

USE OF A MATCHING ALGORITHM IN THE ADMISSION PROCESS OF GENETIC  
COUNSELING PROGRAMS

by

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University of Pittsburgh, 2006

Genetic counselors are health professionals specially trained in medical genetics and counseling. Twenty-nine master's level genetic counseling training programs exist in North America and collectively admit approximately 195 students each year. Continuation of the education and training of these specialized health professionals has significant public health importance. The existing admissions process has recently proven to be labor intensive and time consuming, with difficulty encountered while trying to fill programs. As a result of these obstacles, an alternative admissions procedure was explored. The match algorithm used by U.S. medical residency programs was used as a basis for this study. Under this system, software utilizes rank order lists submitted by programs and applicants to place the two parties into the most mutually beneficial program-applicant pairings. Twenty-seven genetic counseling programs and 166 current first year students participated in a survey that gathered program and student preferences. In addition, interest, opinions, and suggestions concerning the existing and proposed admissions system were ascertained. Due to incomplete student participation in the study, the U.S. residency match algorithm was modified. Compared with the existing admissions process, the match resulted in more programs (4 of 27) with unfilled slots, and approximately equal student satisfaction in terms of which program they were matched to. The accuracy of the modified match results is limited due to the match modifications and insufficient number of study participants. The majority of students (66%) indicated they would not be willing to participate in a match and 75%

indicated they were satisfied or very satisfied with the existing admissions process. Program directors were largely satisfied with the existing process (81%). Benefits of a match may include: time efficiency, reduction in anxiety, and ease of process. Both students and program directors perceived barriers to the implementation of a match, including the problem of financial aid distribution under a match, the operating costs, and loss of decision making ability. Both groups suggested improvements for the existing admissions process. Suggestions included introduction of a universal application and an earlier notification date for admissions decisions. This study serves as a collection of data to be used for further investigation into the use of a matching algorithm in genetic counseling admissions.

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## 1.0 INTRODUCTION

This project was undertaken to examine the use of a matching algorithm as an alternative to the existing admission process used in graduate genetic counseling programs. Graduate level training in genetic counseling has been in existence for over 35 years, with new programs opening regularly. Over 2,100 genetic counselors have been trained through these programs and provide services nationally and internationally (NSGC 2006). A listing of international genetic counseling programs can be found in Appendix A. The growth in the field of genetic counseling over the past years has resulted in an increasing number of applicants to genetic counseling programs. In 2005, approximately 500 individuals applied to one or more of the 29 genetic counseling training programs located in North America. With the increasing number of programs, the application and interview process has become progressively complicated and time consuming for both students and programs.

It has previously been suggested by some of the program directors of genetic counseling programs that a matching algorithm similar to that used in the admissions process to U.S. medical residency programs should be considered for use in this population. This study was conducted to gather more information concerning use of a matching algorithm in the admission process to genetic counseling programs. The specific aims used to guide this inquiry include: evaluation of the performance and potential success of a matching algorithm in genetic counseling graduate program admissions compared with the existing process, elicitation of

genetic counseling program directors' and students' interest and responsiveness to the use of a matching algorithm in genetic counseling graduate program admissions, gathering of their comments on the existing admissions process and how it may be improved, and determining the financial feasibility of a match algorithm in the admission to genetic counseling graduate programs.

## **1.1 BACKGROUND AND SIGNIFICANCE**

Genetic counselors are health professionals specially trained in medical genetics and counseling. They provide education and support to individuals and families concerning birth defects, genetic disorders, and a variety of inherited conditions. The process of genetic counseling may include any of the following: eliciting and interpreting personal and family history; determining mode of inheritance and recurrence risk of birth defects and genetic conditions; explaining etiology, natural history, diagnosis and management of these conditions; interpretation of genetic test results; psychosocial assessment; evaluation of client response to provided information; providing client-centered counseling; promoting informed decision making; providing patient resources; and providing documentation of related information for families and other health professionals (ABGC 2006). The field of genetic counseling is rapidly growing, with the first program established in 1969 at Sarah Lawrence College. Currently, 30 genetic counseling training programs in North America are accredited by the American Board of Genetic Counseling (ABGC 2006). Collectively these programs admit approximately 195 students each year (Lega, Veach et al. 2005). Most graduate programs offer two years of training in the form of basic science courses, counseling/psychosocial courses, seminars, research, and clinical

experience through field practica (both laboratory and clinical) (Smith 1993). Guidelines and recommendations for curriculum of master's level training programs in genetic counseling have been established (Walker, Scott et al. 1990). Graduates of these programs earn a Master's degree, and certification is available through the American Board of Genetic Counseling (ABGC).

### **1.1.1 The American Board of Genetic Counseling (ABGC)**

The ABGC was incorporated in 1993. It is responsible for preparing and administering examinations to certify individuals who provide services in the field of genetic counseling. To be eligible to sit for the certification exam, individuals must graduate from an ABGC-accredited master's level genetic counseling program. They also must submit an application to the ABGC which includes: notarized statement form, graduate school transcript, three letters of recommendation (including one from their genetic counseling program director), exam fees, online biographical form, and a logbook of 50 cases. The certification exam is offered every two years, and consists of the General Examination and the Genetic Counseling Examination. Certification is valid for ten years and must be renewed every ten years by either reexamination or accumulation of continuing education units (CEUs) (ABGC 2006).

The ABGC also accredits training programs in the field of genetic counseling. Accredited programs are categorized under one of the following terms: provisional accreditation (previously referred to as Recognized New Program Status), full accreditation, re-accreditation, or accreditation with restrictions or probationary accreditation. All programs under these categories have met the rigorous accreditation criteria established by the ABGC. General and specific requirements for accreditation have been set forth by the ABGC. General requirements

include the topics of: genetic counseling graduate program sponsorship, resources (in terms of staffing, space, and financial resources), students, operational policies, program design, and program evaluation. Programs must submit applications for accreditation or re-accreditation to the ABGC consisting of: a self-study report (involving program administration, faculty, staff, and students), supporting documents (concerning program resources, didactic coursework, clinical experiences, and training sites), and an accreditation fee. Upon receipt of these documents, the ABGC will conduct a site visit to allow for a comprehensive review of the program. The ABGC Accreditation Committee then makes a final determination about accreditation. Program accreditation is valid for a period of six years. Re-accredited programs that have been previously accredited for six years may be reaccredited for up to eight years. Length of accreditation may also be shortened by the ABGC as deemed necessary (ABGC 2006).

International genetic counseling programs have separate organizations to administer certification examinations. The following organizations administer certification exams for genetic counselors outside of the U.S.: The Canadian Association of Genetic Counselors (CAGC), the British Society of Human Genetics Association of Genetic Nurses and Counselors Registration Board (AGNC), and the Human Genetics Society of Australia: Board of Censors in Genetic Counseling (Sahhar, Young et al. 2005).

### **1.1.2 The National Society of Genetic Counselors (NSGC)**

NSGC is the professional organization in the field of genetic counseling. It promotes the professional interests of genetic counselors as well as provides a network for these health professionals. In April of 1978 a committee to form the NSGC was established. When the



founding committee formed the NSGC, they produced the following statement of purpose: "To aid and encourage the development and growth of the profession of genetic counseling; to unite the genetic counseling community and those interested in genetic counseling; to foster and promote communication within the genetic counseling profession; to disseminate information to its members and the general public pertaining to genetic counseling and human genetics; to represent and further the professional interest of genetic counselors; and, generally, to be responsive to issues related to the field of human genetics..." The NSGC was incorporated in 1979 with the vision to be the leading voice, authority, and advocate for the genetic counseling profession; and the mission to promote the profession as a recognized and integral part of health care delivery, education, research and public policy (Heimler 1997).

### **1.1.3 Current genetic counseling program admission**

The existing application process for genetic counseling programs requires an applicant to file an application with individual program(s), which is initially reviewed by the program faculty/staff. Applications may include reporting of GPA, letters of recommendation, graduate record examination (GRE) scores, prior counseling experience, essays, genetic counseling observations, and required or suggested undergraduate coursework. An on-site interview may or may not be offered to the applicant (Scott, Walker et al. 1988). Once the interview process has concluded, programs must determine which candidates will be given an offer of admission. Until the mid-1990's, individual genetic counseling programs utilized diverse admission procedures. Some programs had rolling admissions, while the remainder of programs had specific admission notification dates that differed among programs. Currently, a universal notification date is used by all programs in North America to contact each applicant with either an admission offer, notify

the applicant of their position on a waitlist, or deny the applicant admission. This date usually occurs in early May. Typically the accepted applicants have five days to accept an offer of admission and (if necessary) decline alternate offers of admission. As applicants accept and decline offers of admission, applicants on waitlists may be offered admission. Programs aim to have all their slots filled by the end of the five days, but this rarely occurs. The majority of the delay in filling slots occurs while program directors “work the waitlist” by calling individuals on the waitlist to make offers of admission (Grubs 2006). Also, applicants may take longer than five days to decide on an offer, thus delaying the ability to offer admission to candidates in waiting.

The Association of Genetic Counseling Program Directors (AGCPD) is a consortium of all North American program directors. It was established in 1993. The AGCPD maintains a listserv used for communication between programs, and gathers every year at the NSGC meeting. The AGCPD conducted a recent survey of genetic counseling programs. Their study showed that first-time applicants apply to an average of 4.78 genetic counseling programs and are accepted to an average of 1.77 programs. Students who were not accepted in their first attempt applied to an average of 6.17 programs during ensuing application cycles, and were then accepted to an average of 2.28 programs. Overall, approximately 30% of the total applicant pool are accepted into genetic counseling graduate programs (AGCPD 2005). A separate study showed that 80% of recently enrolled students were accepted the first time they applied. Typically, students apply an average of 1.22 times before they are accepted to a genetic counseling program (Lega, Veach et al. 2005).

#### **1.1.4 History of the match in U.S. medical residency programs**

In 1951, a group of prominent medical leaders recognized the importance of developing a system to improve the chaotic medical residency selection process. As the process then stood, hospitals would compete for the most desirable residency candidates, resulting in increasingly early offers of internships to students. Some students would be offered positions two years prior to graduation. In response, medical schools came together and agreed not to release student transcripts and letters of reference until an agreed upon date. This solved the problem of early offers; however, the problem still remained that students were given short deadlines to make decisions on program offers (Walker, Scott et al. 1990; Roth 2002; Roth 2003). These were deemed “exploding offers” because they would expire if the student did not accept within a day or so (Reider 2004). Students were effectively forced to make decisions without knowing which positions they may be offered in the future (Walker, Scott et al. 1990; Roth 2002; Roth 2003). To remedy the situation, a group of medical leaders formed the National Interassociation Committee on Internships (NICI), which was part of the Association of American Medical Colleges. The NICI went on to establish the National Resident Matching Program (NRMP) in 1952. The NRMP proposed a centralized system to allocate residency positions to medical students (Wright and Katz 2004). This centralized clearinghouse for residency applications evolved into the existing NRMP matching program. The match was a way to alleviate the chaos of the existing selection process, and allow the preferences of the students and hospitals to have a larger role in residency admissions (Roth 2003).

At this time, F. J. Mullin, dean of students at the University of Chicago School of Medicine, proposed an outline for how the match would work. Rank-order lists would be collected from both students and hospitals. These lists would be used to match each student with

a residency program. Students and hospitals would rank their most preferred program or student, respectively, with a “1.” The rank “2” would be used for the second most preferred party, and so on. The proposed algorithm would first match students and hospitals that were each others’ first choice (a 1-1 ranking). Next, hospitals would be matched with students who they ranked “2,” and who ranked the hospital “1,” a (2-1 ranking). This would be followed by matches of the hospitals’ first choice and the student’s second choice (a 1-2 ranking). The algorithm would continue on (2-2, 3-1, 3-2, 1-3, 2-3) until the lists were exhausted and all possible matches were made. This algorithm was designed to give an advantage to students, and their first choices were considered before the hospitals’ first choices (Mullin and Stalnaker 1951). In addition, all applicants and hospitals participating in the match agreed not to make extraneous agreements outside of the match and were required to accept the resulting placements made through the match (Scotti 1997).

