Supporting Statement – Part A
Evaluation of the Graduate Nurse Education Demonstration Program

A. Background

Advanced practice registered nurses (APRNs) play a critical role in the United States (U.S.) health care delivery system, providing services in a variety of roles in acute, ambulatory, and population-based settings. The demand for APRN-provided care has increased in recent years because of the shortage of primary-care physicians and the rise in the demand for primary-care services. This demand is expected to continue increasing as more Americans acquire access to health care coverage because of the passage of the Affordable Care Act (ACA). The Graduate Nurse Education (GNE) Demonstration aims to increase the supply of APRNs in the U.S. health care delivery system by providing Medicare payments to five selected hospitals for the reasonable cost of providing clinical training to APRN students. This demonstration also involves the creation of partnerships between hospitals, schools of nursing (SONs), and community-based care settings (CCSs).

Optimal Solutions Group, LLC (Optimal), and its partner, American Institutes of Research (AIR), are designing and implementing a program evaluation to inform the demonstrations' Report to Congress (RTC). The final report will include an analysis of the following at a minimum:

1. The growth in the number of APRNs with respect to a specific base year as a result of the demonstration.
2. The growth for each of the following specialties: clinical nurse specialist, nurse practitioner, certified nurse anesthetist, certified nurse-midwife.
3. The costs to the Medicare program as result of the demonstration.

Quantitative and qualitative data from primary and secondary sources will be gathered and analyzed for this evaluation. The primary data will be collected through site visits, key stakeholder interviews, small discussion groups and focus groups, telephone interviews, electronic templates for quantitative data submission, and quarterly demonstration-site reports. The secondary data will come from mandatory hospital cost reports provided to the Center for Medicare and Medicaid Services (CMS), and several other existing secondary data sources, such as the American Association of Colleges of Nursing (AACN).

The primary data elements to be collected are divided into six broad categories:

- Characteristics of APRN applicants, current students, and alumni;
- Characteristics of preceptors to APRN students;
- Characteristics of nursing faculty;
- Characteristics of partner hospitals that are part of the demonstration networks;
- Characteristics of schools of nursing (SONs) that are part of the demonstration networks; and
- Characteristics of community-based care settings (CCSs) that are part of the demonstration networks.

The evaluation team is conducting both a process and impact evaluation within a rapid-cycle framework to systematically collect and report data and to ensure the timely submission of high-quality deliverables to inform CMS' Center for Medicare and Medicaid Innovation (CMMI), its stakeholders, and write the demonstration's RTC. The process evaluation will analyze the implementation of the demonstration and allow for course corrections during the demonstration period. The impact evaluation will measure changes in key data elements from baseline. In order to conduct the process and impact evaluation, it is vital that Optimal and its partner AIR collect information pertaining to all stages of the demonstration, including historical, baseline, transition, implementation and post-implementation stages. For more information on the Graduate Nurse Education Demonstration see http://innovations.cms.gov/initiatives/gne/.

There are two types of data collection for this project: quantitative and qualitative. Table 1 summarizes the purpose and the respondents for each type of data collection at each of the five demonstration sites.

Table 1. Data Collection Types

Data Collection Type	Purpose	Respondents
Quantitative	Process and Impact Evaluation	Demonstration Sites
Qualitative	Process Evaluation	Hospital and SON demonstration administrators, CCS administrators, preceptors, APRN students

B. Justification

1. Need and Legal Basis

The Graduate Nurse Education (GNE) Demonstration is mandated under Section 5509 of the Affordable Care Act under title XVIII of the Social Security Act (42 U.S.C. 1395 et seq.). According to Section 5509 of the ACA, the five selected demonstration sites receive "payment for the hospital's reasonable costs for the provision of qualified clinical training to advance practice registered nurses".

In addition, ACA Section 5509 states that an evaluation of the graduate nurse education demonstration must be completed no later than October 17, 2017. This evaluation includes analysis of the following:

1. The growth in the number of APRNs with respect to a specific base year as a result of the demonstration.
2. The growth for each of the following specialties: clinical nurse specialist, nurse practitioner, certified nurse anesthetist, certified nurse-midwife.
3. The costs to the Medicare program as result of the demonstration.

