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Pre-exposure Prophylaxis (PrEP) Education Improvement Project

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University of San Francisco
CNL Online Program
Prospectus Summary Brief
Pre-exposure Prophylaxis (PrEP) Education Improvement Project

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Specific Aim:
We aim to improve patient adherence to safe sex practices and follow-up health compliance through provider education. The goal is 100 % provider education and zero new HIV infections by December 2015.

Background:
The institution is has 124 operating beds and a 120-bed community living center. The institution is JCAHO accredited and has several National Centers of Excellence in the areas of Epilepsy Treatment, Cardiac Surgery, Post Traumatic Stress Disorder, HIV, and Renal Dialysis. The Infectious Disease clinic meets the standards of staffing ratios and provides comprehensive primary medical care for HIV-infected patients. The charge nurse identified the need to improve the current patient education on PrEP regimen and develop an educational material that is specific for the Infectious Disease clinic.

Supportive Data:
The process flow chart (See Appendix A, Figure 1) shows the workflow of PrEP consultation to administration of the PrEP medication Truvada and identifies the areas or steps where improvements are needed. The Fishbone diagram (See Appendix B, Figure 2) identifies 7 issues associated with PrEP patient education, all of which are addressed in this project. Essentially patients are not receiving adequate information regarding the use of an anti-retroviral medication pre-exposure and need for additional individual measures to prevent HIV.

Microsystem Status Relative to the project:
The SWOT analysis (See Appendix C, Figure 3) shows resources in the form of professionals who are experts in the field as well as physical materials as resources that will aid in the improvement project. The identified threat is social change in the form of the popularity of condom-less sexual intercourse among MSMs (men having sex with men). This project is important to the patients, professionals, and the institution because it focuses on patient safety and patient satisfaction. Improvement in patients' adherence to the PrEP program as well as zero new HIV infection will be of benefit to the stakeholders relative to the reduction of financial loss.

Summary of Evidence:

> **Search Strategies:** The references in these reviews support the project of improving the education of patients on PrEP program. The terms "pre-exposure prophylaxis", "PrEP education", and "HIV prevention" led to the following literatures ranging from 2010 to 2014 publications.

Databases Used: Lippincott Nursing Center, Pub Med, NIH Public Access, MEDSCAPE, and CINHAL Plus with Full Text.

Evidence:

Brooks et al (2011) assert that men having sex in men who are in the pre-exposure prophylaxis program are at risk for developing risk compensation.

Cohen et al (2013) assert that for PrEP to be effective, it is important to ensure that the individual is at high-risk for HIV infection and the healthcare providers know about PrEP.

Galea et al (2011) assert that there are barriers to uptake and adherence to PrEP like potential sexual risk disinhibition, stigma, and discrimination associated with PrEP use, and mistrust of healthcare professionals.

Golub et al (2010) assert that the success of PrEP depends on behavioral and social factors that may determine its appropriate use and formation of support groups address this concerns effectively.

Leibowitz et al (2011) argued that randomized clinical trials may not provide all the needed evidence when the intervention under consideration is one for which the outcome depends not only on the physiologic responses to treatment but also on behavioral responses.

Marcus et al (2014) assert that adherence is critical for maximizing the effectiveness of pre-exposure prophylaxis (PrEP) in preventing HIV infection and the use of multi-modal intervention to support PrEP adherence is an identified effective intervention.

Theoretical Direction:

Nola J. Pender designed the Health Promotion Model theory to be a complimentary counterpart to models of health protection. According to the recently revised model, health promotion entails activities directed toward developing resources that maintain or enhance a person's well being. The Health Promotion Model makes four assumptions and two of the assumptions are applicable to this project: individuals, in all their bio-psychosocial complexity, interact with the environment, progressively transforming the environment as well as being transformed over time, and health professionals, such as nurses, constitute a part of the interpersonal environment, which exerts influence on people through their life span.

Stakeholders:

Patients and their families/significant others, staff of the Infectious Disease clinic, and the institution are the stakeholders on this project.