Within a few months of the match algorithm’s introduction, W. Hardy Hendren, a fourth year student found a flaw in the algorithm. If an applicant did not get his first choice, he or she would lose his second-choice program slot to a less-desirable applicant who ranked the program first. This student and six classmates presented a revised algorithm which was adopted as the “Boston Pool algorithm.” The revised match took place for the first time on March 15, 1952 (Wright and Katz 2004). This new algorithm updated the rank order list pairings as it went along, creating tentative matches between students and hospitals. Students were paired with a hospital that ranked them in the first group and would be moved only when they could be placed with a hospital that was higher on their rank order list. At that time, students ranked low on a hospital’s list could move up into a higher position. This system can be viewed as “deferred acceptance,” as the algorithm has hospitals make offers to applicants at the top of their rank

order list. Applicants may hold onto these tentative offers until they are given an offer by a hospital which they have ranked more highly on their list (Roth 2003). The Boston Pool algorithm was ideal because it produced stable matches. A match is defined as stable if there are no program-applicant pairings such that the applicant “A” prefers program “P” to his or her current match and program “P” also prefers applicant “A” to one of its current matches (Roth and Peranson 1997).

In the first match in 1952, approximately 5,800 students sought positions in 10,500 rotating internships (Scotti 1997). Over the next 40 years, both students and programs were generally satisfied with the match and the improvement over what formerly was a very chaotic process. However, in 1996, the match was again criticized by students who pushed for an “applicant proposing” algorithm to replace the existing “program proposing” algorithm (Reider 2004). The American Medical Student Association, the Medical Student Section of the American Medical Association (AMA), and the Public Citizen’s Health Research Group all contended that the match algorithm should either be changed or that the description of the match should be changed to give applicants better advice on how to participate. The “applicant proposing” algorithm differed from the existing algorithm in that students’ rank order lists were considered before the hospitals’ lists. The match would start by examining a student’s list and attempting to place them at the highest ranked program on their list. If that program also included the student on their list, a tentative match would be made. The match would continue until all applicants had been placed and the matches became final. This algorithm was considered more applicant favorable because their choices were considered before the programs’ choices.

The NRMP asked Roth and Peranson to study the existing and proposed algorithms to determine: whether it would be feasible to replace the existing algorithm with one that was more applicant-favorable; how much the existing algorithm was biased toward program preferences; to what degree a new algorithm would influence the match outcome; and what advice could be given to applicants when they are filling out their rank order lists. The authors discovered that under each algorithm, both applicants and programs receive the greatest benefit when submitting rank order lists that are a reflection of their true preferences. They also determined that using the new applicant proposing match algorithm resulted in a different match for <0.1% of the applicants they studied. Also, 0.5% of programs would be affected by the algorithm change. Most, but not all, of the applicants who were matched to a different program were matched to a more favorable program. The authors concluded that although the two algorithms performed similarly, the new algorithm was slightly more beneficial for applicants (Roth and Peranson 1997). In May of 1997, the board of directors of the NRMP voted in favor of replacing the existing algorithm with an applicant proposing algorithm, which was put into place on January 1, 1998 (Roth and Peranson 1997; Scotti 1997).

Today, the National Resident Matching Program is a private, not-for-profit organization governed by a board of directors elected by both medical education and medical student organizations (NRMP 2006). The NRMP is supported by the National Matching Services Inc. (NMS), a service that specializes in the development and operation of matching programs for many professional positions. The NMS is an umbrella organization, administering matches for postdoctoral dental residencies in the U.S., psychology internships in the U.S. and Canada, neuropsychology residencies in the U.S. and Canada, osteopathic internships in the U.S., pharmacy practice residencies in the U.S., as well as supporting the NRMP and medical residencies in Canada (CaRMS) (NMS 2006).

### **1.1.5 Organization of the match in U.S. medical residency programs**

The process of residency matching begins in the early fall of each year when applicants and residency programs begin the application, interview, and evaluation process. Beginning September 1<sup>st</sup>, applicants may submit an application using the Electronic Residency Application Service (ERAS), a service that electronically transmits residency applications, letters of recommendation, transcripts, Dean's Letters, and other supporting credentials to residency programs. Of note, a few programs use their own application or the Universal Application for Residency (completed on paper) instead of the online ERAS. After all evaluations and interviews are completed, both students and programs prepare a final listing of their choices in preference order. These rank order lists are submitted to NRMP and are used to place applicants into residency programs. Lists must be submitted to the NRMP by a deadline in mid-late February.

The current fee for students to participate in the match is \$65. This fee allows applicants to rank up to 15 programs on their rank order list, with a fee of \$30 per program for each additional program over 15. Institutions participating in the match must agree to pay a \$200 institution registration fee, a \$25 registration fee per program, and a \$25 fee per each matched applicant. For example, Hospital A with programs in Internal Medicine and Surgery who matched a total of 5 students would pay  $\$200 + \$25 + \$25 + (\$25 \times 5) = \$375$ . These five students would each submit \$65 each to NRMP, for a total of  $5 \times \$65 = \$325$  submitted to NRMP from the students (NRMP 2006).

“Match Week” occurs in the third week of March each year. On Monday of Match Week, applicants may visit a website to determine whether or not they have matched to a program, without the name of the program being revealed. Applicants who have not matched to any program may participate in the “Scramble.” On Tuesday of Match Week unmatched applicants can view the “Dynamic List of Unfilled Programs” and contact these programs in an attempt to secure a residency slot. On the Thursday of Match Week the official results of the match are announced and applicants find out the specific program to which they have matched. Applicants later receive official letters of appointment from the hospital they match at. Applicants begin their residency training at their matched program in July of the same year (NRMP 2006).

The existing matching algorithm allows for a number of variations. This includes allowing couples to submit pairs of rank order lists of identical length so that they may be placed in the same residency location (Roth 1996). The matching algorithm is able to treat the two rank order lists as a unit, and match the couple to the highest linked pair of program choices where both members of the couple matched to the programs listed. In 2005, 1,212 applicants entered



the match as part of a couple (Signer and Beran 2005). Also, because many specialties now require more than one residency, applicants may submit a primary rank order list for their desired second year position, and a supplemental list for first year positions to be applied if a second year position is acquired (Roth 2003). The match can also accommodate requests by residency programs to have an even or odd number of matches, and reversions of unfilled positions from one program to another (Roth 1996).

The NRMP has established principles and policies that guide programs and applicants through the match. Participants who do not comply with the policies are guilty of a match violation. Examples of violations include agreements made by match participants before match day, such as: a program pressuring an applicant to reveal the program's place on the applicant's rank order list or vice versa, signing a contract between an applicant and a program before Match day, "guaranteeing" a rank to one party in exchange for a guarantee by the other party to rank in a certain position, and committing to another training program outside the NRMP without withdrawing from the NRMP. Violations made during Match Week include: an unmatched applicant contacting a program before Tuesday of Match Week, program directors contacting a medical school before Monday of Match Week to find out which students did not match, and a medical school dean who consults with a student about their match status prior to Monday of Match Week. Also, both programs and applicants must honor the results of the Match to avoid a violation. Only under "serious hardship" may an applicant or a program receive a waiver from their commitment. These waivers are granted by the NRMP in accordance with their stated policies (NRMP 2006).

### **1.1.6 Outcome and satisfaction of the match in U.S. medical programs**

In 2005, the NRMP enrolled 3,813 programs offering a total of 24,012 positions, and 31,862 applicants in the match. The NRMP estimates that 80% participation is necessary for the match to function properly (Reider 2004). Applicants were either U.S. medical school students or “independent applicants,” a group that includes former graduates of U.S. medical schools, U.S. osteopathic students, Canadian students, and graduates of foreign medical schools. A total of 1,212 applicants entered the match as part of a couple. They had a match rate of 94.3%. In 2005, 19,760 (78.0%) active applicants matched to a program (Signer and Beran 2005). These applicants ranked an average of 7.65 programs on their rank order list (NRMP 2006). 5,588 (22.0%) active applicants in the 2005 cycle were unmatched, with an average rank order list length of 4.48 (Signer and Beran 2005; NRMP 2006). Their rank order list length was significantly lower than lists from students who matched to a program, demonstrating the fact that successful applicants include all acceptable choices on their rank order lists. The same trend holds when examining specific data from U.S. fourth year medical student applicants. In 2005, 12,975 (94.7%) U.S. fourth year medical students matched and had an average rank order list length of 8.25. There were 726 (5.3%) unmatched U.S. fourth year medical students in 2005 with an average rank order list length of 5.29. The NRMP encourages applicants to include on rank order lists only those programs that represent their true preferences. Programs should be ranked in sequence, according to the applicant’s true preferences. Applicants should consider the following factors when determining the number of programs to rank: competitiveness of the specialty, competition for specific programs that are ranked, and personal qualifications (NRMP 2006).

In 2005, 3,005 (79.4%) programs were filled and 779 (20.6%) programs were unfilled. Compared with unfilled programs, the filled programs had both longer average rank order list lengths and longer average ranks per position opening (NRMP 2006). Program fill rates differed significantly by specialty with Emergency Medicine post graduate year (PGY-2) filling all 144 (100%) positions offered. Preliminary Surgery had the lowest fill rate of all the specialties, with only a 65.0% fill rate.

A number of studies have been conducted on applicant satisfaction with the match. In 2003, a survey was distributed to oral and maxillofacial surgery residents to estimate their satisfaction with the matching process, elicit the factors they considered in selecting residency programs, and analyze the relationship between these factors and residents' overall satisfaction with the match. For these residents, the application and matching process is remembered as a stressful, expensive, and time-consuming effort. When making their rank order list for the match, these residents considered five factors to be of the greatest importance: good relationships with attendings, good relationships between residents, training in orthognathic surgery, training in dentoalveolar surgery, and training in implant surgery. Seventy percent of residents report being placed in the program they ranked first on their list. When asked how satisfied they were with the results of the match, satisfaction averaged 4.3 on a scale where 1=dissatisfied and 5=very satisfied. Satisfaction averages varied between programs (4-year certificate, MD integrated, MD optional, or OMFS/PhD) (Laskin, Lesny et al. 2003).

A 2005 study from Wayne State University Obstetrics and Gynecology Residency Program sought to explore the relationship between residency program selection factors and the placements the program received on candidates' match lists. Candidates were given a list of 16 possible program selection factors, including: subspecialty opportunities, faculty impression at

interview, curriculum, lectures and conferences, living location, medical center location, and resident impressions at interview. The respondents of this survey indicated three factors as most important in their decision to rank a program in the top quartile of their rank order list: program meets personal career goals, faculty-resident relationships, and living location (Raymond, Sokol et al. 2005). In a related survey, 40% of surveyed candidates ranked program curriculum as the most important factor when creating a rank order list (Carraccio and Gladstein 1992).

Finally, the Association of Pediatric Program Directors (APPD) and the Council on Medical Student Education in Pediatrics (COMSEP) conducted a study in 2005 to evaluate the effectiveness of the match process overall, and the existing resources available to students going through the match. They discovered that 97% of pediatric residents were either very satisfied (88%) or somewhat satisfied (9%) with where they matched. A majority of respondents (82%) were either very satisfied (42%) or somewhat satisfied (40%) with the advice/counseling they received on the match from their medical school. The vast majority of the respondents were satisfied with the following aspects of the matching process: accessibility of information on Pediatric training programs (94% somewhat or very satisfied), use of the ERAS (96%), and the interviewing process (96%). When asked how they would improve the counseling and guidance given to fourth year medical students concerning the match, respondents listed timing of advice, quality of advice, quantity of advice, and quality of information available online as areas which could be improved upon. Students desired a “time-line” of events concerning the matching process to be given in the third year of medical school. To improve quality of advice, students suggested universal guidelines for individuals advising over the matching process. To improve the quantity of advice, students suggested a number of forums throughout the application process consisting of faculty, residents, and students who have participated in the match. Students also

suggested that quality of information could be enhanced through improved accuracy on the Fellowship and Residency Interactive Database (FREIDA) (Englander, Carraccio et al. 2003).

Overall, these four studies indicate that although the application and matching process may be a stressful time for applicants, the majority of residency applicants are satisfied with the results of the match. Applicants also indicated that they have a number of defined criteria that they utilize when creating a rank order list. A number of resources also exist to guide applicants through the matching process.