2. Information Users

All information collected through the Evaluation of the Graduate Nurse Education Demonstration will be used by the Center for Medicare and Medicaid Innovation (CMMI) through its contractors Optimal and its partner AIR to conduct the analysis of the three items specified under ACA Section 5509.

CMS will use the results of the process evaluation to inform demonstration sites on how to improve their operations. CMS will use the results of the impact evaluation to inform Congress on the effectiveness of the Graduate Nurse Education Demonstration.

3. Use of Information Technology

Quantitative Data Collection
The data collection forms will be provided to respondents (see table 1) in a common electronic file type (i.e., Microsoft Excel) and can be submitted via a secure File Transfer Protocol (FTP) site. Respondents can submit data outside of the provided template forms as long as all data elements are clearly labeled and the file type is Microsoft Excel, .csv, or tab delimited text file. This approach is most efficient and reduces burden as respondents have the data available electronically and are compiling data electronically. Each site will be provided a secure login to the FTP site. Signatures from respondents are not required.

Qualitative Data Collection
Opinion on and details of the perceived progress or success of the demonstration implementation will be collected through in person and telephone interviews. Collecting the data electronically would actually pose a higher burden on participants as it would require them to provide their perceptions in writing.

4. Duplication of Efforts

In order to identify and prevent duplication of efforts, Optimal has contacted the five demonstration sites to inquire about current data collection efforts. Optimal worked to incorporate demonstration sites' feedback in determining which data elements would result in excessive burden to be collected.

Additionally, Optimal conducted secondary data research, identifying data sources that can provide comparable information when data would be too burdensome to collect directly from demonstration sites. One example is the collection of historical data for APRN alumni, which demonstration sites indicated would be difficult to gather for all baseline years (2006-2010). Optimal identified the American Association of Colleges of Nursing (AACN) and the National League of Nursing (NLN) as secondary data sources that will substitute and/or complement the primary data gathered from demonstration sites. Optimal has taken measures to ensure that the primary data collection does not duplicate any other effort and the information cannot be reliably obtained from any other source.

5. Small Businesses

While demonstration hospitals and SONs are not small businesses, some of the community-based care settings (CCSs) within the de demonstration networks may be considered small businesses or small entities. However, CCSs can be Federally Qualified Health Center, public health facilities, or other types of CCS which do not qualify as small businesses. As part of the primary data collection efforts, some of the demonstration sites may request additional information from partner CCSs, thus potentially having a minor impact on a few small businesses or entities. This burden is a requirement of participation in the demonstration network by the CCS and they are aware of this requirement. Therefore, the burden imposed upon small businesses is likely to be negligible.

6. Less Frequent Collection

Quantitative Data Collection
The frequency of data collection, which varies by data element, has been determined by the frequency of the natural availability of data. For example, because APRN students enroll and graduate each academic period, data on student enrollment are requested with a frequency of once per academic period (semester or quarter). The frequency of the data collection as described above is necessary to execute the process evaluation as well as the impact evaluation as required by the ACA. Collecting data at specific intervals throughout the demonstration allows for the analysis of the implementation of the demonstration and subsequent course corrections.

Qualitative Data Collection
Part of CMS' objective in fulfilling the legislative requirement of GNE demonstration evaluation is to conduct a process evaluation. Qualitative methodology is commonly used to conduct process evaluations, given its ability to capture the complexity of interventions as well as individuals' perspectives. The qualitative data collection is an essential component of the evaluation as it allows for rich and detailed information about the projects, their challenges and successes, and potential for sustainability.

Data collection for the qualitative component of the evaluation will be conducted at three time points. Time 1 (T1) will be as close to the beginning of the grant period as feasible. Time 2 (T2) will be roughly six months after T1. Time 3 will occur 6 months after T2. The purpose of collecting data at multiple time points is to document the progress, challenges, and implementation and development strategies associated with the GNE demonstration projects. To collect data less frequently would reduce the reliability, specificity and thoroughness of the analysis due to challenges associated with requiring respondents to recall activities over long periods of time.

