

Final Progress Report for Research Projects Funded by Health Research Grants

Instructions: Please complete all of the items as instructed. Do not delete instructions. Do not leave any items blank; responses must be provided for all items. If your response to an item is “None”, please specify “None” as your response. “Not applicable” is not an acceptable response for any of the items. There is no limit to the length of your response to any question. Responses should be single-spaced, no smaller than 12-point type. The report **must be completed using MS Word**. Submitted reports must be Word documents; they should not be converted to pdf format. Questions? Contact Health Research Program staff at 717-783-2548.

1. **Grantee Institution:** UPMC McKeesport
2. **Reporting Period (start and end date of grant award period):** 1/1/2009 - 6/30/2010
3. **Grant Contact Person (First Name, M.I., Last Name, Degrees):** Barbara A. Klewien, BS
4. **Grant Contact Person’s Telephone Number:** 412-664-2943
5. **Grant SAP Number:** 4100047656
6. **Project Number and Title of Research Project:** 1 - Analysis of Emergency Department Elopements Over Time
7. **Start and End Date of Research Project:** January 1, 2009 – June 30, 2010
8. **Name of Principal Investigator for the Research Project:** Rani Kumar, MD
9. **Research Project Expenses.**

9(A) Please provide the amount of health research grant funds spent on this project for the entire duration of the grant, including any interest earned that was spent:

\$ 53,137

9(B) Provide the last names (include first initial if multiple individuals with the same last name are listed) of **all** persons who worked on this research project and were supported with health research funds. Include position titles (Principal Investigator, Graduate Assistant, Post-doctoral Fellow, etc.), percent of effort on project and total health research funds expended for the position. For multiple year projects, if percent of effort varied from year to year, report in the % of Effort column the effort by year 1, 2, 3, etc. of the project (x% Yr 1; z% Yr 2-3).

Last Name	Position Title	% of Effort on Project	Cost
Mammarella, S	Project Coordinator	2.5	\$13,770
Weinman, S.	Data Manager	5	\$11,076
Roumani, Y.	Biostatistician	1	\$1,700

9(C) Provide the names of **all** persons who worked on this research project, but who *were not* supported with health research funds. Include position titles (Research Assistant, Administrative Assistant, etc.) and percent of effort on project. For multiple year projects, if percent of effort varied from year to year, report in the % of Effort column the effort by year 1, 2, 3, etc. of the project (x% Yr 1; z% Yr 2-3).

Last Name	Position Title	% of Effort on Project
Kumar, R	Principal Investigator	2%
Klewie, B	Grant Administrator	5%

9(D) Provide a list of **all** scientific equipment purchased as part of this research grant, a short description of the value (benefit) derived by the institution from this equipment, and the cost of the equipment.

Type of Scientific Equipment	Value Derived	Cost
N/A		

10. Co-funding of Research Project during Health Research Grant Award Period. Did this research project receive funding from any other source during the project period when it was supported by the health research grant?

Yes _____ No _____

If yes, please indicate the source and amount of other funds:

11. Leveraging of Additional Funds

11(A) As a result of the health research funds provided for this research project, were you able to apply for and/or obtain funding from other sources to continue or expand the research?

Yes _____ No _____

If yes, please list the applications submitted (column A), the funding agency (National Institutes of Health—NIH, or other source in column B), the month and year when the application was submitted (column C), and the amount of funds requested (column D). If you have received a notice that the grant will be funded, please indicate the amount of funds to be awarded (column E). If the grant was not funded, insert “not funded” in column E.

Do not include funding from your own institution or from CURE (tobacco settlement funds). Do not include grants submitted prior to the start date of the grant as shown in Question 2. If you list grants submitted within 1-6 months of the start date of this grant, add a statement below the table indicating how the data/results from this project were used to secure that grant.

A. Title of research project on grant application	B. Funding agency (check those that apply)	C. Month and Year Submitted	D. Amount of funds requested:	E. Amount of funds to be awarded:
	<input type="checkbox"/> NIH <input type="checkbox"/> Other federal (specify: _____) <input type="checkbox"/> Nonfederal source (specify: _____)		\$	\$
	<input type="checkbox"/> NIH <input type="checkbox"/> Other federal (specify: _____) <input type="checkbox"/> Nonfederal source (specify: _____)		\$	\$

11(B) Are you planning to apply for additional funding in the future to continue or expand the research?