### **1.1.7 Other uses of a matching algorithm**

As the match algorithm became commonplace for residency placement, a number of post-residency programs adopted an identical or similar algorithm to regulate their appointment processes (Reider 2004). These matches for fellowships were enacted in the 1980s and 1990s after the fellowship market began to unravel in a manner similar to that of the internship market in 1950 prior to the match (Roth 2003). Thirty-four types of sub-specialty fellowship positions are organized through a Specialty Matching Service organized by the NRMP. The algorithm developed by Roth and Peranson in 1997 has also been adopted by postdoctoral dental residencies, osteopathic internships, osteopathic orthopedic surgery residencies, pharmacy practice residencies, clinical psychology internships, and medical residencies in Ontario and Alberta, Canada (Roth 2002).

Outside of the medical realm, the matching algorithm has been used to design auctions used by the U.S. Federal Communications Commission to sell the rights to transmit on different parts of the radio spectrum (Roth 2002). Sororities also use submitted rank order lists but use a different matching algorithm called a Preferential Bidding System. This algorithm is very

different from the one used by the medical community because it produces unstable matches (Roth and Mongell 1991). New York City used the match as a model for assigning spots at public high schools in 2004. Using a match, 30% more students were assigned to their first choice school (Wright and Katz 2004). In Canada, the Roth and Peranson algorithm is used to fill articling positions with law firms in Ontario and Alberta (Roth 2002).

## **1.2 SPECIFIC AIMS**

No literature is available describing the use of a matching algorithm in the admission process to genetic counseling programs or any other graduate studies programs. Recent admission cycles for genetic counseling programs proved to be quite labor intensive and time consuming for both the applicant and the programs. Despite the excess ratio of applicants to available slots, recent application cycles resulted in a number of programs with unfilled slots (Gettig 2005). Due to these recent obstacles encountered in the admissions process, it is worthwhile to examine alternatives to the existing process for admission to genetic counseling programs. The NRMP's matching algorithm was used as the basis for this project. A mock match was performed to determine if a matching algorithm would be a feasible and successful alternative to the existing admission process used in genetic counseling programs.

Specific Aim #1: To evaluate the performance and determine the potential success of a matching algorithm in genetic counseling graduate program admissions compared with the existing process. Plan: A mock match was performed using rank order lists from current first year genetic counseling students and genetic counseling programs. To determine feasibility, the results of this mock matching algorithm were compared to the existing admission process to

explore whether a match would result in a different number of program slots filled. Also, it was determined whether the proposed match would result in higher rates of student satisfaction concerning which program they attend. In other words, using this algorithm, were students matched to a program that they ranked more highly than the program they currently attend? Also, an organization to administer the match was researched.

Specific Aim #2: To elicit genetic counseling program directors' and students' interest and responsiveness to the use of a matching algorithm in genetic counseling graduate program admissions. Also, the study aimed to gather their comments on the existing admissions process and how it may be improved. Plan: To determine interest and responsiveness to a matching process, students and program directors were asked to rate their level of satisfaction with the existing process, comment on the existing and proposed admission processes, and state whether or not they would be willing to participate in a binding match algorithm.

Specific Aim #3: To determine the financial feasibility of a match algorithm in the admission to genetic counseling graduate programs. Plan: To determine financial feasibility, program directors and students were asked how much money they would be willing to pay for a matching system to be implemented. Also, an estimate of the cost of a matching algorithm was elicited from the National Matching Services Inc.

## **2.0 EXPERIMENTAL DESIGN AND METHODS**

### **2.1 PARTICIPANTS**

All North American genetic counseling program directors and first year genetic counseling students were invited to participate in the study. Twenty-nine programs were contacted via e-mail through the Association of Genetic Counseling Program Directors (AGCPD) listserv and directed toward the website administering the survey (Appendix C.1). Program directors were also sent an e-mail to forward on to their first year genetic counseling students, inviting them to participate in the study (Appendix C.2). Of the 29 programs contacted, 27 submitted data in time to participate in the study. Of the approximately 200 current first year genetic counseling students, 166 responded to and participated in the survey. Also, a representative from National Matching Services, Inc. was contacted to obtain more specific information about a potential match for genetic counseling program admissions.

### **2.2 PROTOCOL**

The surveys used in this study were created by the author, Dr. Grubs, and Ms. Gettig and approved by the University of Pittsburgh Institutional Review Board as exempt (Appendix B). Both surveys were hosted on SurveyMonkey.com, an online survey administrator. Program



directors were asked fourteen questions concerning a match algorithm (Appendix D). They were first asked to identify which program they are from, and then to provide a rank order list including all applicants from the 2004-2005 applicant pool that they considered acceptable and who have been or were offered admission to their program. Ranking was provided in order of desirability, with “1” representing the most desirable candidate that the individual program interviewed. Applicant data was coded using a combination of first and last initials, last four digits of social security number, and birth date. Applicants who did not have a social security number (such as international applicants) were coded using the first six letters of their last name. The code was utilized to provide anonymity for the applicants and their data. Programs were also asked about their experience with the existing process, including ability to fill all available slots, whether or not they had applicants accept admission and later rescind, and level of satisfaction. Program directors were also asked for their thoughts on a matching algorithm, including potential benefits and limitations, and willingness to accept unfilled slots that may arise as a result of a matching algorithm. A second email was sent to program directors and students three weeks after the initial contact email as a reminder to complete the survey. In this email, program directors were asked an additional question to determine if they would be able to support the cost of a match. Program directors were also given the Internet website address of the NRMP so that they could learn more about the medical school’s match and how it operates.

Students were asked a total of eighteen questions in the survey (Appendix E). Students were first asked to identify themselves using the code described above. They were then asked whether or not they would be willing to participate in a binding matching program for admission to genetic counseling programs. Students were asked to list which genetic counseling programs they applied to, interviewed at, were waitlisted at, were accepted at, and which program they are

currently attending. Choosing from the list of programs where an individual interviewed, they were asked to provide a rank order list of these programs in order of desirability. Students were asked not to rank programs that they would not consider attending. Ranking was done in a similar manner to that of the program director's survey, with the most desirable program ranked as "1." Students were also asked if they had accepted admission from one program and later decided to attend a different program. The next set of questions elicited factors influencing the decision to apply to, interview at, and accept an offer of admission at a certain program. Students were also asked about their willingness to pay a fee associated with a matching program, their level of satisfaction with the existing admission process, and general comments concerning how well the existing process works and their experiences with the admissions process.

### **2.3 DATA ANALYSIS**

Students' and program directors' rank order lists were analyzed using the existing applicant proposing algorithm used by the NRMP. This algorithm uses programs' and applicants' preferences, as stated on the rank order list, to place applicants into the highest ranked program possible. Using this algorithm, students were placed into programs starting with the first student to fill out the survey. However, it is of note that the order in which students are matched to a program does not affect the final outcome. An attempt was made to place each student into the program that was most preferred on his or her rank order list. A student was placed into a tentative match with a program when the program placed the student on their rank order list as an acceptable candidate. Also, to make a tentative match the desired program must have an unfilled

position available for the student. If the program is filled, the current student can potentially replace another student who is tentatively matched to the program but is ranked lower than the current student. If this was the case, the less preferred student was removed from the tentative pairing to make room for the more preferred student. When a student was removed from a previous tentative match, an attempt was made to re-match the student, starting as high as possible on their rank order list and moving downward. If a student could not be matched to their first choice, an attempt was made to match them with their second choice, then their third choice, and so on. This process continued until the student reached a tentative match with a program on their rank list, or all their choices were exhausted and a match could not be made. After all applicants were considered, the matching process was completed and tentative matches became final.

Responses to open-ended questions were reviewed and common themes and positions were assembled for the purpose of data analysis. Answers to yes/no questions and multiple-choice questions were compiled and tallies and percentages were calculated.

### **3.0 RESULTS**

Of the total 29 programs and estimated 200 current first year genetic counseling students, 27 and 166 surveys (respectively) were returned. As the surveys were collected anonymously, no information is available regarding non-respondents. Applicants who did not submit their unique applicant code (consisting of a combination of first and last initials, last four digits of social security number, and birth date), or a list of where they interviewed at/were accepted to, or a rank order list could not be included in the matching algorithm. Twenty-nine of the 166 student respondents were excluded from the algorithm because of this missing data. Also not included in this match algorithm were applicants to genetic counseling programs who are not currently attending any genetic counseling program. The entire applicant pool for the 2004-2005 application cycle was approximately five hundred. This study did not include the approximately 300 applicants who did not obtain admissions. These are individuals who were not offered an interview or were interviewed but declined offer(s) of admission. We did not have the means at this time to collect data from these individuals.

### **3.1 SPECIFIC AIM 1**

Specific Aim #1: To evaluate the performance and determine the potential success of a matching algorithm in genetic counseling graduate program admissions compared with the existing process.

#### **3.1.1 Statistics and performance of the existing admissions process**

Information was first collected concerning the existing admissions process. Using data from the student surveys, it was calculated that in the 2004-2005 application cycle students applied to an average of 5.2 programs, interviewed at an average of 3.6 programs, and were accepted to an average of 2.4 programs. Under the existing admission process, students now attend their first (1.29 average) choice based on their submitted rank order list.

In an open-ended response question, students were asked to describe and rank all the factors that influenced their decision to apply to specific programs. Location was the most common influence listed by students (93%). Size of the program was listed as an influence by 31% of students. Cost (26%) and financial aid (25%) were also important influences. The students also listed quality of rotations (25%), program reputation (24%), and admission requirements (13%) as influential in their decision to apply to a program. Other influences included balance between psychosocial and science aspects of genetic counseling, timing and balance between classes and rotations, staff/faculty, and “gut feelings” about the program. Open-ended responses to this question can be found in Appendix F.1.

Influences on the decision to interview at a program were also elicited. Many students responded that they would interview at any program where they were given the opportunity to interview (52%). Again, students listed location as an important factor influencing their decision to interview (34%). Students also listed costs associated with interviewing, such as travel and hotel (14%), as influential. Ease of scheduling the interview and the program's help with arranging travel and accommodations was also listed (6%). Students also included influences similar to those affecting the decision to apply to a particular program, such as financial aid, program reputation, and size. Open-ended responses to this question can be found in Appendix F.2.

Lastly, students were asked to describe the influences on their decision to attend a genetic counseling program. Compared to the previous questions concerning decision to apply and interview at a program, the greatest variety of influences were gathered from this question. Location was the most commonly listed influence (70%), followed by cost/financial aid/scholarship awards (54%). Also influential were the program directors and faculty associated with the program (32%), rotation quality and organization (31%), "gut feeling" about the program after interviewing (18%), size of program (18%), and reputation of program (17%). Twenty-one percent of students responded that they were only accepted to one program; therefore, they did not have a decision to make. Other influences listed by the students include: the program's balance between clinical and classroom experiences, the program's balance between psychosocial and science aspects of genetic counseling, meeting with current students, and reported rates of passing the board examinations and ease of job placement following graduation. Open-ended responses to this question can be found in Appendix F.3. A summary of influential factors listed by students can be found in Table 1.

**Table 1. Student influential factors**

<b>Application</b>		<b>Interview</b>		<b>Attendance</b>	
<b>Influence</b>	<b>Percentage</b>	<b>Influence</b>	<b>Percentage</b>	<b>Influence</b>	<b>Percentage</b>
Location	93%	Opportunity was given	52%	Location	70%
Size of program	31%	Location	34%	Cost/ financial aid	54%
Cost	26%	Cost associated with interview	14%	Program director/ faculty	32%
Financial aid	25%	Ease of scheduling	6%	Rotations	31%
Rotations	25%			“Gut feeling”	18%
Program reputation	24%			Size of program	18%
Admission requirements	13%			Program reputation	17%

A summary of program data from the existing and proposed admissions processes is displayed in Table 2. Collectively, the 27 programs had an average of seven available slots in the 2004-2005 applicant pool (see Table 2, column A). Four programs (14.8%) reported having unfilled slots following the 2004-2005 admission cycle. These programs had an average of two unfilled slots (see Table 2, column B).