7. Special Circumstances

None of the special circumstances apply to this data collection effort.

8. Federal Register/Outside Consultation

CMS and the evaluation contractors worked with the demonstration sites to determine what data was available historically and what data can be collected moving forward. While there are slight variations across sites, the data collection forms reflect what can be realistically collected and what is necessary to answer key research questions.

9. Payments/Gifts to Respondents

Quantitative Data Collection
No payments or gifts will be provided to respondents other than the reimbursement of reasonable costs associated with the clinical training of APRNs, as part of the GNE demonstration mandated by the ACA Section 5509.

Qualitative Data Collection
While we assume that the participation of key informants from the GNE personnel at the demonstration sites, the clinical sites, and the nursing schools will be subsumed under the responsibilities and duties of their employment, APRN students are under no obligation to provide their perspectives on the activities of the GNE demonstration. Thus, we will provide an incentive in the amount of $25 to APRN students who participate in focus groups as part of the process evaluation. This incentive is intended as a gesture of thanks to the students for the time they will take out of their busy schedules to participate in the qualitative data collection efforts.

10. Confidentiality

Quantitative Data Collection
Individual-level participant data will be maintained as provided by the Privacy Act of 1974 (5 U.S.C. 552a). The requested data set does not include personally identifiable information such as participant names, addresses, or Social Security numbers. To ensure the confidentiality of the data during transmission from the awardees to Optimal, we will set up secure file transfer protocol servers through which the data are to be transmitted. The data to be transmitted will be encrypted using American Encryption Standard (AED) 256-bit. Access to the data for validation and analysis will be limited to project personnel who have been granted specific user-credentials for the task and have signed an Assurance of Confidentiality agreement. Server access requires a virtual Private Network (VPN) account with a login and password assigned, as well as a login and password for the server. Additionally, since these machines operate on a secure virtual local area network (VLAN) that does not have access directly to the Internet, the only way to move files on or off is through a secure FTP.

The VLAN is a managed hosted VLAN that includes a Cisco ASA hardware firewall and separate Layer 2 switching such that our network is physically separate from other hosted VLANs and private.

The data collection effort assures respondents that the raw data will be treated as proprietary. Optimal has established stringent procedures and safeguards for securing and protecting data against inappropriate disclosure or release of confidential information that will be collected. The contractors handling the GNE data will not release any of the information collected in such a way that it can be linked to individual demonstration participants or their partners. All results will be

presented in the aggregate.

Qualitative Data Collection
The confidentiality of the data collected through the qualitative instruments will be maintained as provided by the Privacy Act of 1974 (5 U.S.C. 552a). Data collectors will upload all audio-recordings of interviews within 24 hours of completing an interview. To protect the confidentiality of respondents, each interview will be assigned an identification number. Identifiable information such as names and organizations of respondents will be stored separately from these data, with a key as the only crosswalk between the data and identifiers. Data and the key will be stored on password protected server hosted by the American Institutes for Research. Only evaluation team members and contractors, such as transcriptionists, who have signed an Assurance of Confidentiality Agreement, will have access to the data for purposes of transcribing and analysis. Transfer of audio and transcript files between AIR and the transcriptionist service and/or will use a secure FTP server encrypted using American Encryption Standard (AED) 256-bit.

11. Sensitive Questions

No information of a sensitive nature will be collected.

12. Burden Estimates (Hours & Wages)

Quantitative Data Collection
The quantitative data collected includes individual data on preceptors, APRN students, and APRN alumni and aggregate data on hospitals, APRN program applicants, SONs, SON faculty, and CCSs. Year 1 startup costs include provision of historical data (2007-2012) in addition to the collection of contemporaneous data. Calculations are based on an initial start-up burden to provide historical data of 62-104 hours per respondent plus an annualized burden to provide contemporaneous data of 137-552 hours per-respondent..