Methods:

The participation of every team member was sought to jump start the project. Revision of the currently used standard operating procedure (SOP) for PrEP was one of the first task that was completed by the medical director and the charge nurse who is acting as the CNL in this project. This was implemented immediately last February. The mental

health team and the charge nurse worked on developing a two-session class on risk reduction that is being held every 2nd and 4th Tuesday of the month as a requirement for every patient on PrEP to attend within the first month of PrEP initiation. The charge nurse reached out to those who are already on PrEP and worked with the patients to attend the classes. To encourage the patients who are already on PrEP to attend the classes, the charge nurse and the medical systems assistant (MSA) developed a scheduling strategy to coincide the patients' follow-up visits to the dates of the classes on risk reduction. The charge nurse also developed an educational material that is clinic specific based on the existing educational material and other resources from Center for Disease Control (CDC), AIDS Infonet, and San Francisco AIDS Foundation. The educational material developed includes the current programs and services that the institution and clinic are offering specifically to support and educate the patients on PrEP.

Steps for implementation:

The timeline of activities (See Appendix D, Figure 4) shows that the first two weeks from January 27th to February 12th were dedicated to different meetings with the different team members. The meetings involved brainstorming, reviewing existing SOP, and proposal of the project. There were 2 phases of electronic chart review that were conducted: pre-implementation or before the use of the newly developed educational material (February and March), and post-implementation (April and November). The months of February and March were also dedicated to conducting a pre-implementation survey to assess patient satisfaction as well as the development of the educational material. In April, the mental health team and the charge nurse developed a checklist or guideline for the providers taking care of PrEP patients. A two-session risk reduction class for PrEP patients was also implemented in April every 2nd and 4th Tuesday of the month. From April to November, the distribution of the first clinic specific PrEP education material is the focus of the project. In December, the results of the survey and chart reviews will be analyzed. The revised clinic specific PrEP education material will also released.

Evaluation:

The evaluation of data included patient survey, staff feedback through peer-to-peer report, and new HIV infection rate and new STI infection rates.

Business Case:

The project team leader is a contribution by the CNL student and it includes 220 hours at a rate of $52.00 per hour totaling $11,440.00. The effort includes chart reviews/data collection, meetings, researches, conducting surveys, collaboration with staff, creating a timeline, and professional presentation. With this project, the projected savings from wasted supplies and resources or extra costs for supplies and resources is approximately $2,000.00 per patient per 1-month supply of Truvada. The wasted supplies refer to the medications that were issued to patients but expired because of non-adherence to the regimen; while unnecessary laboratory tests costs $400/person for every lost to follow up case. If a patient did not adhere to his or her follow-up appointments, it becomes a case of lost to follow up. There is a high tendency that his bottle of Truvada (which costs $2,000.00 per bottle) will go to waste or expire. If the clinic reaches out to patient or the patient decides to resume, another full laboratory work-up is done and new bottle of Truvada is dispensed. A full laboratory work-up approximately costs $400. A lost to follow up case would cost approximately $2,400.00 per patient. Prevention of lost to follow up cases is a potential savings for the institution multiplied by the number of cases. Prevention of five lost to follow up cases saves the institution $12,000.00

annually. This project will also save the institution $27,000.00 for the treatment of new HIV infection annually. The goal of zero new HIV cases saves the institution at least $54,000.00. Treatment for new sexually transmitted infections (STIs) cost $650.00/person. Prevention of at least 4 cases of new STIs saves the institution $2,600.00. The project will save the institution at least $68,600.00 per year, which means that for every dollar of my paid hours, the project will save the institution $6.00. There are also other benefits of this project that is not financially quantifiable like increased patient satisfaction, improved staff satisfaction, and improved clinic workflow.

Results:

The activities in the timeline are up to date. The meeting with the medical director resulted in the revision of the pre-exposure prophylaxis standard operating procedure (SOP). The grant application meeting was only a brief brainstorming due to overlapping projects. First two chart reviews provided insights in the patients' current sexual practices, before the implementation of the new PrEP patient educational material. The meeting with the LVN and the unit clerk resulted in the development of a tracking system that helps the clinic monitor the patients' adherence to their schedule follow-up appointments. In April, the first clinic specific PrEP patient educational material was released. The educational material is available for the staff and the patients in the clinic. A checklist or guideline for the providers was also released and is the result of the collaboration between the charge nurse acting as the CNL and the mental health team. Three of the four new PrEP patients have attended the newly implemented two-day risk reduction class for old and new PrEP patients.

Outcomes:

Since the implementation of the new clinic specific PrEP patient educational material, 100% of the providers utilized the educational material in educating their patients. This met one of the specific aims. Currently, there is no new HIV infections and sexually transmitted infections (STIs) since the implementation of the project. This met the specific aim. According to the peer-to-peer report, the staffs are more satisfied with the PrEP patient education after the implementation of the project and prefer using the newly developed PrEP educational material than other existing educational materials for PrEP patients.