Yes No

If yes, please describe your plans:

While there are no immediate plans to apply for funding, we will continue to explore the issue of ED elopements and possible effective strategies to reduce them.

12. Future of Research Project. What are the future plans for this research project?

UPMC McKeesport will evaluate the results of the analysis in terms of value of the patient navigator related to patient outcomes including success of establishing medical home for individuals treated in the Emergency Department (ED). This assessment will include the

results of this study as well as the findings related to the project funded by other sources with focus on low acuity patients. Our findings related to the two projects will be important when allocating financial resources to sustain navigation services in the ED beyond the term of funding sources. The benefit to the patients will be primary in this assessment.

13. New Investigator Training and Development. Did students participate in project supported internships or graduate or post-graduate training for at least one semester or one summer?

Yes _____ No _____

If yes, how many students? Please specify in the tables below:

	Undergraduate	Masters	Pre-doc	Post-doc
Male				
Female				
Unknown				
Total				

	Undergraduate	Masters	Pre-doc	Post-doc
Hispanic				
Non-Hispanic				
Unknown				
Total				

	Undergraduate	Masters	Pre-doc	Post-doc
White				
Black				
Asian				
Other				
Unknown				
Total				

14. Recruitment of Out-of-State Researchers. Did you bring researchers into Pennsylvania to carry out this research project?

Yes _____ No _____

If yes, please list the name and degree of each researcher and his/her previous affiliation:

15. Impact on Research Capacity and Quality. Did the health research project enhance the quality and/or capacity of research at your institution?

Yes No

If yes, describe how improvements in infrastructure, the addition of new investigators, and other resources have led to more and better research.

The formula funding for this and prior research projects have enabled UPMC McKeesport to conduct research efforts to investigate practices in the community setting related to patient care. The populations served by our institution consist of higher than county, state and national averages of underserved individuals who are defined as minority, those of low socioeconomic status and elderly. Research infrastructure and associated funding provide the means for community hospitals to evaluate and answer critical questions related to effectiveness of newly initiated programs that attempt to resolve health disparities. Historically with each research project we have undertaken has led to further research questions. This and other research funding has fostered a culture of inquiry not traditionally a part of a community hospital administration. Considering that many underserved groups gravitate to their community hospitals, we bear significant responsibility to understand and address the nature of health disparities in general.

16. Collaboration, business and community involvement.

16(A) Did the health research funds lead to collaboration with research partners outside of your institution (e.g., entire university, entire hospital system)?

Yes No

If yes, please describe the collaborations:

16(B) Did the research project result in commercial development of any research products?

Yes No

If yes, please describe commercial development activities that resulted from the research project:

16(C) Did the research lead to new involvement with the community?

Yes No

If yes, please describe involvement with community groups that resulted from the research project:

17. Progress in Achieving Research Goals, Objectives and Aims.

List the project goals, objectives and specific aims (as contained in the grant application's strategic plan). Summarize the progress made in achieving these goals, objectives and aims for the entire grant award period. Indicate whether or not each goal/objective/aim was achieved; if something was not achieved, note the reasons why. Describe the methods used. If changes were made to the research goals/objectives/aims, methods, design or timeline since the original grant application was submitted, please describe the changes. Provide detailed results of the project. Include evidence of the data that was generated and analyzed, and provide tables, graphs, and figures of the data. List published abstracts, poster presentations and scientific meeting presentations at the end of the summary of progress; peer-reviewed publications should be listed under item 20.

This response should be a DETAILED report of the methods and findings. It is not sufficient to state that the work was completed. Insufficient information may result in an unfavorable performance review, which may jeopardize future funding. If research findings are pending publication you must still include enough detail for the expert peer reviewers to evaluate the progress during the course of the project.

Health research grants funded under the Tobacco Settlement Act will be evaluated via a performance review by an expert panel of researchers and clinicians who will assess project work using this Final Progress Report, all project Annual Reports and the project's strategic plan. After the final performance review of each project is complete, approximately 12-16 months after the end of the grant, this Final Progress Report, as well as the Final Performance Review Report containing the comments of the expert review panel, and the grantee's written response to the Final Performance Review Report, will be posted on the CURE Web site.