Regarding the monetary costs of compiling and uploading this information, the evaluation team estimates that administrative personnel time will account for 90% of the time spent in these tasks. The remaining 10% of the time will be accounted for by executive level staff. Accordingly, the resulting hourly rate is $24.3/hour, which is the weighted average of 90% of time at $21.9/hour and 10% of the time valued at $45.74/hour. These rates are based on information from the Bureau of Labor Statistics[1]. To calculate the monetary burden to respondents, the estimated time burden per respondent was multiplied by the time cost for each respondent, and the resulting figure was multiplied by 5, which is the total number of respondents (demonstration sites). The resulting estimated range of total monetary costs is $40,790-$146,830, which are divided between $24,160-79,735 for the first year and $16,630-$67,095 for the second year. The difference in costs between both years is explained by the startup costs that are incurred during the first year of the evaluation only.

1 See http://www.bls.gov/oes/current/oes_nat.htm#00-0000.

Table 2. Total Respondent Hour Burden by Year for Quantitative Data Collection

Activity	Year 1			Year 2			All Years
	Total Respondents	Hours per response	Annualized Response Burden	Total Respondents	Hours per response	Annualized Response Burden	Total Hours
Start-up (one time)	5	62 - 104	310-520	0	0	0	310-520
Reporting	5	137-552	685-2760	5	137-552	685-2760	1370-5520
TOTAL	**5**	**199-656**	**995-3280**	**5**	**137-552**	**685-2760**	**1680-6040**

Table 3. Total Respondent Cost Burden by Year for Quantitative Data Collection

Activity	Year 1			Year 2			All Years
	Total Respondents	Cost per response	Annualized Cost Burden	Total Respondents	Cost per response	Annualized Cost Burden	Total Cost
Start-up (one time)	5	$1506 - $ 2528	$7530-$12640	0	$0	$0	$7530-$12640
Reporting	5	$3326-$13419	$16630-$67095	5	$3326-$13419	$16630-$67095	$33260-$134190
TOTAL	**5**	**$4832-$15947**	**$24160-79735**	**5**	**$3326-$13419**	**$16630-$67095**	**$40790-$146830**

Qualitative Data Collection

The qualitative data collection is structured to conduct interviews and focus groups with multiple key informant types. Each key informant will contribute information based on their role and responsibility. As a result, the following will vary widely: the interview/focus group length, the utility of multiple interviews, and the costs per interviewee associated with their hourly wages. Thus, estimated burden calculations will be reported in a range. There will be between 50 and 77 interviews per site (GNE partnership network). Each participant will respond 1 – 2 times per year. Each interview/focus group will last .5 – 1.5 hours. The estimated hourly wage of expected respondents ranges from $20.91 (Administrative Assistant) to $120 (Dean of a Nursing Program). Aggregated, these estimates equate to an annualized hourly burden of 367.5 in year 1 and 332.5 hours in year 2 and an annualized cost burden of $16,170.95 - $19,729.53 in year 1 and $15,656.40 - $18,121.10 in year 2.

Table 4. Total Respondent Hour Burden by Year for Qualitative Data Collection

Instrument	Year 1			Year 2			All Years
	# of people	Hours per response	Annualized hours	# of people	Hours per response	Annualized hours	Total hours
GNE Strategic planning and implementation team - T1	15	1	15				15
SON Administration - T1	20	1	20				20
Clinical faculty - T1	60	1.5	90				90
Clinical placement coordinator - T1	20	1	20				20
Director of Nursing/Clinical Director - T1	15	1	15				15
APRN Student	100	1.5	150	100	1.5	150	300
Preceptor	20	1	20	20	1	20	40
Interim Check-In	75	0.5	37.5	0		0	37.5
GNE Strategic planning and implementation team - T3	0		0	15	1	15	15
SON Administration - T3	0		0	20	1	20	20
Clinical faculty - T3	0		0	60	1.5	90	90
Clinical placement coordinator - T3	0		0	20	0.75	15	15
Director of Nursing/Clinical Director - T3	0		0	15	1	15	15
CFO/Business Manager	0		0	15	0.5	7.5	7.5
Totals	***325***	***.5 – 1.5***	***367.5***	***265***	***.75 – 1.5***	***332.5***	***700.0***