Recommendations:

Continue utilizing the new PrEP patient educational material and perform a literature review every 6 months after starting January 2016 to update and keep it current. Schedule patients who were started on PrEP before the implementation of the risk reduction classes to attend the classes and continue offering it to new PrEP patients. By January 2016, all the new and old patients on PrEP should have completed the two-session risk reduction class. Include PrEP education by providers as one of the topics in the orientation for Infectious Disease clinic providers in July 2015 when the new providers join the team. Improve the tracking system of the patients' adherence to their scheduled follow up appointment by creating a master list of all PrEP patients that is maintained and updated by the charge nurse every 2nd and 4th Wednesday of the month.

Appendices

Appendix A
Process Map

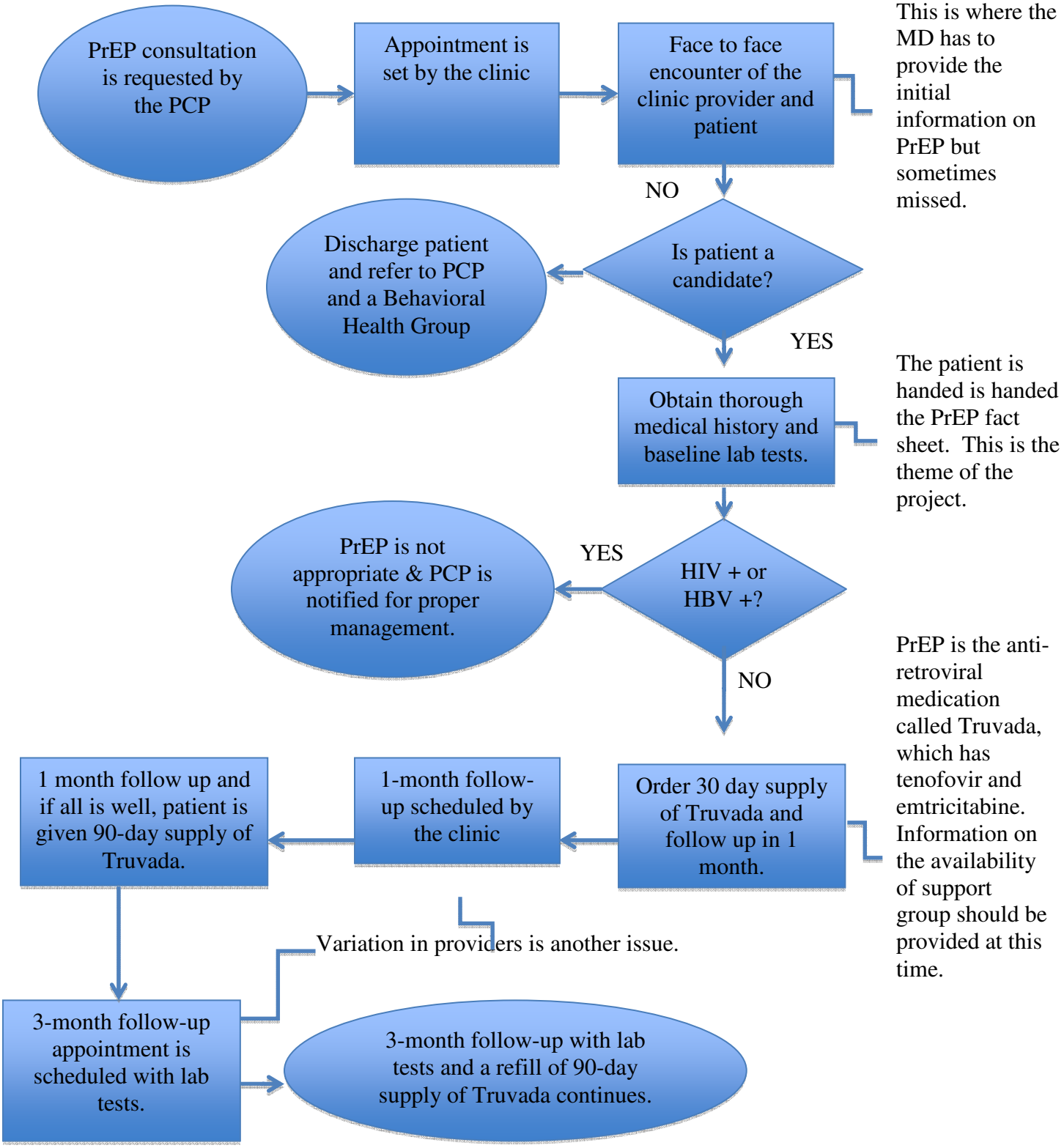

Figure 1. Infectious Disease Clinic workflow. This identifies the steps or areas where improvements are needed.

