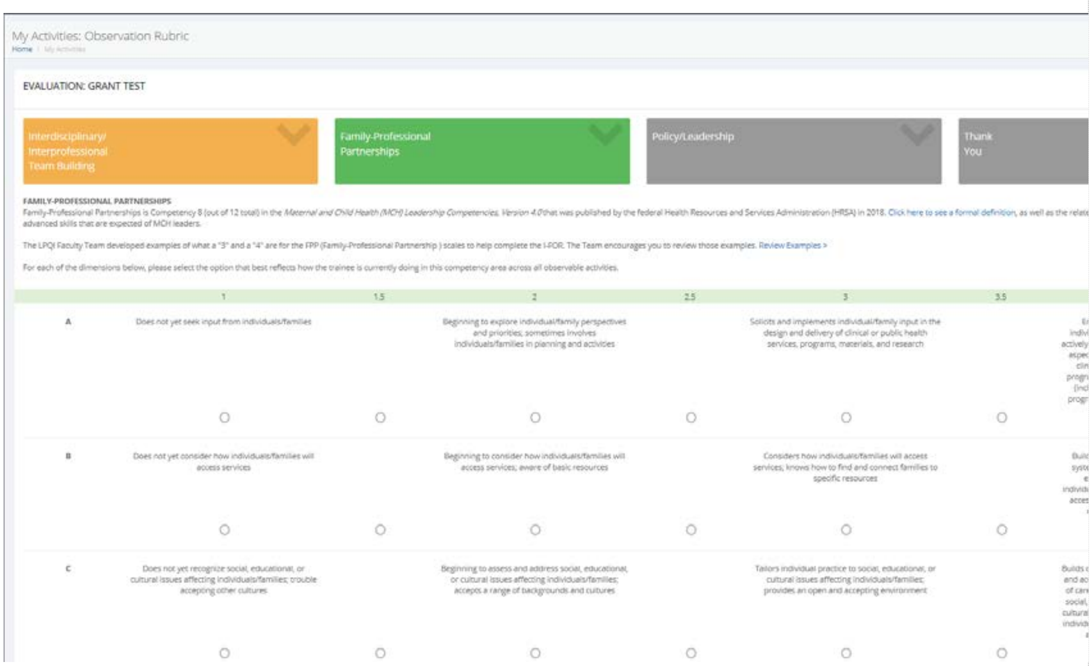
a) Faculty invitation to complete the I-FOR for their assigned Trainees. Body text will contain a link to the NIRS/LPQI login page.

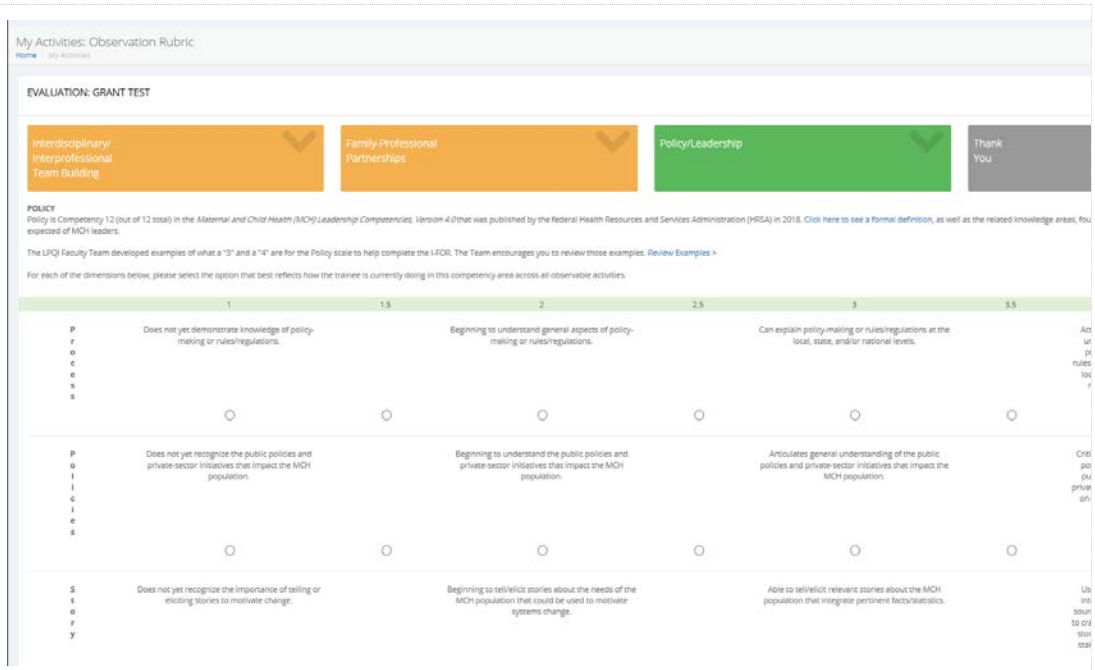
Reminder about the approaching deadline for completing the I-FOR for their assigned Trainees; this will also contain a link to the NIRS/LPQI login page.