Table 5. Total Respondent Cost Burden by Year for Qualitative Data Collection

Instrument	Year 1				Year 2				All Years
	# of people	Hours per response	Hourly wage level	Annualized Cost Burden	# of people	Hours per response	Hourly wage level	Annualized Cost Burden	Total cost burden
GNE Strategic planning and implementation team - T1	15	1	$21.91 - $80.25	$328.65 - $1203.75					$328.65 - $1203.75
SON Administration - T1	20	1	$40.52 - 120	$810.40 - $2400					$810.40 - $2400
Clinical faculty - T1	60	1.5	$33.91	$4578.30					$4578.30
Clinical placement coordinator - T1	20	1	$33.91	$678.20					$678.20
Director of Nursing/Clinical Director - T1	15	1	$41.54	$623.10					$623.10
APRN Student	100	1.5	$31.71	$7135.50	100	1.5	$31.71	$7135.50	$14271
Preceptor	20	1	$80.29	1605.8	20	1	$80.29	$1605.80	$3211.60
Interim Check-In	75	0.5	$21.91 - $80.25	$411 - $1504.88					$411 - $1504.88
GNE Strategic planning and implementation team - T3					15	1	$21.91 - 80.25	$328.65 - $1203.75	$328.65 - $1203.75
SON Administration - T3					20	1	$40.52 - $120	$810.40 - $2400	$810.40 - $2400
Clinical faculty - T3					60	1.5	$33.91	$4578.30	$4578.30
Clinical placement coordinator - T3					20	0.75	$33.91	$381.45	$381.45
Director of Nursing/Clinical Director - T3					15	1	$41.54	$623.1	$623.10
CFO/Business Manager					15	0.5	$51.52	$193.20	$193.20
Totals	***325***	***8.5***	***$21.91 - $120***	***$16170.95 - $19729.53***	***265***	***8.25***	***$21.91 - $120***	***$15656.40 - $18121.10***	***$31827.35 – $37850.63***

All Data Collection

Total respondents for all data collection are 330; this number assumes 325 respondents for the qualitative data collection and 5 respondents (sites) for the quantitative data collection. The total burden estimate across both years and for both types of data collection is 3,750 to 12,260 hours. As a result, the estimated range for the overall monetary cost burden is $72,617.40 to $184,681.

Table 6. Total Respondent Hour Burden by Year for All Data Collection

Activity	Year 1			Year 2			All Years
	Total Respondents	Hours per Response	Annualized Response Burden	Total Respondents	Hours per Response	Annualized Response Burden	Total Hours
Quantitative	5	199-656	995-3280	5	137-552	685-2760	3050-11560
Qualitative	325	.5 – 1.5	367.5	265	.75 – 1.5	332.5	700
Grand Total	**330**	**199.5-657.5**	**1362.5-3647.5**	**270**	**137.75-553.5**	**1017.5-6407.5**	**3750-12260**

Table 7. Total Respondent Cost Burden by Year for All Data Collection

Activity	Year 1			Year 2			All Years
	Total Respondents	Cost per Response	Annualized Cost Burden	Total Respondents	Cost per response	Annualized Cost Burden	Total Cost Burden
Quantitative	5	$4832-$15947	$24160-$79735	5	$3326-$13419	$16630-$67095	$40790-$146830
Qualitative	325	$21.91 - $120	$16170.95 - $19729.53	265	$21.91 - $120	$15656.40 - $18121.10	$31827.35 – $37850.63
Grand Total	**330**	**$4853.91-$16067**	**$40330.95-$99464.50**	**270**	**$3347.91-$13539**	**$182286.40-$85216.10**	**$72617.40-$184681**

13. Capital Costs

There are no capital costs. .

14. Cost to Federal Government

Table 6. Cost to the Federal Government

Activity/ Partner	Specific Activities	Year 1 Cost	Year 2 Cost	Cost all Years	Cost Description
Start-up/ Government	• Reviewing and providing guidance on instruments, OMB clearance, and data collection approach.	$4570	$1428	$5998	GS-14 staff: 105 hours X $57.13
Start-up/ Contractor	• Developing data set requirements • Setting up FTP site for file transfer • Providing assistance to respondents • Testing FTP site • Retrieving Data • Site Visits, Calls, Focus Groups	$158,326	$136,771	$295,097	Contractor staff:[2] 2895 hours x $101.94
Total	--	**$162,896**	**$138,199**	**$301,096**	--

15. Changes to Burden

Not applicable as this is a new information collection.