Appendix B
Fishbone Diagram

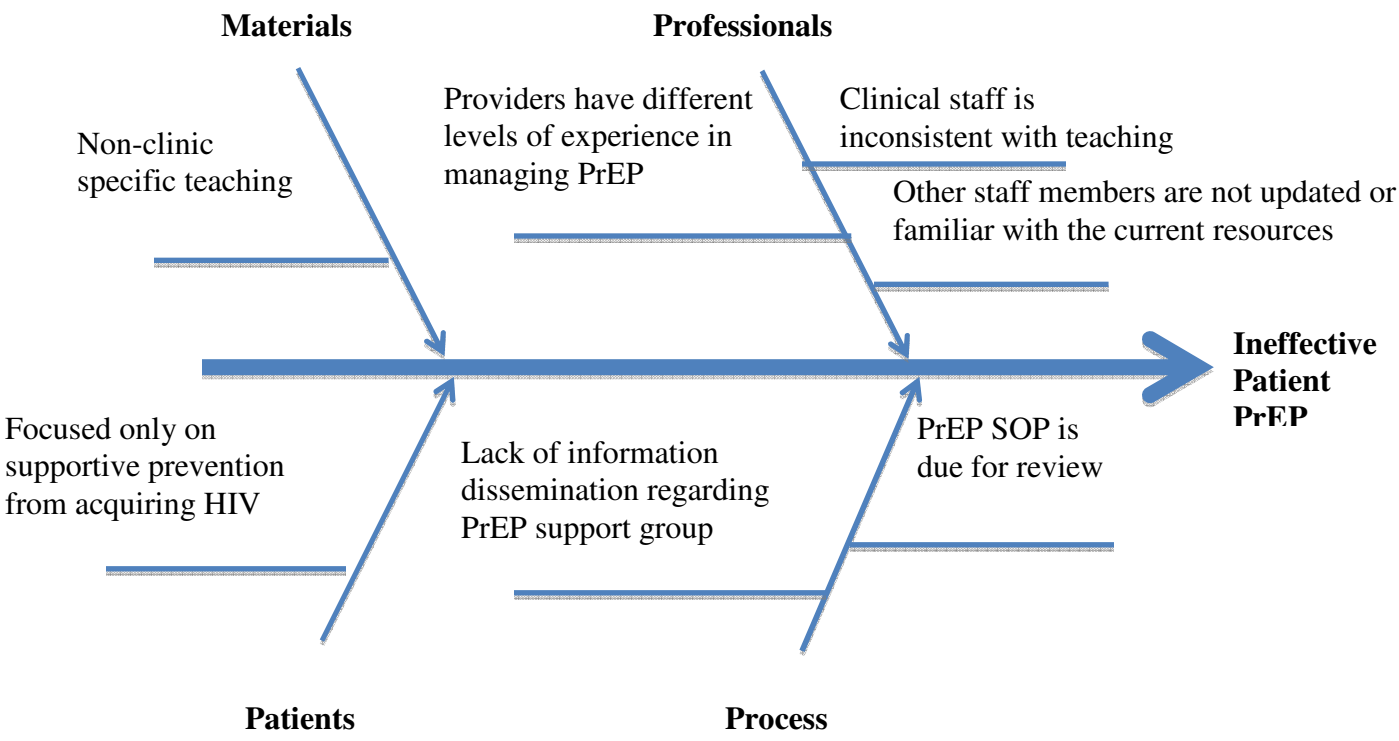

Figure 2. Fishbone diagram of the PrEP patient education at the Infectious Disease clinic. This figure identifies the 7 issues associated with PrEP patient education.