**Table 2. Available and filled program slots in existing admissions versus match**

<b>Program</b>	<b>A. # Slots available in 2004-2005 cycle</b>	<b>B. # Slots filled in existing admissions</b>	<b>C. # Slots filled in initial match</b>	<b>D. # Slots available in modified match</b>	<b>E. # Slots filled in modified match</b>
<b>California State University at Northridge, CA</b>	9	9	7	6	6
<b>UC Irvine Medical Center Genetic Counseling Program, CA</b>	5	5	5	4	4
<b>University of Colorado Health Science Center, CO</b>	8	6	4	6	4
<b>Northwestern University Medical School- Graduate Program in Genetic Counseling, IL</b>	10	8	6	7	6
<b>Indiana University, IN</b>	6	6	6	4	4
<b>Boston University School of Medicine, MA</b>	5	5	4	4	4
<b>Brandeis University, MA</b>	8	8	3	6	4
<b>University of Maryland School of Medicine, MD</b>	6	6	3	4	4
<b>Johns Hopkins University/NHGRI, MD</b>	5	5	5	4	4
<b>University of Michigan Medical Center, MI</b>	6	6	5	4	4
<b>University of Minnesota, MN</b>	6	6	4	4	4
<b>UNC Greensboro, NC</b>	8	8	7	6	6
<b>Sarah Lawrence College, NY</b>	25	23	8	17	9



Table 2 (continued)

<b>Program</b>	<b>A. # Slots available in 2004-2005 cycle</b>	<b>B. # Slots filled in existing admissions</b>	<b>C. # Slots filled in initial match</b>	<b>D. # Slots available in modified match</b>	<b>E. # Slots filled in modified match</b>
<b>Mount Sinai School of Medicine, NY</b>	6	6	6	4	4
<b>University of Cincinnati, Genetic Counseling Program, OH</b>	8	8	5	6	5
<b>Case Western Reserve University, OH</b>	4	4	4	3	3
<b>University of Oklahoma Medical Center, OK</b>	4	4	3	3	3
<b>Arcadia University, PA</b>	10	9	8	7	7
<b>University of Pittsburgh, PA</b>	11	11	10	8	8
<b>University of SC- Genetic Counseling Program, SC</b>	6	6	5	4	4
<b>University of TX- Medical School at Houston, TX</b>	6	6	6	4	4
<b>University of Utah Graduate Program in Genetic Counseling, UT</b>	6	6	5	4	4
<b>Medical College of VA/VCU, VA</b>	5	5	4	4	4
<b>University of WI- Genetic Counseling Program, WI</b>	5	5	5	4	4
<b>University of British Columbia, Canada</b>	6	6	6	4	4
<b>University of Toronto, Canada</b>	4	4	1	3	2
<b>McGill University, Canada</b>	4	4	2	3	2
<b>Average</b>	<b>7.1</b>	<b>6.9</b>	<b>5.0</b>	<b>5.0</b>	<b>4.5</b>

Three programs reported having one or more applicants accept admission and later withdraw their acceptance. Collectively, these programs reported a total of 10 students who withdrew acceptance. Only one student reported that they accepted admission from one program and later decided to attend another. The student explained, stating: “On decision day I accepted an offer from my second choice school. Later in the day my first choice called me and suddenly offered me a spot. I had to retract my acceptance from the original school.”

### **3.1.2 Mock match algorithm and comparison with existing process**

A mock match was attempted using the submitted student and program data. However, the execution of a mock match in this study had to be modified due to missing data. Some student surveys and rank order lists could not be included in this part of the study because they were missing the unique student code needed to match them with various programs. Other students omitted a completed rank order list or information on which program they are currently attending. Twenty-nine of 166 (17.5%) submitted student surveys could not be used in the mock match due to missing data. Instead of providing their unique code consisting of the last four digits of the social security number and first and last initial, some students submitted only a last name. This was expected from the Canadian students (who do not have a social security number). Some students provided incomplete rank order lists, which did not allow for their inclusion in the match. Other students submitted codes that were incorrect. These codes were assumed to be incorrect because they did not match up with any codes in the rank order lists of programs that these students applied to, interviewed at, or where now attending.

Two genetic counseling programs (Wayne State and Howard University) did not submit rank order lists in time to be included in this study. These programs and the students who are now attending these programs were excluded from the mock match. In addition, not all program directors had access to applicants' social security numbers. Therefore, these directors could not create the unique student codes (a combination of social security number and initials) necessary to match students with their program. These programs created rank order lists based on last name and date of birth, initials and date of birth, last name alone, or initials alone. It was difficult to determine whether a student was located on a program's rank order list when the two methods of coding did not match up. Due to the inconsistencies in coding, the match was modified.

When the match was initially attempted using all the student and program data that was submitted without any alteration to adjust for the missing student data, nineteen programs did not fill. This was logical, since only 137 student surveys were available for almost 200 open slots. In this initial match, only eight of 27 programs filled all their available slots (see Table 2, column C). To take the missing student surveys into account, each program's number of available slots was reduced by 30%. The percent used to reduce slots was calculated based on the number of useable student surveys received, divided by the total student respondents we expected ( $137/192=70\%$ ). The adjusted total number of open slots was 137 (see Table 2, column D), which was equal to the number of useable student rank order lists. A mock match was performed again. A comparison of slots filled under the existing admissions process versus slots filled under the initial and modified mock match is shown in Table 2.

Programs ranked an average of 23 students in their rank order lists. Under the match, programs had an average of five slots available to fill (see column D, Table 2). Under this match, seven programs (26%) had unfilled slots, while the other 74% of programs filled all their slots (see column E, Table 2). The unfilled programs had an average of two unfilled slots. Students ranked an average of 3.37 programs on their rank order list. Using a match, students were placed with their 1.30 choice (on average), based on their submitted rank order list. Sixteen of the 137 students were not matched under the match algorithm. A comparison of the existing admissions process performance versus the modified match results is shown in Table 3.

**Table 3. Performance of existing admissions process versus mock match algorithm**

	<b>Existing admissions</b>	<b>Match algorithm</b>
# Of programs with unfilled slots	4	7
Average number unfilled slots	2	2
Total number unfilled slots	7	15
Average rank of program applicant was placed with	1.29	1.30
Number of applicants rescinding decision to attend	10	None (theoretically)
Number of applicants not placed with a program	Not determined in this study	16

### **3.1.3 Organization to administer the match**

To further investigate the feasibility of a match in genetic counseling admissions, the National Matching Services Inc. was contacted. This organization administers matches for dental residencies, psychology internships, neuropsychology residencies, osteopathic internships, and pharmacy residencies. It administers all aspects of a matching program in collaboration with a professional organization, such as the AGCPD, including development of educational materials,

registration of participants, data collection, performance of the match, distribution of results and preparation of statistics. The organization has administered matches of many sizes, involving anywhere from 200 to 30,000 applicants and 100 to 25,000 positions. Also, consulting services are available to advise on the feasibility of a matching service. The NMS utilizes software to automate all aspects of a match. Customized software is available to organizations that wish to administer their own matching program (NMS). A representative from the NMS was contacted, and indicated that it would be feasible for their organization to assist genetic counseling programs in a matching algorithm(Peranson 2006). Further information was gathered from the NMS concerning the cost of a genetic counseling admissions match, which is further described under aim 3 in section 3.3.

## **3.2 SPECIFIC AIM 2**

Specific Aim #2: To elicit genetic counseling program directors' and students' interest and responsiveness to the use of a matching algorithm in genetic counseling graduate program admissions. Also, the study aimed to gather their comments on the existing admissions process and how it may be improved.

### **3.2.1 Student interest in a match**

Students' openness to a matching program was elicited through a few questions. First, the students were asked if they would be willing to participate in a binding match algorithm for admission to genetic counseling programs. Of 159 students, 54 (34%) students responded that they would be willing to participate in a match, while 105 (66%) indicated that they would not be

willing. Students who indicated that they were unwilling to participate in a match were asked to provide an explanation. Many students expressed skepticism concerning how the match works, whether they would truly benefit from a match, and the nature of a binding contract. Many participants recognized that they were lacking sufficient knowledge to decide on a match. As one student explained, “I don't like the idea of entering into a binding contract without knowing exactly what I'm agreeing to.” Another commented: “I am not terribly familiar with how the matching program works; however, my sense is that there's an element of strategy to it which I am uncomfortable with.” A few students expressed interest in the match if it would not be attached to a binding contract. One remarked “a matching program would be helpful, but a binding contract would be a deterrent for those applying.” Students expressed similar concerns that a match would not result in them attending their top choice program. Others brought up the question of personal circumstances (such as family illness) that may occur close to the match date, making a binding match undesirable.

Students also commented on potential limitations of a computer based matching algorithm. The first limitation is that a matching algorithm would not be able to take into consideration the importance of financial aid and scholarships in the decision to attend a program. One student explained: “Some schools offer scholarships or financial aid packages at the time of acceptance to only certain students. If I needed that financial aid to attend that particular program over one that was less expensive, but could not be guaranteed that I would be a recipient, I would be wary of having a binding contract with that institution.” Yet another student affirmed, “A matching program would not account for financial variability that arises as the bidding process continues.” Another limitation of a computer based match is the inability to create classes of students based on personalities. One student commented that an important

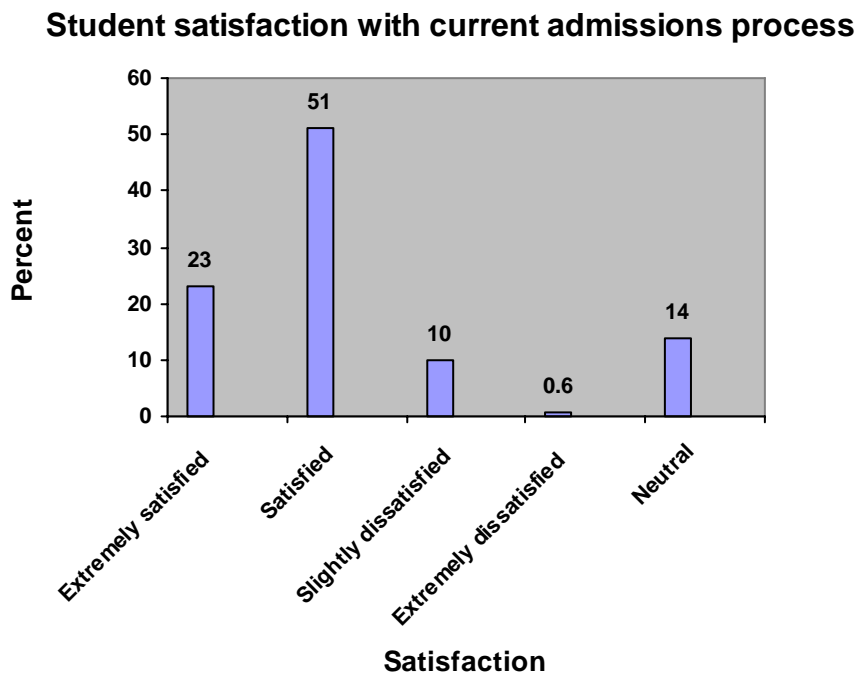
factor in genetic counseling programs is the class dynamic and interaction between individuals: “I feel that our program heavily weighed our personalities and how much of a "match" we were for each other just as much as they considered how much of a match we were with the program.” Another student stated “with the current system, programs have the option of not offering a spot if they see a drop off in talent or if the next person on the list doesn’t fit well with the class they already accepted. With a match system that may be a tougher call to make.” The ability program directors currently have to create a unified, cohesive class is a facet of the existing admission process which a computer based matching algorithm would not be able to perform.

Others brought up the complexity of the factors influencing the decision to attend a program, and the desire to be able to make the last decision and freedom to change one’s mind at the last minute. As one student simply declared, “I am passionate about CHOICES!” Students also expressed concern over the fact that they changed their mind about which program to attend up until the last minute. They recognized that this decision making process would be limited by a match. Other comments included the idea that the admissions process is already too stressful, and that a match would add unnecessary stress. A number of students simply stated that they would not want to be matched with a program that was undesirable, or in location that they did not desire. Additional open-ended responses describing why students are not willing to participate in a match can be found in Appendix F.4.