16. Publication/Tabulation Dates

The publication dates for the GNE evaluation reports are provided in the project timeline table below:

2 According to national industry-specific occupational employment and wage estimates, social scientist and related workers in "Management, Scientific, and Technical Consulting Services" (NAICS 541600) on average earned $43.75 in 2011, which is approximately $101.94 including overhead, fringe and general and administrative indirect rate ($43.75 * 2.3). http://www.bls.gov/oes/current/naics4_541600.htm

Table 7. GNE Task Area #2 -- Analyze and Report on the Demonstration Site Efforts Production Schedule

Deliverable Number	Deliverable Name	Official Due Date	Start Date	End Date
	Reporting System	Ongoing		
5	Design Reporting System (Identify data elements, data collection frequency, finalize forms and develop business rules)		1/7/2013	3/5/2013
6	*Interim Qualitative and Quantitative Analyses Report*	Revised to 12 months of award		
	Draft and Revise Interim Qualitative and Quantitative Analyses Report -- Draft		8/22/2013	9/13/2013
	Interim Qualitative and Quantitative Analyses Report -- Final		9/20/2013	9/25/2013
7	*Final Qualitative and Quantitative Analyses Report*	20 months of award		
	Final Qualitative and Quantitative Analyses Report -- Draft		5/2/2014	7/3/2014
	Final Qualitative and Quantitative Analyses Report -- Final		7/18/2014	8/1/2014
	Year One Site Visits - Key Informant Interviews, Small Group Interviews, Focus Groups			
	Scheduling of Site Visits		5/4/2013	6/3/2013
	Site Visits		7/8/2013	8/8/2013
	Analysis of data from site visits		8/9/2013	8/22/2013
	Year Two Telephone Interviews			
	Scheduling of telephone interviews		11/4/2013	11/18/2013
	Telephone Interviews		11/18/2013	12/2/2013
	Analysis of data from telephone interviews		12/2/2013	12/9/2013
	Year Two Site Visits - Key Informant Interviews, Small Group Interviews, Focus Groups			
	Scheduling of Site Visits		2/4/2014	2/14/2014
	Site Visits		4/15/2014	6/17/2014
	Analysis of data from site visits		4/22/2014	7/18/2014

The quantitative data gathered at the beginning and during the length of the project from the demonstration networks and secondary sources will be analyzed utilizing both a simple differences and a Difference-in-Differences (DID) approach to estimate the impact of the demonstration. In order to meet project deadline of September 2013 for the preliminary findings report, historical and first year demonstration quantitative data must be collected by June 2013. Qualitative data will be collected for the final report.

The DID approach requires both a treatment group (the demonstration sites) and a comparison group. Due to the unfeasibility of obtaining data from hospital networks not included in the demonstration, secondary data on APRN training nationwide will be utilized for comparison purposes.

In contrast to uniquely estimating the effect of the demonstration by comparing the before and after outcomes, the DID estimator calculates the difference in outcomes between the pre- and post-demonstration-comparison differences of outcomes—thus, the difference in the differences between both groups over time. The basic purpose of DID in this project will be to examine the effect of the demonstration by comparing the outcomes of the treatment group after treatment to the outcomes of the treatment group before treatment and to the comparison secondary data. DID accounts for other confounding effects that may occur at the same time as the demonstration and that may affect its outcome. The DID approach uses the comparison group to subtract these confounding effects, assuming that these confounding effects are the same for the demonstration and the comparison groups.

The data obtained from the demonstration sites for which no comparison secondary information can be obtained will be analyzed using a time-series/before-and-after approach.

17. Expiration Date

CMS would like an exemption from displaying the expiration date, since this is a quarterly data collection instrument to be used on continuing basis.