Appendix C
SWOT Analysis

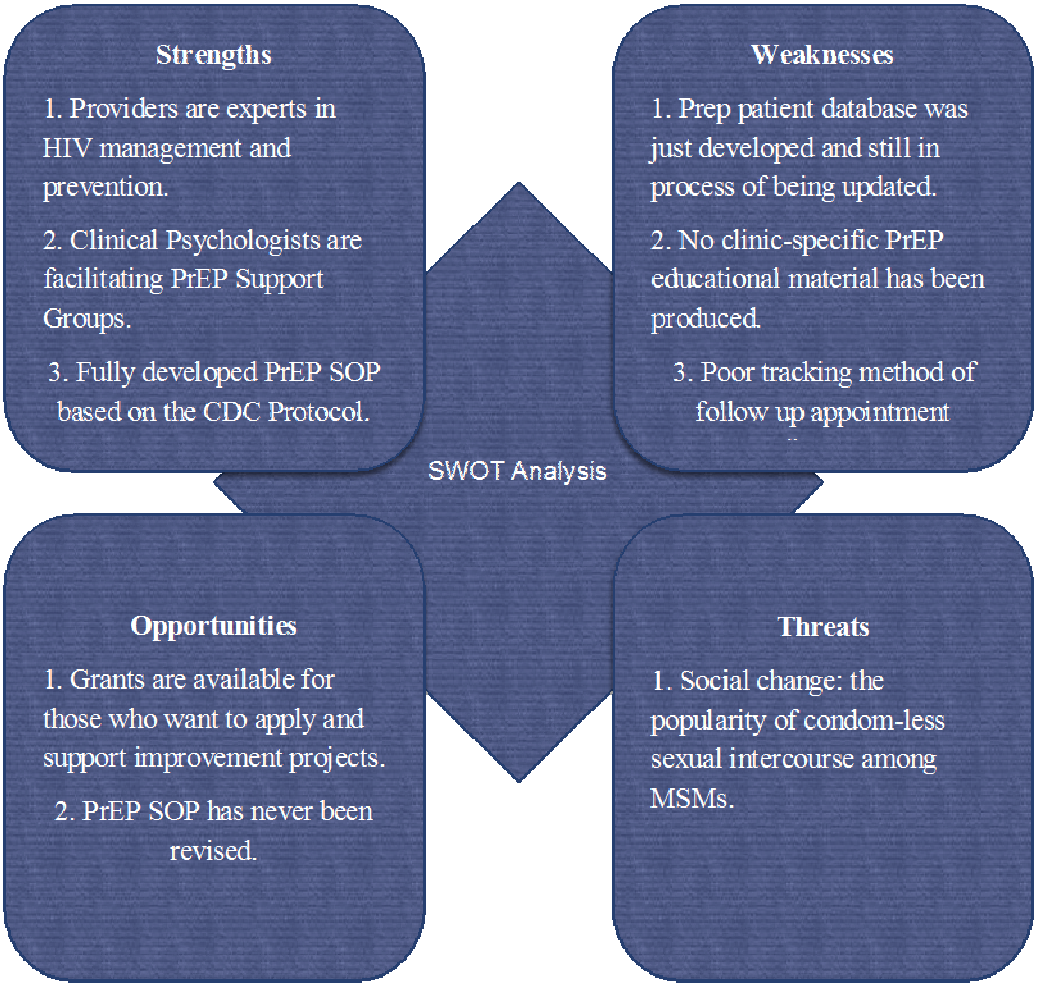

Figure 3. SWOT analysis of the microsystem. This figure shows resources in the form of professionals and physical materials that will aid the project.

Appendix D
Timeline of Activities

Date/2015	Activities
January	➢ Meeting with a research advisor ➢ Meeting with the medical director
February	➢ Project proposal ➢ First chart review ➢ Grant application meeting ➢ Pre-exposure Prophylaxis (PrEP) Standard Operating procedure revision ➢ Survey before the release or implementation of the new clinic specific educational material
March	➢ Second chart review ➢ Meeting with LVN and unit clerk and develop a tracking system ➢ Continuation of the survey before the release or implementation of the new clinic specific PrEP educational material
April	➢ Release of the first clinic specific PrEP educational material ➢ Collaborated with the mental health team in developing a guideline or checklist for the providers taking care of PrEP patients ➢ Two-session risk reduction class for new and old PrEP patients was implemented every 2nd and 4th Tuesday of the month ➢ Third chart review
May - October	➢ Continue implementing the new clinic specific PrEP educational material
November	➢ Survey after the release or implementation of the new clinic specific PrEP educational material ➢ Fourth chart review
December	➢ Analysis of survey results ➢ Analysis of chart review results ➢ Release of the revised clinic specific PrEP educational material

Figure 4. Timeline of activities for the PrEP Education Improvement Project. This figure shows the chronological arrangement of activities in the completion of the project.

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