### **3.2.2 Student satisfaction with existing admissions process**

A second question assessed student satisfaction with the existing admissions process, which can be examined as an indirect measure of potential openness to the possibility of a match. Students were asked to rate their satisfaction with the existing admissions process and were given five

choices: I am extremely satisfied with the current process and believe it worked well for me; I am satisfied with the process; I feel neutral about the current process; I am slightly dissatisfied with the current process; or I am extremely dissatisfied with the process and do not believe it worked well for me. Responses were obtained from 150 students. The majority of students were either satisfied (51%) or extremely satisfied (23.3%) with the current process. Fourteen percent felt neutral about the process, while 10.6% were slightly dissatisfied, and one individual (0.6%) was extremely dissatisfied with the current admissions process. The results from this question are shown in Figure 1.



**Figure 1. Student satisfaction with current admission process**



Students were also asked to comment on how well they feel the existing admissions process works. Student comments ranged from “not very satisfied” to “I really like it,” and “I feel like the admissions process works itself out fairly well eventually.” Students made suggestions to improve the existing process, including a universal application and a universal date on which programs invite applicants for interviews. One student suggested setting up interviews “for specific ranges of times as well instead of having some so early and others so close to the notification date.” Concerning the universal notification date and the five-day period following it, most students were satisfied with the existing process. However, many indicated that they wished the notification date would be scheduled earlier in the year. Students were divided concerning opinions of the five-day waiting period. While one student commented that the “5 day window to decide seems awfully narrow if you find out that you have been selected from the wait list on one of the last two days,” another student had a different viewpoint: “Five days is a lot of time. I don’t see why it should take that long. It just allows for people to procrastinate.” One student disliked the feeling of pressure she received when programs called to ask if she had made a decision concerning acceptance. Many students remarked that they appreciated constant information concerning their place on the waitlist. One student emphasized: “more information = more informed decision.” Additional student comments on the effectiveness of the existing admissions process can be found in Appendix F.5.

Finally, students were asked to comment on their overall experience with the existing admissions process, including any comments on whether or not it was stressful. They were also asked for any suggestions they had to improve the process. Many of the comments focused on how stressful the entire admissions process is, including the interviews, the notification date, and the five days during which an applicant must make a final decision. One student strongly

declared: “I felt like a ‘piece of meat’ that the programs were fighting over - I did not enjoy the process.” A major cause of stress was the waitlist. One student commented on how they imagined a particularly stressful wait-list scenario may occur:

With this system, I think that my worst fear was that I would be accepted at a school that I didn't really want to attend and waitlisted at the one I really wanted. So, I was afraid maybe there was someone else out there was waitlisted at the school I was accepted at (which maybe they really wanted to attend), and the school that they were accepted at was the one I really wanted. Therefore, there we would be, each hoping that someone out there would turn down their acceptance to the programs we really wanted, but not able to know and make the right decision. I think that this fear would have made me procrastinate my acceptance to the school I didn't really want to go to, and that might hurt another's chance of getting into that school. How many people do you think wait until the last second to make that choice and end up hurting another person's chances of getting into the school they really want?

A second student commented “I was on the waitlist for a day or 2 and was very nervous. If a matching program could eliminate that, it would be great.” Another potential downfall of the waitlist is that it may discourage students to learn that they are not highly desired by the program that they wished to attend. One student put it this way: “It definitely doesn't make someone feel good when their #1 school says that they're waitlisted. You want to go to a school that wants you the first time around!” Other causes of stress mentioned by students include: a large number of interviews in a short period of time, high cost of applying and interviewing, difficulty of travel to interviews, having only five days to decide on a program to attend, and the inconsistency in admission decision notification (by phone, email, and mail). However, a number of students acknowledged that although the process can be extremely stressful at times, the stress is to be expected. One student noted “things work themselves out in the end the way it is set up now.” Another student concurred, stating that “a matching program would feel more stressful because it

would feel like I had less control over the final decision.” Someone else remarked, “It is extremely stressful. The build-up to that day is insane. However, in the end I think it works well”. Another student had an interesting perspective on the stress, stating that “it would not be as fulfilling to get into the program you want, if it wasn't a difficult/stressful process.”

Although there is a lot of stress associated with the existing admissions process in genetic counseling program, students noted a number of aspects that they found very helpful. Students were very appreciative of programs that were able to continually inform them of their place on the waitlist. The students also appreciated the universal notification date, the opportunity to stay with current students during the interview process, and programs that were willing to help with travel expenses. As one student noted, interviews are an essential component in the admissions process: “the interviews are an absolute necessity in order for the applicant to gain a truer understanding of the program and what it has to offer. This sort of experience cannot be replaced by a website.”

While evaluating the existing admission process, students were able to provide some suggestions as to how to improve the process. Many students expressed interest in changing the universal notification day to an earlier date. Typically students apply to genetic counseling programs in the late fall, and are not notified of a decision until May of the following year. As one student shared, “I applied late October and found out in May that I was in. Seven months seems like a long time to have to hear.” Another student had a similar experience while she/he was preparing to make a major life transition:

The process is incredibly stressful. Especially the universal acceptance date being in May. At that point in time (if you are an undergrad), your undergrad years are coming to an end. I was on an emotional rollercoaster already. I was leaving a place I'd been for the last four years, graduation was approaching. It was

incredibly stressful because I didn't find out until after my college graduation if I was accepted or not. I couldn't make any plans about my life. I think the date should be moved up.

Students offered a number of other suggestions to improve the current process. There was a strong interest in initiating a universal application service on the Internet which would allow applicants to submit letters of recommendation, transcripts, essays, applications, and associated fees to a single organization. For schools that already utilize an Internet based application service, students wished for more frequent updates on their application status. Other students saw a need for better and updated information about programs on their respective websites. When thinking about interviews, one student suggested it may be “useful to have a universal deadline for schools to offer interviews so that it makes it easier to coordinate travel schedules, etc.” Others suggested “video-conferencing” as an option for interviewing applicants who lack the money to travel long distances to every interview. One student wished they had the opportunity to meet with professors as well as current students and program directors. During the interviews another student wished for a more extensive explanation of the universal notification day.

Students also discussed ways to improve the universal notification day, as well as the five days that follow it. Suggestions included: informing people of their status while they are at home (as opposed to at work), limiting students to the number of acceptances they can “hold onto” over the weekend, enacting set times each school calls with decisions, consistently informing applicants their number/place on the waitlist, and constant communication between potential students and programs to reduce stress. Additional student comments on the overall experience with the existing admissions process can be found in Appendix F.6.

### **3.2.3 Program director interest in a match**

In a similar fashion, genetic counseling program directors' interest and responsiveness to the use of a matching algorithm in genetic counseling graduate program admissions was assessed through a number of questions. First, the program directors were asked for their thoughts concerning the implementation of a match in the admission process for genetic counseling programs. Program directors expressed a range of interest in the match, including: "do not feel we need this," "mixed feelings," "willing to go along with this," "would love to see this work," and "full support!" Some Canadian programs expressed uncertainty over whether they would need or benefit from a match because they have a unique population of Canadian applicants who for the most part prefer to stay in their own country. Because of this, these programs rarely experience difficulty filling their program slots. Similarly, some directors of U.S. genetic counseling programs did not see the need to change a system that works well, as one program stated that they "rarely go far down our waiting list" and have never been left with a slot unfilled. Another program director stated they "prefer the present system, flawed as it is, with additional guidelines for the students regarding their responsibility to a program once they accept."

Although some directors were anxious at the thought of a matching algorithm, many expressed interest in the outcome of this study and were "very glad it is being considered." In response to this question many program directors indicated potential problems associated with a match, as well as potential benefits associated with a match. These comments have been included in sections 3.2.4. and 3.2.5. so that they may be grouped with the responses to the specific question which elicited potential benefits and problems associated with a matching program. All program director responses about the implementation of a match can be found in Appendix F.7.

Due to the nature of the match algorithm, it has been recognized that not all programs are guaranteed to fill all open slots using this system. Therefore, program directors were asked if they would be willing to have unfilled slots in their program if a match was implemented for genetic counseling programs. Representatives from 27 programs responded to this question. The majority (19, 70%) indicated that they would not be willing to have unfilled slots, while the remainder of respondents (8, 30%) indicated that they would be willing to have unfilled slots.

### **3.2.4 Program director potential benefits of a match**

To further explore program directors' feelings concerning a match, they were asked two questions concerning the potential benefits and limitations of a matching program. First, they were asked to list three ways they believe a matching program would add to or improve the existing admissions process. The directors acknowledged a number of potential benefits to a match, including a potential decrease in anxiety, and a more efficient, quicker, easier, and satisfying admission process with benefits for applicants as well as program directors. In terms of benefit to applicants, a match may minimize applicant anxiety while waiting to hear about acceptance/waitlist, stimulate applicants to apply to more or different programs than they normally would, minimize the number of decisions that applicants need to make, and it may force applicants to think more during the interview process and encourage students to plan better. Also, program directors suggested that a match might make it more likely that qualified candidates get into a genetic counseling program. One program director stated: "it would provide opportunities for qualified applicants who did not match to be considered for admissions by programs that did not fill their class," most likely via a post-match scramble similar to that utilized by the NRMP during residency match week.

Directors also noted that the match may be more efficient by preventing applicants and programs from playing games to manipulate the admission process, resulting in a more formally regulated system. The match may also be more likely to fill a class, ensure that the greatest number of students are matched, and that as many programs are filled as equally as possible. In addition, the match would potentially result in the most satisfaction for programs and students, as the two parties are matched in the most desirable pairings possible. The match would also be a way to enroll the truly interested applicants and potentially decrease the “negotiations” between students and programs, as one director commented, it “would force (encourage) applicants and admission committees to carefully review their options and rank their choices ahead of time.” It was also suggested that a match would result in more final decisions potentially eliminating the existing problem of students accepting a slot and later withdrawing.

Program directors also discussed that the match would have the benefit of minimizing director anxiety about filling a class and would reduce the number of slots that students need to “scramble for” after admission decisions have been made. It would also drive programs to distinguish themselves from each other during interviews. A match may also be a quicker and easier process for programs, as program directors noted that it would “alleviate the hassle associated with call out day and the one to two weeks following when it seems like all a program director gets done is calling, recalling and answering calls from applicants.” A match may move the process along more quickly by reducing delays in confirming classes and providing a shorter time frame for finalizing admissions. It was also suggested that a match would require less administration time on the part of the programs by allowing a computer to take responsibility for the match, which “might reduce some of the craziness of the four days”, as stated by one program director. Also, using a matching program, directors will not have to "sell" the program

based on the match day; instead students will make choices based on their interview experiences. All program director comments about possible benefits of a match can be found in Appendix F.8.

### **3.2.5 Program director potential limitations of a match**

To contrast the previous question, directors were asked to discuss what they believe would be potential limitations of a matching algorithm. One potential issue that was brought up by multiple respondents was the concern of financial aid and scholarship offers. As the admissions process works now, applicants are provided with information concerning qualification for financial aid and scholarships after they are offered admission. The students usually have this information available to them when deciding to accept or reject an offer of admission, as opposed to residency programs. As one program director pointed out, “medical residency programs are much more similar in terms of costs/etc that this is less of a problem there. It is not reasonable to expect an applicant to make a decision without consideration of finances. Unlike the MD's, this is not part of "our" culture and I worry that it would turn students off from applying to GC programs.” Another program director predicted negative consequences for the applicants: “students would only be able to rank programs that they could afford (potentially without necessary information about financial aid/ scholarships). Or they may rank a program that they cannot afford, get matched, not get the amount of aid they need or anticipated and end up needing lots of loans, etc.” Others had concerns that private and expensive programs would not fill in a matching process. Also, the cost of conducting a match may be an “unnecessary expense for both parties,” as one director pointed out. Another respondent recognized the burden to the applicant, as “applicants are already spending thousands of dollars to apply and attend interviews --- what's the limit?”