There is no limit to the length of your response. Responses must be single-spaced below, no smaller than 12-point type. If you cut and paste text from a publication, be sure symbols print properly, e.g., the Greek symbol for alpha (α) and beta (β) should not print as boxes (\square) and include the appropriate citation(s). DO NOT DELETE THESE INSTRUCTIONS.

Introduction and Background:

The stated goals of the project are as follows:

- Analyze and initiate corrective actions to reduce the incidence of elopements from the ED by 25% in year 1 and by 50% in year 2.
- Analyze and initiate corrective actions to reduce the LOS (length of stay) for treated and discharged and treated and admitted patient categories to best practice levels as compared to equivalently sized Emergency Departments based upon volume of ED visits.
- Improve patient satisfaction scores to the 90 percentile level as measured by the Press Ganey Patient Satisfaction Scores.

To achieve the goals, our plan was to obtain the following data elements for statistical analysis of two time periods – one year pre and one year post implementation of a patient navigator focused on Medicaid patients:

Mode of Arrival (EMS vs. Walk-in)

Triage Category

Waiting time from triage to ED Bed

Number of elopements

Time of day of elopements

Staffing per shift related to elopements

Prevalence of elopements based upon reasons for presentation to the ED (i.e. medical vs. behavioral health, and triage category, etc.)

ED occupancy level (defined as the total number of patients in ED beds divided by the number of licensed treatment beds)

Waiting Count (number of patients in the waiting room at time of elopement)

Boarding Count (number of patients awaiting hospital admission)

Length of Stay (LOS) (defined as the average time since presentation among all patients in ED beds)

Expected outcomes were stated as:

Individuals who leave the Emergency Department without receiving treatment may be ill and therefore not receive the appropriate care to treat the medical condition for which they are presenting. Furthermore, the Emergency Medical Treatment and Labor Act (EMTALA) requires a federally mandated medical screening examination and failure to perform such an examination may be construed as a violation of this act. In addition the hospital may suffer economic hardship by losing revenue associated with these visits. UPMC McKeesport is initiating a new program whereby a “medical home” for individuals, on Medical Assistance who are treated at the Emergency Department, will be established. Most often these individuals do not have an established physician. The aforementioned program does not address the issue of elopements and we are therefore proposing an important strategic project with the Formula Funds to study the possible effect on elopements that have been a long time problem for this community setting.

Analysis of the information and data will permit the redesign of processes aimed at improving the timeliness of patient care, providing care appropriate to treat the individual and preventing loss of revenue. Also we hope to demonstrate a reduction in elopements due to implementation of the “medical home” program.

It should be noted here that the data elements listed below were not analyzed. The complexity introduced by these particular data elements was considered at the outset and proved to be labor intensive and could not be accomplished within the funding limitations. Furthermore, it was determined that eliminating these data would not jeopardize the expected outcomes and the proposed analysis related to overall elopement rates for the time periods proposed would produce important findings with a more narrow focus and again within the funding limitations. Most of the deleted data elements focus on occupancy/count levels and

it can be assumed that during the two time periods to be analyzed that these levels would correlated to a degree over the span of a year. In addition it is necessary to comment that during the two time periods there were no notable catastrophic events in the area served by UPMC McKeesport that may have resulted in skewing of the data analyzed or not analyzed.

Date elements not included in the analysis:

ED occupancy level
Waiting count
Boarding count
Length of stay

Personnel: Ms. Claire Daday, the original project coordinator is no longer with UPMC McKeesport and Ms. Susan Mammarella assumed this role. Ms. Mammarella also serves as chief financial officer of the hospital and has a special interest not only in the financial implications of elopements but a desire to implement appropriate actions that may lead to improvement in patient care and patient satisfaction. She was responsible for day-to-day monitoring and reporting on the project. Mr. Scott Weinman was appointed to serve as data manager. He is highly qualified and detail oriented particularly with respect to cleaning and presentation of the data to be analyzed. Mr. Yazan F. Roumani, MS, MBA served as biostatistician. Mr. Roumani has served UPMC McKeesport faculty as an instructor in biostatistics for the residency program. Ms. Barbara Klewien, grant administrator, performed project monitoring to assure conformance with hospital policy related to research projects.

Methods:

Data collection and cleaning was performed by Mr. Scott Weinman. Two data sets of summary data were abstracted from UPMCCOGNOS system and imported into a Microsoft Excel workbook. The two data sets are defined as April, 2008 - March 31, 2009 and April 2009 - 2010. The workbook structure drafted by Mr. Weinman and provided extremely clean and usable data sets for the statistician.