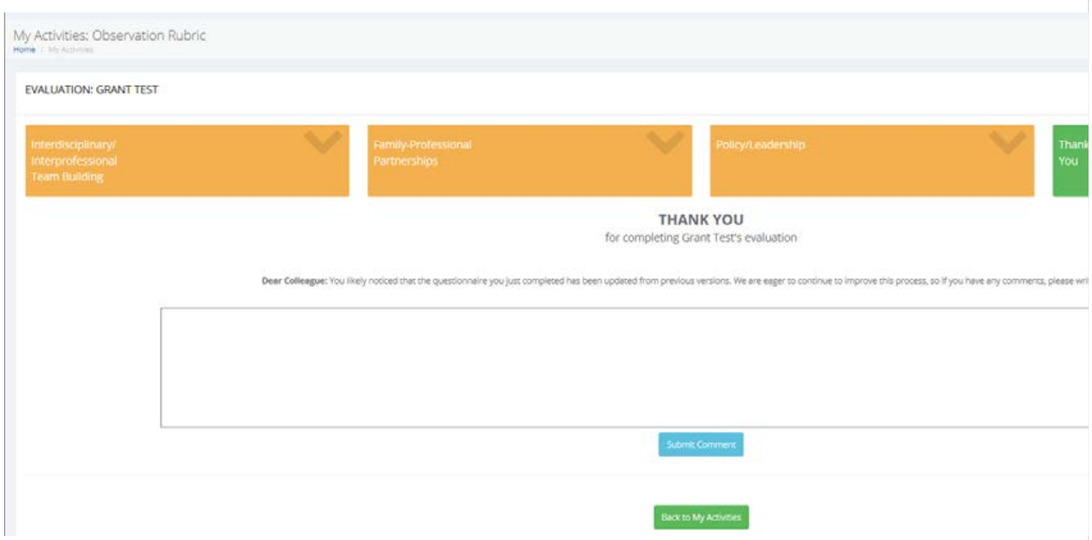
5.4.3 Trainee Evaluation

Screenshot









Note: The above screenshots do not show all questions and choices.

Functional Description

The I-FOR includes:

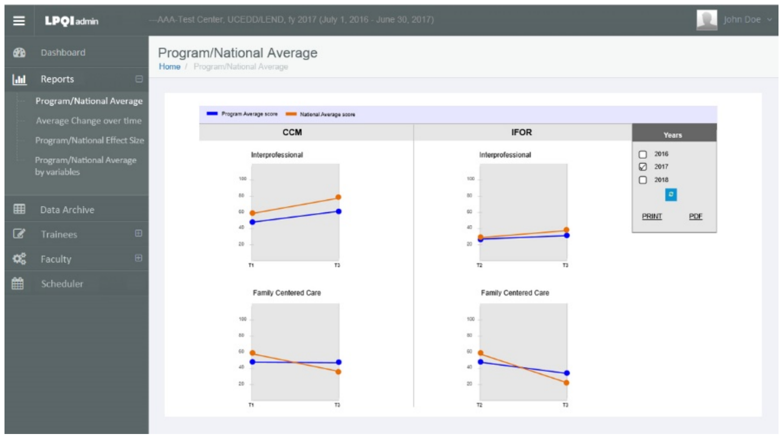
- Page with questions about the assigned Trainee's skills related to Interprofessional Teaming
- Page with questions about the assigned Trainee's skills related to Family-Centered Care
- Page with questions about the assigned Trainee's skills related to Policy/Leadership
- Thank you page

Note that all questions require an answer. Faculty members cannot move to the next page without selecting an answer for each question.