Program directors also had concerns of the match itself, and what the undesirable consequences may be in the context of genetic counseling programs. There were concerns that a match would encourage programs and students to try to “game” the system to obtain more desirable results, and may increase competition among programs. One director imagined that “students may try to guess where they will be matched to and rank accordingly instead of ranking their choice. Programs may rank based on who they think will rank their program.” There was concern that a match may result in too much focus on the actual process of matching rather than determining if a candidate is right for a school, and vice versa. Also, a respondent mentioned that if a match needs full participation, it may be difficult to conduct a match in the genetic counseling population. Other directors had concerns that the genetic counseling applicant pool may be too small to utilize a match. Also, there were concerns that a match would “depersonalize the admissions process - contrary to the nature of the profession,” that a match would potentially favor the programs and put the student at a disadvantage, and that a “formal match could add to the perception that this is a unique, highly competitive and difficult process.” Others mentioned that “rather than making the process less painful, it (a match) might simply make it painful in a different way.” Program directors also had concerns that a match doesn’t allow programs to change a ranked order list (ROL) after a certain date if new information comes to light, and that ranking would be problematic, as “faculty hate the concept of having to “rank” to this degree” and rankings of top applicants is random, so that more strict criteria would have to be developed to address this concern. Some directors questioned the need for a match as they observed that a match would still necessitate the need for interviews, and it would not solve the issues of location constraints that many applicants have.

When thinking about the impact on students, program directors expressed concerns that a match may place student at a disadvantage by not providing them with a choice, as it “might limit choices for candidates who have significant others who also need to ‘match’ to a school or work location.” The match may also be an unfamiliar concept for applicants “as the process is not something that is commonly used in undergrad or other areas (except health care).”

Undesirable match results may cause lower student satisfaction and distrust of the system, may increase tensions for students, and applicants may refuse to participate, resulting in the dilemma of how to account for these applicants in the admissions process.

Finally, program directors expressed concern over the effect of a matching algorithm on the programs themselves. Many respondents had concerns that a match would result in less flexibility, control, and choice for program directors. As one director commented, program directors will “lose ability to balance class by selecting those with complementary backgrounds” resulting in a class that doesn’t have a good fit or “feel.” Others expressed concern that programs will not fill with the most desirable candidates, and that a match would not allow programs to negotiate with students as they are deciding. Three of the North American genetic counseling programs are located in Canada, which presents a unique variable, as these programs tend to fill with Canadian applicants. Some of these programs directors stated that they do not usually have difficulty filling their program slots with diverse and highly qualified applicants. In addition, at least one Canadian program requires that their students have a working knowledge of French. One program director feared that many Canadian applicants “may suffer in the match process” as there is a large difference in cost between attending a Canadian versus an American program. Due to the unique situation of the Canadian programs, program directors questioned the need to include Canadian programs in the match. All program director comments about

possible limitations of a match can be found in Appendix F.9. Table 4 compares potential benefits and limitations of a match algorithm, as suggested by program directors and students.

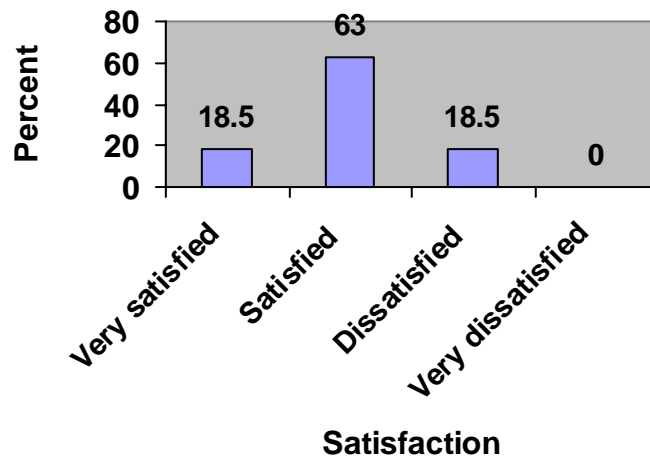
**Table 4. Benefits and limitations of a match**

<b>Benefits</b>	<b>Limitations</b>
Eliminates problem of waitlist	Binding contract
Forces applicants to think about programs	Cannot account for financial aid/ scholarship
Qualified candidates more likely to get into a program	Expensive programs may not fill
May discourage “game playing”	May encourage “game playing”
Quicker, less time consuming for directors	Depersonalizes admissions/ takes away choice
Finality of decisions	Costly
Minimize director and student anxiety	Stressful for program directors and applicants
	Not needed- Canadian programs not interested
	Programs do not want to rank candidates
	Needs 80% participation

### **3.2.6 Program director satisfaction with existing admissions process**

Another question assessed genetic counseling program directors’ satisfaction with the existing admissions process. Program directors were asked to rate their satisfaction with the existing admissions process and were given four choices: very satisfied, satisfied, dissatisfied, or very dissatisfied. Responses were obtained from 27 programs. The majority of program directors were either satisfied (63%) or extremely satisfied with the current process (18.5%). Five individuals (18.5%) were dissatisfied, and no directors reported being very dissatisfied with the current admissions process. The results from this question are shown in Figure 2.

### Program director satisfaction with current admissions process



**Figure 2. Program director satisfaction with current admissions process**

Program directors who indicated that they were dissatisfied with the current admissions process were asked to provide an explanation. A few directors expressed that the five-day period to decide on an offer has become problematic. One director suggested that five days might be too long, considering that the applicants often have several months following their interviews to consider their program options and preferences. Other directors expressed frustration with applicants who waited until the end of the five days to make a decision, while other applicants went past the five days to make a decision. For some programs, this lack of adherence to the five-day policy resulted in “loss” of applicants high on the waitlist while waiting to hear from applicants who were given an initial offer of admission. It was suggested that a match might help alleviate some of the stress associated with the five-day decision period. Other comments included dissatisfaction with the late acceptance date, the need for a more formal acceptance agreement between students and programs, and that the existing system is too stressful for all

parties involved and makes applicants doubt themselves. Additional program director comments on dissatisfaction with the existing admissions process can be found in Appendix F.10.

Finally, program directors were invited to provide any additional comments concerning admission and matching processes. One program director suggested the consideration of a universal application process, as was suggested by one of the student respondents. Other suggestions included: faster turn-around time between notification date and applicant response date, and creation of a formal pool for applicants who were not accepted so that they may get in touch with programs that have not filled all their slots. Also, there was concern that a match should not be binding so it would allow for switches to take place by students if, for instance, a spouse cannot find employment in a particular city. One program director noted that much more detailed information about the existing process should be collected and compared against the results of this study to determine the impact and potential effects of changing the admission process to incorporate a matching algorithm. Additional program director comments concerning admission and matching processes can be found in Appendix F.11.

### **3.3 SPECIFIC AIM 3**

Specific Aim #3: To determine the financial feasibility of a match algorithm in the admission to genetic counseling graduate programs.

#### **3.3.1 Cost estimate for a match**

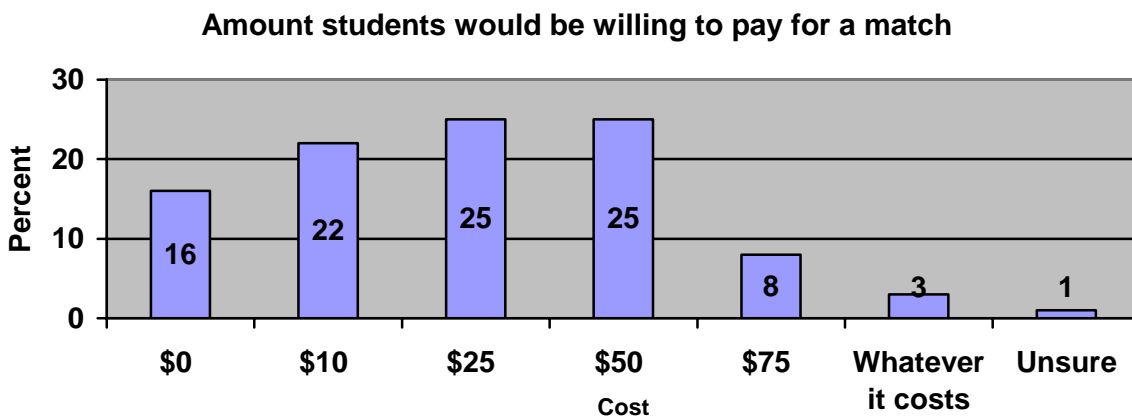
To estimate the cost of a match for genetic counseling program admissions, the National Matching Services Inc. was contacted. A representative from NMS provided a cost estimate

based on the figures of approximately 30 genetic counseling programs in North America with 150-170 positions to fill each year, and approximately 500 applicants annually. The total annual operating cost was estimated to be in the range of \$40,000 to \$50,000. An exact cost cannot be determined at this time as the cost varies based on a number of factors including: how the match is administered/operational procedures, exact numbers of participants, and start-up costs of a match. The cost of the match can be covered in a variety of different ways. Typically, both applicants and programs each pay a fee to register for the matching program. In most matching programs, the fee is paid when the applicant or program registers for the matching program. This fee is paid upfront, and is not refunded if an applicant or program later decides not to participate in the match. Usually, the applicant's fee is not based on the number of programs which they apply to. Also, the individual program registration fees may be pro-rated based on program size and number of available applicant slots. Also, programs may be charged an additional fee based on the number of positions filled. Overall, the distribution of the total cost to administer a match is flexible and may be done in a variety of ways. Some matches charge only applicants, only programs, both applicants and programs, or some matches get all or a portion of the costs paid for by a sponsoring organization (Peranson 2006). The U.S. residency match distributes the cost among programs and applicants. Applicants pay \$65 to participate in the match. Institutions participating in the residency match agree to pay a \$200 institution fee, a \$25 fee per each matched applicants, and a \$25 registration fee per program (NRMP 2006).

### **3.3.2 Students' views on cost of a match**

When asked how much they would be willing to pay for a matching algorithm, 15.7% of students said they would not be willing to pay for a match/ would not pay anything additional to the usual

program application fee, 21.9% would be willing to pay \$10, 24.7% would be willing to pay \$25, 25.3% would be willing to pay \$50, and 8.2% would be willing to pay \$75. Open ended responses included: would pay whatever is required (2.7%), or unsure (1.3%). A few students indicated reasons for their unwillingness to pay for a match. One student explained “Applying to programs is expensive; traveling all over the place is expensive as well. The last thing all the students need is another fee to get into a program.” The results from this question are shown in Figure 3.



**Figure 3. Amount students would be willing to pay for a match**

### 3.3.3 Program directors’ views on cost of a match

Based on the estimate of a match costing \$40,000-\$50,000, divided by 29 genetic counseling programs in North America, it was calculated that a match would cost approximately \$1,500 per program. This cost would possibly be higher or lower depending on the limitations mentioned above in section 3.3.1, as well as the percentage of the total cost that is passed along to applicants. Program directors were asked: Would your program be able to pay \$1,500 per year to participate in a match? Participants responded with either yes or no. Fourteen of the nineteen

program directors (74%) who responded indicated that their program would be able to pay the \$1,500 cost, while four programs (21%) would not be able to cover the cost. One program director declined to answer at this time.



## **4.0 DISCUSSION**

### **4.1 SPECIFIC AIM 1**

Specific Aim #1: To evaluate the performance and determine the potential success of a matching algorithm in genetic counseling graduate program admissions compared with the existing process.

Outcome: A mock match was performed, but with a number of modifications, as described in section 3.1.2. Due to the missing student data and the inconsistencies in coding between the rank order lists of programs and students, the ability to recreate a match was limited. The accuracy of the match results and their comparison to the existing admissions process is questionable and should be interpreted with caution. Table 2 gives a comparison of the performance of the existing admissions process versus the mock match algorithm. The match filled all available slots in 74% of programs. This is very similar to the performance of the 2005 U.S. residency match in which 79.4% of programs were filled (Signer and Beran 2005). In the context of program satisfaction, the existing admissions process appears to result in a fewer number of programs with unfilled slots (four, versus seven in the match). Both processes resulted in an average of two unfilled slots per program. Perceived student satisfaction (based on placement in the most desirable program) appears to be very similar in the existing system versus the match (1.29 versus 1.30 average rank of program that a student is paired with). In the 2004-2005 admissions cycle, 10 applicants eventually rescinded their decision to attend a particular

program. Theoretically, this would not be an issue in a binding match that requires applicants to attend the program they are matched to. During the mock match, 16 students were unable to be matched to a program. The total number of applicants not matched to a program under the existing admissions process has not been measured in this study. Overall, based on this preliminary data, the existing admissions process appears to perform better based on number of programs with filled slots, and in level of student satisfaction with program placement.