Using SPSS 17.0, we ran Mann-Whitney U test to check whether there were any statistically significant differences in elopement between April 2008-March 2009 and April 2009-March 2010. We used Mann-Whitney U test because the data was not normally distributed. Mann-Whitney U test is a non-parametric test used to compare the means of two independent samples. Elopement between the two time periods was compared as percentage of all (total) departures, all (total) elopement and within each category (gender, shift (daylight, second and midnight), age group (adult (18-64), geriatric (65+ years) and pediatric (0-17 years)), average length of stay (ALOS), mode of arrival and acuity level).

Moreover, because UPMC Braddock closed on January 31, 2010 we ran a Mann-Whitney U test to check whether there was a statistically significant difference in number of admissions between January 2009-March 2009 and January 2010-March 2010. UPMC McKeesport is geographically the nearest community hospital to the former UPMC Braddock site and it was

important that we consider any possible migration of Braddock residents to McKeesport for treatment that may have produced an increase in ED admissions to UPMC McKeesport.

Findings:

Tables 1 and 2 along with Figure 1 (follow the narrative) show the findings of the statistical analysis.

Tables 1 and 2 details the following elements:

- Comparing elopement in April 08-March 09 to elopement in April 09-March 10:
 - There was a statistically significant difference in adult elopement as percentage of all (total) elopement (p-value=0.01).
 - There was a statistically significant difference in pediatric elopement as percentage of all (total) departures (p-value=0.018).
 - There was a statistically significant difference in second shift elopement as percentage of all (total) departures (p-value=0.024).
 - There was a statistically significant difference in second shift elopement as percentage of all (total) elopement (p-value=0.014).
 - There was a statistically significant difference in midnight shift elopement as percentage of all (total) elopement (p-value=0.038).

Figure 1 details the significant changes noted in the analysis. Pediatric elopement, first and second shift elopement as percentage of all departures were omitted from this plot because their values were too low (<1%) or not significant.

- All other comparisons (mode of arrival, gender, ALOS, acuity level) were not statistically significant (i.e. p-value > 0.05).
- There was not a statistically significant difference in number of admissions between January 2009-March 2009 and January 2010 and March 2010 (i.e. p-value > 0.05).

Discussion:

The UPMC McKeesport definition of elopement is consistent with that of Centers for Medicare and Medicaid Services - patients who have been triaged and seen by the physician and departed from the ED prior to medical discharge without the staff being aware they were leaving. These individuals were analyzed separately from patients who register and leave prior to being evaluated by the physician (categorized as Left Without Being Seen). They were also separated from patients who were evaluated by the physician and not yet discharged and left with the staff being aware of this action (Left Against Medical Advice). While there is some recording subjectivity relative to classification by clerks entering the disposition into the electronic record system, we are confident that possible recording errors would be consistent throughout the period of time that was analyzed. The data abstracted from COGNOS was relatively clean which minimized the time necessary for major efforts by the statistician. This consistency and clean data transfer provided for an efficient and confident statistical analysis.

Role of Patient Navigator: The patient navigator began assisting patients in May of 2009. Patients who are evaluated by the ED physician who do not have a family physician or primary care physician and who are presenting with acuity levels of 1 or 2 (non life threatening illness or injury) are referred to the patient navigator. The patient navigator then interviews the patient and assists them with establishing a medical home and ensures follow up care once the patient leaves the ED.

Acuity levels range from 1-5 with 5 being the most acute. Level 3, 4 and 5 admissions constitute approximately 2/3 of all patients registered in the ED.

The navigator is assisting approximately one third of patients who are seen by the ED physician which is the known intervention relative to the second data set. We have considered other possible changes that have occurred in the ED over the two year span including staffing patterns and possible influx of patients from UPMC Braddock due to closure of that ED in January of 2010. In general ED admissions overall slightly declined in year 2, yet elopements statistically increased. The data presented above did not indicate any variation due to the closure of UPMC Braddock which had the potential of affecting the data.