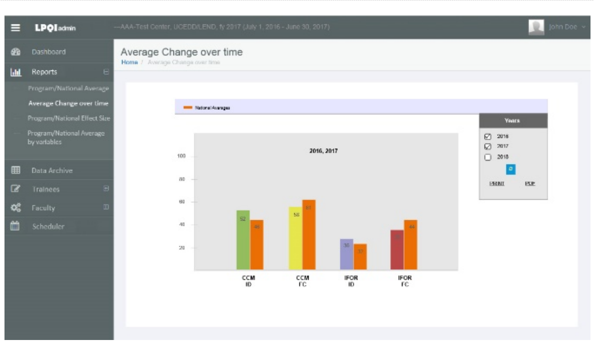
5.5 Step 4: Reports

The “Reports” section contains four unique reports. All data reports can be saved as an accessible .pdf document and/or printed.

5.5.1 Report: Program / National Average

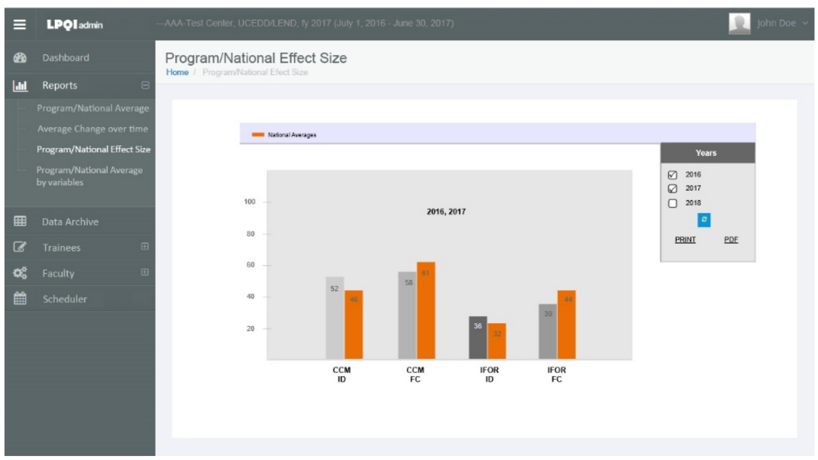
Screenshot	
Functional Description	Comparison of program average score on each measure with national average at T1 and T3 for CCM, and T2 and T3 for I-FOR; data from all reports can be stratified by training year and cumulative years for visualization purposes. Calculations / Formula: **Program average** = Individual LEND program average score for all trainees on each measure (I-FOR Interprofessional Teaming, I-FOR Family-Centered Care, CCM Interprofessional Teaming, CCM Family-Centered Care) at T1 and T3 for CCM, and T2 and T3 for I-FOR **National average** = Program average score on each measure for all participating programs at T1 and T3 for CCM and T2 and T3 for I-FOR

5.5.2 Report: Average change over time

Screenshot	

Functional Description	Comparison of average change over time (program) with average change over time (national) for each measureCalculations / Formula: **Average change over time (program):** Program average score on CCM at T3 minus program average score on CCM at T1 (and same for I-FOR at T3 minus T2) **Average change over time (national):** National average score on CCM at T3 minus national average score on CCM at T1 (and same for I-FOR at T3 minus T2)

5.5.3 Report: Program / National Effect Size

Screenshot	
Functional Description	This reporting feature is currently “Under Construction”; it will be available later this year. Effect Size = (Mean T3 score at site – mean T1 score at site)/(pooled standard deviation from T1 and T3 scores at the site)

5.5.4 Report: Program / National Average by Variables

<table>
<tr><td>Screenshot</td><td>
</td></tr>
<tr><td>Functional Description</td><td>Program average, national average, and comparison on each measure by variable at T1 and T3 for CCM, and T2 and T3 for I-FOR

Trainee Variables:
Discipline
Highest degree obtained
Time in program
One-year vs. multiple-year</td></tr>
</table>