Data was also collected on the existing admissions process. In this study, students reported applying to an average of 5.2 programs, and were accepted to an average of 2.4 programs. This data concerning student application activity was similar to that reported by the Association of Genetic Counseling Program Directors. In the AGCPD's 2005 study, first-time applicants applied to an average of 4.78 programs and were accepted to an average of 1.77 programs (AGCPD 2005). In this thesis project, students ranked an average of 3.37 programs on their rank order list. Their rank order lists were shorter on average than the rank order lists of applicants to U.S. residency programs, who ranked an average of 7.65 programs (Signer and Beran 2005; NRMP 2006). This highlights a difference between genetic counseling program applicants and U.S. medical residency applicants.

Students listed a number of influences on their decisions to apply to, interview at, and attend certain programs. Many of these factors, such as location and interaction with faculty, were also influential factors for U.S. medical students when deciding on a residency (Raymond, Sokol et al. 2005). Genetic counseling students also listed cost/financial aid as a strong deciding factor throughout the admissions process. If students are indeed very limited by location and program cost, a match algorithm which cannot account for these two factors may not be a good fit for the genetic counseling applicant population.

Implications: Many obstacles were encountered during the process of recreating a match algorithm for genetic counseling programs. Some of these challenges were unique to this method of performing a match, while others may be universal to any matching process. As described in section 3.1.3., National Matching Services Inc. utilizes an online application process to enroll participants, and operates automated software to perform the match. This process would eliminate the problems experienced in this project concerning coding of student data and the associated reduced ability to match student preferences with the rank order lists of programs. Also, the format for submission of data online would likely be more simplistic and “user-friendly.” If a match algorithm was officially adopted by the genetic counseling community as the primary mode of admissions, it might be assumed that more students would participate (as compared to the number of students who participated in this study). However, students did report strong aversions to the implementation of a match which may result in reduced participation in a match (see discussion under aim 2). Also, a formal match would still encounter problems due to incomplete participation, and lack of participants’ full understanding of a match and how to create a rank order list.

The accuracy of the data concerning the performance of the match algorithm in this project is reduced due to the number of modifications that were made to the matching process used in medical residency placement. In addition, responses were gathered from only 68% of current students, and applicants who are not currently attending a genetic counseling program were not surveyed. Rank order lists were compiled retrospectively, which may have introduced recall bias. Also, the results of the match regarding which programs filled may have been influenced by the proportion of students who responded to the survey from each program. A program with eight slots that had all of its students respond to the survey was more likely to fill

under the mock match compared with a program that did not have as many current students respond to the survey. The NRMP estimates that 80% participation is necessary for the match to function properly (Reider 2004). In this study 93% of programs and 68.5% of students participated. For this reason as well as those stated above, the results of this match are compromised.

## **4.2 SPECIFIC AIM 2**

**Aim:** To elicit genetic counseling program directors' and students' interest and responsiveness to the use of a matching algorithm in genetic counseling graduate program admissions. Also, to gather their comments on the existing admissions process and how it may be improved.

**Outcome:** Overall, the students surveyed were hesitant and for the most part not interested in the implementation of a match in the admissions process to genetic counseling programs. The majority (66%) of students indicated that they would not be willing to participate in a binding match in the admissions process to genetic counseling programs. Many indicated that they were not interested in a match because they did not have enough information concerning how a match works, were hesitant to enroll in a binding agreement, and had concerns that they would not be matched with their most favorable program. Another major concern for students was the issue of financial aid and how it would factor into a matching process. Many students make decisions to accept an offer based on what they can personally afford. Also, the majority of the students (74.6%) reported that they are either satisfied or extremely satisfied with the existing admissions process. Eleven percent of current students stated that they were slightly or extremely dissatisfied with the existing admissions process. Similar to U.S. medical residents,

students recalled the admissions process as stressful, expensive, and time-consuming (Laskin, Lesny et al. 2003). Complaints concerning the existing process included stress relating to the waitlist and the late notification date.

Program directors expressed varying degrees of interest in a match. Although the majority (81.4%) of program directors was either satisfied or very satisfied with the existing admissions process, many expressed interest in the results of this study. The directors acknowledged a number of possible benefits to a match, including a potential decrease in anxiety, and a more efficient, quicker, easier, and more satisfying admission process with benefits for applicants as well as program directors. Both program directors and students suggested investigation into the possible use of a universal application for genetic counseling programs. Also suggested was an earlier notification date, to reduce the time between interviews and acceptances. Potential limitations of a match may include the same concern that students expressed over financial aid and scholarships, and the potential for participants to attempt to “game” the system to receive more desirable results. Also, the matching algorithm cannot guarantee to fill all slots in every program. Most program directors (70%) indicated that they would not be willing to have unfilled slots in a matching algorithm. When examining the existing admissions process, only 4 of 27 programs reported having unfilled slots. Collectively, there was an average of 2 unfilled slots per program. This raises the question as to whether having unfilled slots is actually a major problem in the existing admissions process.

The differences between medical residencies and genetic counseling programs were recognized by many respondents, and presented as a major concern and barrier against the implementation of a match. A number of respondents questioned the need for a match as; on the whole, the existing system has been working fairly well.

Implications: As might be expected, there was not an overwhelming consensus from either the students or the program directors concerning whether or not a matching process should be implemented in the admissions process to genetic counseling programs. Although the majority of students and program directors report that they are satisfied with the existing process, a number of limitations and drawbacks of the existing process were identified in this study. Using the results of this study as a guide, students and program directors are invited to further explore a number of possible modifications to the existing admissions process, regardless of whether or not a matching algorithm will be utilized in the future.

Both students and program directors discussed a number of valuable suggestions and opinions concerning the existing and suggested admissions processes. First, the existing admissions process will be discussed. The waitlist was a major cause of stress for many students. Although many recognized that stress is inherent in the process of graduate program admissions, suggestions were made to partially alleviate some of the stress. One student suggested limiting an applicant to the number of slots they can “hold onto” over the weekend following notification. While this may not be feasible, it would be helpful to emphasize to applicants that they should decline an offer as soon as they know that they are no longer considering that particular program. Most programs probably already stress this fact to accepted candidates; however, it cannot be emphasized enough, as it is mutually advantageous to both programs and students to keep the waitlist moving as quickly as possible. In general, students expressed a desire to have close communication with program directors during the five days following the notification date. Also, even if a match is not implemented, adoption of a formal acceptance agreement should be considered. This would allow programs to continue with the existing admissions process while gaining the beneficial binding aspect associated with a match.

Another suggestion included use of a universal application on the Internet that would allow applicants to submit letters of recommendation, transcripts, essays, applications, and associated fees to a single organization. Ideally programs would be able to send students a secondary application asking program specific questions after they have submitted the universal application. Notification of admission decisions is currently made by email, telephone, or mail. Although it may not be possible to make the method of notification universal among programs, it is sensible that all programs should inform applicants of how they will be contacted on the notification day if they are accepted or waitlisted, versus not offered admission. Also, it may be reasonable for programs directors to consider changing the universal notification date to an earlier time in the spring. This would require restructuring of the application due dates and interview dates so as to allow an earlier notification date.

Student and program director respondents expressed a variety of opinions concerning implementation of a match in genetic counseling admissions. The majority of students (66%) indicated that they would not be willing to participate in a binding match. It is important to note, however, that the surveyed group only included individuals for whom the existing admissions process was successful, and resulted in acceptance to a satisfactory program. It is possible that a match algorithm would be favored more by individuals who interviewed but were not accepted under the existing admissions process. This is a limitation in the interpretation of the results of this study. When asked to provide information concerning why they would not be willing, many students indicated that they were uncomfortable with the idea because they did not fully understand how a match works. Unlike the medical community, the match is not a part of the genetic counseling culture and many individuals do not fully trust or understand it. Other students responded that they would not want to participate in a match because they may change

their mind concerning which program they want to attend after interviewing. Also, students commented that they did not believe that a computer would be able to decide which program was the best fit for them. However, the match is designed so that students' rank order lists are not submitted until after interviews are conducted. In addition, the student is instructed to compile a rank order list consisting only of programs that they see as acceptable. Although a computer does place the student in a program, the match is based on the student's own preferences which they have submitted after interviewing and taking time to thoughtfully decide which programs they would be willing to attend. Students were not provided with extensive information concerning: how a match works, when a rank order list is filled out during the admission process (after all interviews have been completed), and how a match algorithm is designed to consider student preferences above program directors (although the balance is only slightly tipped in the students' favor). Also, the match algorithm is designed so that the most favorable outcomes will be achieved when individuals state their true preferences on the rank order list, thereby discouraging individuals to try to "game" the system to receive more desirable results. This lack of detailed information concerning the match algorithm may have skewed the students' opinions of a match in a negative direction. However, this limitation alone cannot account for all of the students' lack of interest in a match. Many students expressed the desire for the freedom to decide for oneself which program to attend. The importance of autonomy over this decision was emphasized by both students and program directors, and should be strongly considered when examining the possibility of implementing a matching algorithm.

The differences between genetic counseling programs and U.S. medical residency programs were raised as an important issue to consider before implementing a match. Although the strong majority of medical residents in the U.S. are satisfied with the process and results of



the match and fill rates are close to 80% (see section 1.1.4.), it should be stressed that genetic counseling programs are not medical residencies. A number of variables separate the two populations, including size of applicant pool and programs, finances, and belief systems. As stated by both student and program director respondents, the field of genetic counseling is based on the freedom of choice and personal autonomy. Many respondents saw a match as a threat to the very core belief system held by those in the genetic counseling field. The issue of financial aid and scholarship is also an aspect of the match that residency programs do not have to sort out. Residents' income is relatively similar among programs, whereas tuition and financial aid varies greatly both between and within genetic counseling programs. For a number of students, acceptance of an offer of admission is contingent on financial aid. If a match were implemented, many programs indicated that they would be unable to provide an applicant with precise information concerning tuition and scholarships prior to submission of a student's rank order list. Program directors expressed concern that expensive and private programs would have difficulty filling if a match were implemented. These are two very important limitations of a match in genetic counseling programs which should be weighed out against the advantages of a match. There was also concern that the size of the applicant pool and the programs would inhibit execution of a match. The National Matching Service (NMS) administers matches of many sizes, involving anywhere from 200 to 30,000 applicants and 100 to 25,000 positions (NMS 2006). It therefore appears that small size alone is not a reason to reject the possibility of a match.

In conclusion, program directors and students brought up a number of limitations and benefits associated with a match. No definitive consensus was reached by either students or program directors concerning use of a match in the admissions process. The information in this

section should be closely examined by all involved parties and combined with the information presented in the rest of this thesis to determine how, if at all, the admissions process to genetic counseling programs should be modified.

### **4.3 SPECIFIC AIM 3**

**Aim:** To determine the financial feasibility of a match algorithm in the admission to genetic counseling graduate programs.

**Outcome:** Information was gathered from both students and program directors concerning the financial feasibility of a match. The majority of students indicated they would be willing to pay \$25-\$50 to participate in a matching program. Also, a significant number of students indicated that they would not be willing to pay anything for a match, pointing out that they already have to pay a lot in application fees and travel expenses. The majority of program directors indicated that they would be able to provide \$1,500 per year to contribute to operating costs of a match.

As discussed by the NMS representative in section 3.3.1., there are a variety of ways to distribute the operating costs of a match. For genetic counseling programs, one option would be to pass on part of the cost of the match to the applicants. Using the estimate of 500 applicants annually, and the \$25 amount that students indicated that they would be willing to pay, approximately \$12,500 of the \$45,000-50,000 in operating costs could be passed on to the applicants. This would result in a lower cost to programs, approximately \$32,500-37,500 annually, to be distributed among programs.

The distribution of this cost could be determined in a number of ways. One program director indicated that \$1,500 is expensive, considering the small class size of certain programs. This concern of class size could indeed be factored into the matching program cost distribution. Cost to each program could be pro-rated based on program size and number of slots available. Programs could be charged a fee per applicant matched. U.S. residency programs are charged \$25 per applicant matched to the program, in addition to their flat registration fee of \$200. In a genetic counseling match, the fee per applicant matched could be determined using a formula. It was calculated above that after the 500 applicants are each charged \$25 to participate in the match, \$32,500-37,500 in cost would remain to be distributed among programs. This remaining cost, divided by the approximately 200 available slots, results in a \$175 charge per program slot ( $\$35,000/200 \text{ slots} = \$175$ ). Using this formula, a program with four slots would be charged \$700 ( $4 \times \$175$ ) to participate in the match, while a program with ten slots would be charged \$1,750 ( $10 \times \$175$ ).