Conclusions:

A steady increase in Emergency Department elopements has been a concern of community and other hospitals for many years since they may have an impact on patient care. While a literature search produced many studies related to Emergency Departments, elopements were not found to be the primary focus. Many variables contribute to a patient's decision to elope and most often waiting times or "crowding" seem to be the general consensus. UPMC McKeesport has a unique opportunity having resources to support a patient navigator in our Emergency Department in an attempt to reduce elopement rates by working with low acuity patients presenting in the ED particularly by those who have not established a medical home. Aside from the original goal of the navigator to assist these patients and their families in this effort, the navigator may indeed be having an effect on elopements in general. We are cautious to avoid stating this as a certainty, however this pilot analysis has provided some interesting observations relative to elopements and the presence of a patient navigator. A search of the literature did not produce any results related to patient navigation in Emergency Departments and elopement frequency therefore our study may present a basis for future inquiry.

Our findings above clearly show an increase in elopements relative to the second and third shifts in the ED which would be consistent with a national trend for elopements in general. These shifts cover the time period from 3pm to 7:00am the following day. Interestingly, the analysis shows no increase in elopements for the first shift (7am to 3pm) or day shift. Because staffing patterns may affect wait times and subsequent elopements, we reviewed staffing patterns over the study period and it was determined there was no significant change. We closely examined the brief period (January 2010 – March 2010) that correlated with the closure of UPMC Braddock to ascertain any changes in elopement rates that may have introduced another variable to this analysis.

While there is no clear explanation for the increase in elopements observed in the second and third shifts, the absence of increase in the first shift may be attributable to the presence of a patient navigator.

These preliminary findings may indicate an effect of the presence of a patient navigator in the ED. UPMC McKeesport management is committed to supporting this position that provides critical education to patients with respect to the importance of maintaining a medical home that may provide for improved health outcomes for the patient and their families as well as reducing financial burden caused by elopements to this community-serving hospital.

Future Plans:

We plan to continue to observe patient elopement patterns relative to the patient navigator presence with the aim to confirming observations of this pilot analysis. Should elopements continue to remain static or decline with the presence of a navigator it may provide important evidence in support of expanding patient navigation to cover evening and night shifts. This study has provided important information and further, more detailed study may confirm a positive effect of patient navigation that may lead to a novel publication that will undoubtedly benefit other hospitals in community settings.

One possible avenue of inquiry will be to closely review acuity level data relative to elopements during the day shift when the navigator is on site. It has been our experience that the higher acuity level patients' dispositions tend to be more medically definitive such as hospital admission or transfer to another institution for further treatment. The navigator is not consulting with all patients – only those without a medical home who are referred to the navigator by the ED physician. McKeesport demographics include minorities, those of low socio-economic status and elderly.- populations who are traditionally underserved. It is not always feasible to design a research study that includes a no intervention arm in this demographic due to the ethical considerations related to withholding important patient education and support. Therefore our plans will focus on expanding analysis of existing and future data as well as measuring outcomes for those patients and families who have the benefit of the services of the patient navigator.

The findings of this study are sufficient to achieve our stated goals to initiate actions related to reducing elopements by continuing to support patient navigator activities and continue monitoring any positive outcomes. They also warrant initiating actions to initiate comparative studies with equivalent Emergency Departments. At this writing while Press Ganey Patient Satisfaction Scores are not yet available, however, we plan to look closely at the scores related to the ED when they are received and consider administrative actions to continue our approaches to this important issue. While the data is preliminary, it is hoped in the near future that we will achieve additional funding to enable a service-oriented program with a research element to study the effects of patient navigators on elopements with regard to the later shifts.

Tables and Figures

Table 1

Test Statistics ^b					
	Adult elopement as percentage of all elopement	Pediatric elopement as percentage of all departures	Second shift elopement as percentage of all departures	Second shift elopement as percentage of all elopement	Midnight shift elopement as percentage of all elopement
Mann-Whitney U	27.500	31.000	33.000	29.500	36.000
Wilcoxon W	105.500	109.000	111.000	107.500	114.000
Z	-2.573	-2.367	-2.252	-2.455	-2.079
Asymp. Sig. (2-tailed)	.010	.018	.024	.014	.038
Exact Sig. [2*(1-tailed Sig.)]	.008 ^a	.017 ^a	.024 ^a	.012 ^a	.039 ^a

a. Not corrected for ties.

b. Grouping Variable: Year

Table 2

	April 08-March 09 (average)	April 09-March 10 (average)
Adult elopement as percentage of all elopement	84.4%	75.7%
Pediatric elopement as percentage of all departures	0.1%	0.2%*
Second shift elopement as percentage of all departures	0.3%	0.6%*
Second shift elopement as percentage of all elopement	39.4%	58.9%*
Midnight shift elopement as percentage of all elopement	24.4%	11.7%

*Elopement increased.

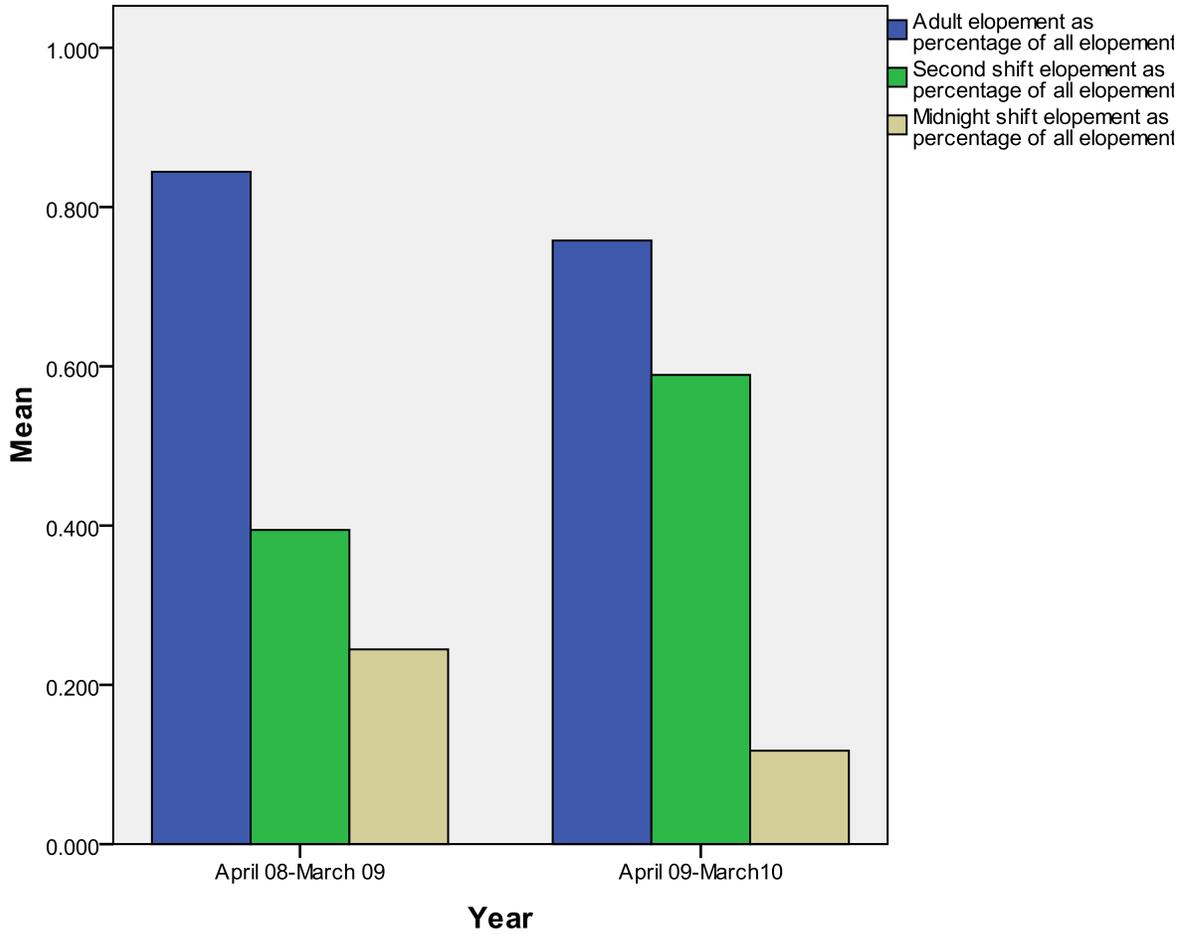


Figure 1

18. Extent of Clinical Activities Initiated and Completed. Items 18(A) and 18(B) should be completed for all research projects. If the project was restricted to secondary analysis of clinical data or data analysis of clinical research, then responses to 18(A) and 18(B) should be “No.”

18(A) Did you initiate a study that involved the testing of treatment, prevention or diagnostic procedures on human subjects?

Yes
 No

18(B) Did you complete a study that involved the testing of treatment, prevention or diagnostic procedures on human subjects?

Yes
 No

If “Yes” to either 18(A) or 18(B), items 18(C) – (F) must also be completed. (Do NOT complete 18(C-F) if 18(A) and 18(B) are both “No.”)

18(C) How many hospital and health care professionals were involved in the research project?

Number of hospital and health care professionals involved in the research project

18(D) How many subjects were included in the study compared to targeted goals?

Number of subjects originally targeted to be included in the study
 Number of subjects enrolled in the study

18(E) How many subjects were enrolled in the study by gender, ethnicity and race?

Gender:

Males
 Females
 Unknown

Ethnicity:

Latinos or Hispanics
 Not Latinos or Hispanics
 Unknown

Race:

American Indian or Alaska Native
 Asian
 Blacks or African American

- Native Hawaiian or Other Pacific Islander
- White
- Other, specify: _____
- Unknown

18(F) Where was the research study conducted? (List the county where the research study was conducted. If the treatment, prevention and diagnostic tests were offered in more than one county, list all of the counties where the research study was conducted.)

19. Human Embryonic Stem Cell Research. Item 19(A) should be completed for all research projects. If the research project involved human embryonic stem cells, items 19(B) and 19(C) must also be completed.

19(A) Did this project involve, in any capacity, human embryonic stem cells?

- Yes
- No

19(B) Were these stem cell lines NIH-approved lines that were derived outside of Pennsylvania?

- Yes
- No

19(C) Please describe how this project involved human embryonic stem cells:

20. Articles Submitted to Peer-Reviewed Publications.

20(A) Identify all publications that resulted from the research performed during the funding period and that have been submitted to peer-reviewed publications. Do not list journal abstracts or presentations at professional meetings; abstract and meeting presentations should be listed at the end of item 17. **Include only those publications that acknowledge the Pennsylvania Department of Health as a funding source** (as required in the grant agreement). List the title of the journal article, the authors, the name of the peer-reviewed publication, the month and year when it was submitted, and the status of publication (submitted for publication, accepted for publication or published.). Submit an electronic copy of each publication, listed in the table, in a PDF version 5.0.5 format, 1,200 dpi. Filenames for each publication should include the number of the research project, the last name of the PI, the number of the publication and an abbreviated research project title. For example, if you submit two publications for PI Smith for the “Cognition and MRI in Older Adults” research project (Project 1), and two publications for PI Zhang for the “Lung Cancer” research project (Project 3), the filenames should be:

- Project 1 – Smith – Publication 1 – Cognition and MRI
- Project 1 – Smith – Publication 2 – Cognition and MRI
- Project 3 – Zhang – Publication 1 – Lung Cancer

Project 3 – Zhang – Publication 2 – Lung Cancer

If the publication is not available electronically, provide 5 paper copies of the publication.

Note: The grant agreement requires that recipients acknowledge the Pennsylvania Department of Health funding in all publications. Please ensure that all publications listed acknowledge the Department of Health funding. If a publication does not acknowledge the funding from the Commonwealth, do not list the publication.

Title of Journal Article:	Authors:	Name of Peer-reviewed Publication:	Month and Year Submitted:	Publication Status (check appropriate box below):
1.				<input type="checkbox"/> Submitted <input type="checkbox"/> Accepted <input type="checkbox"/> Published
2.				<input type="checkbox"/> Submitted <input type="checkbox"/> Accepted <input type="checkbox"/> Published
3.				<input type="checkbox"/> Submitted <input type="checkbox"/> Accepted <input type="checkbox"/> Published

20(B) Based on this project, are you planning to submit articles to peer-reviewed publications in the future?

Yes _____ No _____

If yes, please describe your plans:

21. Changes in Outcome, Impact and Effectiveness Attributable to the Research Project.

Describe the outcome, impact, and effectiveness of the research project by summarizing its impact on the incidence of disease, death from disease, stage of disease at time of diagnosis, or other relevant measures of outcome, impact or effectiveness of the research project. If there were no changes, insert “None”; do not use “Not applicable.” Responses must be single-spaced below, and no smaller than 12-point type. **DO NOT DELETE THESE INSTRUCTIONS.** There is no limit to the length of your response.

While the study provided no definitive conclusion related to the effect of initiation of a patient navigator on emergency department elopements, we believe the lack of statistically significant increase in elopements during the navigator’s shift may point to a possible effect. We will continue to monitor the elopement rates over time to determine if this is indeed the case.

22. Major Discoveries, New Drugs, and New Approaches for Prevention Diagnosis and Treatment. Describe major discoveries, new drugs, and new approaches for prevention, diagnosis and treatment that are attributable to the completed research project. If there were no major discoveries, drugs or approaches, insert “None”; do not use “Not applicable.” Responses must be single-spaced below, and no smaller than 12-point type. **DO NOT DELETE THESE INSTRUCTIONS.** There is no limit to the length of your response.

Not applicable

23. Inventions, Patents and Commercial Development Opportunities.

23(A) Were any inventions, which may be patentable or otherwise protectable under Title 35 of the United States Code, conceived or first actually reduced to practice in the performance of work under this health research grant? Yes _____ No x

If “Yes” to 23(A), complete items a – g below for each invention. (Do NOT complete items a - g if 23(A) is “No.”)

- a. Title of Invention:
- b. Name of Inventor(s):
- c. Technical Description of Invention (describe nature, purpose, operation and physical, chemical, biological or electrical characteristics of the invention):
- d. Was a patent filed for the invention conceived or first actually reduced to practice in the performance of work under this health research grant?
Yes _____ No _____

If yes, indicate date patent was filed:

- e. Was a patent issued for the invention conceived or first actually reduced to practice in the performance of work under this health research grant?
Yes _____ No _____
If yes, indicate number of patent, title and date issued:
Patent number:
Title of patent:
Date issued:
- f. Were any licenses granted for the patent obtained as a result of work performed under this health research grant? Yes _____ No _____

If yes, how many licenses were granted? _____
- g. Were any commercial development activities taken to develop the invention into a commercial product or service for manufacture or sale? Yes _____ No _____

If yes, describe the commercial development activities:

23(B) Based on the results of this project, are you planning to file for any licenses or patents, or undertake any commercial development opportunities in the future?

Yes _____ No _____

If yes, please describe your plans:

24. Key Investigator Qualifications. Briefly describe the education, research interests and experience and professional commitments of the Principal Investigator and all other key investigators. In place of narrative you may insert the NIH biosketch form here; however, please limit each biosketch to 1-2 pages. *For Nonformula grants only – include information for only those key investigators whose biosketches were not included in the original grant application.*

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2.

Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Rani K. Kumar		POSITION TITLE Emergency Department Physician	
eRA COMMONS USER NAME (credential, e.g., agency login)			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	MM/YY	FIELD OF STUDY
Government College for Women	BS	1970	
Glancy Medical College, Punjab University	MBBS	1970	

Personal Statement

This physician has a long history and expertise in emergency medicine. With this background she has developed a desire to influence administrative decisions related to policy and staffing with an aim to overall improvement in patient outcomes particularly with regard to underserved populations.

Positions and Honors:

1978-1981 Staff Physician, Emergency Department, Provident Hospital (part time)
1978-1982 Emergency Department, Byerly Hospital, Hartsville, SC
1981-1982 Staff Physician, Emergency Department, McLeod Regional Medical
Center, Florence, SC
1980-1982 Chief of Health Program, Pee Dee Center, Florence, SC
1982-1984 Staff Physician, Emergency Department, Lock Haven Hospital, Lock
Haven, PA
1984-1986 Staff Physician, Emergency Department, United Hospital Center,
Clarksburg, WV
1986-1987 Acting Medical Director, Emergency Department, United Hospital Center,
Clarksburg, WV
1987-1988 Assistant Medical Director, Emergency Department, United Hospital
Center, Clarksburg, WV
1988-1994 Staff Physician, Emergency Department, Mercy Regional Health System,
Altoona, PA
1994-1996 Associate Director, Emergency Department, Mercy Regional Health
System, Altoona, PA
1996-Present Chairman, Emergency Department, UPMC McKeesport, McKeesport, PA

Certifications:

Board Certified Emergency Medicine
Board Certified Pediatrics
Board Certified Pediatric Emergency Medicine
Fellow, American College of Physicians
Fellow, American Academy of Pediatrics
Pediatrics Advanced Cardiac Life Support Instructor/Director (PALS)