Implications: In comparison to residency programs, it is clear that a match may be cost prohibitive for genetic counseling programs due to the limited number of programs. The difference in amounts paid by residency programs compared to the potential amount that individual genetic counseling programs would pay is quite large. Although the majority of directors stated that their program would be able to pay \$1,500 per year, at least four programs indicated that they would be unable to contribute that amount of money. This would raise the difficult predicament of attempting to operate a match without all programs participating or contributing to the operational costs. The success of the match in residency programs, and in general, is based on a high percentage of participation by both applicants and programs. The high cost of a match could potentially reduce the number of participants thereby hindering the

effectiveness of the match. If a match is introduced in the future, the possible options to distribute the cost of a match should be fully explored to determine the fairest and most agreeable distribution of cost among programs and students.

#### **4.4 LIMITATIONS**

A number of limitations of the study were noted as the data analysis was performed. Students and program directors were not provided with a detailed explanation of how the match works. As discussed in section 4.2, this lack of information may have skewed the students' opinions of a match in a negative direction, as they appeared to have a number of misconceptions concerning how the match operates. Program directors did receive an email directing them to the NRMP website for an explanation of the medical residency match. However, they too did not receive extensive information concerning how a match operates. Detailed information concerning the match was not provided in an effort to keep the survey short and as minimally time consuming as possible. Hopefully, this thesis will serve as a more comprehensive explanation of the procedure of the match for those parties interested in learning more about the possible implementation of a match in genetic counseling programs.

Concerning the attempt to perform a mock match with the data and rank order lists collected from participants in this study, a number of limitations were encountered that restricted the ability to perform a mock match. First, responses were not received from all current first year genetic counseling students or genetic counseling programs. Completed rank order lists and student codes were only received from 137 of the estimated 200 current first year genetic counseling students. The NRMP estimates that 80% participation is necessary for the match to

function properly (Reider 2004). This study did not collect enough useable student surveys to enable a realistic replication of a match algorithm. Also, the survey did not collect data from applicants who are not currently attending a program. This omission hindered the replication of the match and may have skewed the student data. For example, student/applicant interest in a match may have been more positive if applicants who were not accepted were included in the survey, as a match may have been more beneficial for this population.

Creation of the rank order lists by students and programs may also have been somewhat compromised. Program directors were asked to create a rank order list of interviewees approximately ten months after they had interviewed. In the residency model, programs create rank order lists within four months of the first interviews. Unless genetic counseling programs had an existing list of rankings from the last admissions cycle, the recreation of the rank order may not have been as accurate as it would have been if it were created immediately following interviews. Also, program directors may not be accustomed to creating a formalized rank order list of applicants. As one program director pointed out, rankings of the top applicants are random, and faculty do not like to compose a formal ranked list. In addition, the students' reported rank order lists may be biased toward the program they now attend. This may have distorted the statistic that students now attend the program that they ranked 1.3 (on average). Students may rank programs differently now than they would have immediately after interviews. Their rankings may be influenced by the knowledge of where they were accepted and where they were placed on the waitlist. One student commented: "I changed my mind several times about my "top" choice throughout the admissions process. Had I been forced to choose one at, for example, an early point in the admissions process, that program may not have been my first choice by the end of the process."

#### **4.5 FUTURE RESEARCH OPPORTUNITIES**

As discussed previously, the modified match used in this project has limited significance. If there is still interest in the use of a match after reviewing this study, it may be possible to try a match again. If this was done, it is recommended that the process begin early in the admissions cycle. Participants should be provided with a more detailed description of the match algorithm before compiling rank order lists (ROL). Non-identifying codes could be designed ahead of time and provided to both students and program directors for use in the ROL. These ROLs should be formally gathered from every applicant and program after interviews and before the universal notification date. Data should be collected on a secure website, designed to minimize confusion and complications. The matching could be performed by hand, or possibly with the use of a computer program. If the process was run under the guidance of the Association of Genetic Counseling Program Directors, students may be more likely to participate.

Students and program directors made some good suggestions concerning the existing admissions process and ways that it may be improved. Many suggested use of a universal application online, which would enable students to submit basic application material, such as transcripts, letters of recommendation, and essays. The information could then be sent to individual programs indicated by the applicant. Programs could later send out secondary applications to applicants to elicit further information. Also, it has been suggested by a number of respondents that an earlier notification date would be desirable. Many students expressed interest in this, as the existing notification date is very close to graduation for many undergraduates, and does not allow much time to relocate. Both of these possibilities should be explored for the benefit of applicants as well as programs.

## 5.0 SUMMARY

This project was conducted to gather more information concerning the use of a matching algorithm in the admissions process to genetic counseling programs. Information was collected concerning the performance of the match, student and program director feelings concerning a match, comments on the existing admissions process, and financial feasibility of a match. Due to missing data, a match could not be accurately reproduced. The existing admissions process performed similarly to the modified match, if not better, in terms of percentage of programs filled and student satisfaction with program placement. Based on information provided by the NRMP and the NMS, it appears that a match could be performed in the genetic counseling admissions process. However, just because the match is feasible does not mean that it is the best option. The majority of program directors and students reported that they were satisfied with the existing admissions process, but discussed a number of areas that could be improved both with and without the implementation of a match. Many expressed reasonable concerns pertaining to a match, including the inability to incorporate cost and financial aid, as well as the significant cost of the match itself. Respondents were reluctant to give up the freedom of choice and entrust their fate to a computer program. Others pointed out the differences between genetic counseling and medical residency programs that would hinder the use of a match in this population. Nevertheless, many individuals did express interest in the results of this project and the possibility of a new option for the admissions process. The many benefits and limitations of a

match should be carefully weighed before the existing admissions process is modified. This project cannot determine conclusively whether or not a match should be implemented in genetic counseling admissions, but offers additional information that can be used in further investigation on this topic.



## **Appendix A**

### **INTERNATIONAL GENETIC COUNSELING PROGRAMS**

**Table 5. International genetic counseling programs**

<b>Country</b>	<b>Program</b>
Australia	Charles Sturt College
Australia	Griffith University
Australia	University of Melbourne
Australia	University of Newcastle
Canada	McGill University
Canada	University of British Columbia
Canada	University of Toronto
China	Peking University
Cuba	National Center for Medical Genetics
France	University of Marseille
Israel	Haddasah Hebrew University
Japan	Chiba University
Japan	Kawasaki University
Japan	Kinki University
Japan	Kitasato University
Japan	Kyoto University
Japan	Ochanamizu University
Japan	Shinsu University
Netherlands	University of Groningen
Norway	University of Bergen
Saudi Arabia	King Faisal Hospital and Research Center
South Africa	University of Cape Town
South Africa	University of Witwatersand
Spain	University of Barcelona
Spain	University of Pompeu Fabra
Sweden	Uppsala University
Taiwan	National Taiwan University
United Kingdom	Cardiff University
United Kingdom	University of Manchester

**Appendix B**

**LETTER OF IRB APPROVAL**



## University of Pittsburgh Institutional Review Board

3500 Fifth Avenue  
Suite 100  
Pittsburgh, PA 15213  
Phone: 412.383.1480  
Fax: 412.383.1508

### Exempt and Expedited Reviews

University of Pittsburgh FWA: 00006790  
University of Pittsburgh Medical Center: FWA 00006735  
Children's Hospital of Pittsburgh: FWA 00000600

TO: Ms. Stephanie Newton

FROM: Sue R. Beers, Ph.D., Vice Chair *Sue R. Beers*

DATE: December 2, 2005

PROTOCOL: "Use of a Matching Algorithm in the Admission Process of Genetic Counseling Programs"

IRB Number: 0511153

The above-referenced protocol has been reviewed by the University of Pittsburgh Institutional Review Board. Based on the information provided in the IRB protocol, this project meets all the necessary criteria for an exemption, and is hereby designated as "exempt" under section 45 CFR 46.101(b)(2).

The regulations of the University of Pittsburgh IRB require that exempt protocols be re-reviewed every three years. If you wish to continue the research after that time, a new application must be submitted.

- If any modifications are made to this project, please submit an 'exempt modification' form to the IRB.
- Please advise the IRB when your project has been completed so that it may be officially terminated in the IRB database.
- This research study may be audited by the University of Pittsburgh Research Conduct and Compliance Office.

**Approval Date:** December 2, 2005

**Expiration Date:** December 2, 2008

SRB:kh

## **Appendix C**

### **E-MAILS TO PARTICIPANTS**

#### **C.1 E-MAIL TO PROGRAM DIRECTORS**

Hello Program Directors,

I am a second year genetic counseling student at the University of Pittsburgh. I am conducting a thesis research project to determine whether using a match program, similar to the one used by U.S. medical schools, would work well in the admissions process to North American genetic counseling programs. I would like to simulate a match program using data collected concerning the preferences from current first year genetic counseling students and program directors. This survey will take approximately 15-60 minutes to complete depending on your program size and the number of students you interviewed last year and can be found at:

<http://www.surveymonkey.com/s.asp?u=921161385541>

The survey is completely optional. I appreciate your time and help in this study. If you have any questions, you can reach me at [Stephanie.newton@hgen.pitt.edu](mailto:Stephanie.newton@hgen.pitt.edu). Please respond by Feb.5, 2005.

We apologize for the immediacy of the deadline.

Shortly I will be sending an additional email about this project that you can forward on to your current first year genetic counseling students.

Thank you!

Stephanie Newton

Second Year Genetic Counseling Student

Stephanie.Newton@hgen.pitt.edu

Project supervisors:

Elizabeth Gettig, MS, CGC

betsy.gettig@hgen.pitt.edu

Robin E Grubs, PhD, CGC

robin.grubs@hgen.pitt.edu

University of Pittsburgh

Department of Human Genetics

130 DeSoto Street, A-300 Crabtree

Pittsburgh, PA 15261

phone 412.624.3018

fax 412.624.3020

## C.2 E-MAIL TO STUDENTS

Hello,

I am a second year genetic counseling student at the University of Pittsburgh. I am conducting a thesis research project to determine whether using a match program, similar to the one used by U.S. medical schools, would work well in the admissions process to North American genetic counseling programs. I would like to simulate a match program using data collected concerning the preferences from current first year genetic counseling students and program directors. You will need to recall where you interviewed, from whom you had offers of admission and your personal preferences in choosing a program (how you ranked the places where you interviewed).

This survey will take approximately 15 minutes to complete and can be found at:

<http://www.surveymonkey.com/s.asp?u=497381384941>

The survey is completely optional. I appreciate your time and help in this study. If you have any questions, you can reach me at [Stephanie.newton@hgen.pitt.edu](mailto:Stephanie.newton@hgen.pitt.edu). Please complete the survey by February 5. Thank you!

Stephanie Newton

Second Year Genetic Counseling Student

[Stephanie.Newton@hgen.pitt.edu](mailto:Stephanie.Newton@hgen.pitt.edu)

Project supervisors:

Elizabeth Gettig, MS, CGC

[betsy.gettig@hgen.pitt.edu](mailto:betsy.gettig@hgen.pitt.edu)

Robin E Grubs, PhD, CGC

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Pittsburgh, PA 15261

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## **Appendix D**

### **PROGRAM DIRECTOR SURVEY**

**1. Study description**

I am conducting a research study to determine whether using a match program, similar to the one used by U.S. medical schools, would work well in the admissions process to North American genetic counseling training programs. The current national residency match program is used to match graduating medical students to a residency program by taking into account both the student's and the program's choices and preferences. A computer makes these matches, resulting in a binding contract that a medical resident must attend the program to which he/she has been matched to.

In this study I will be asking first year genetic counseling students to name the genetic counseling programs they applied to, interviewed at, and were accepted to in the most recent admissions cycle. Students will be asked to rank these programs in terms of desirability and interest in attending the program. Students will be assigned a unique and anonymous identifier number which will not be published or distributed to programs.

I am asking genetic counseling program directors to also submit lists of their most desirable candidate students, coded by the same unique anonymous identifier. This questionnaire should take approximately 15-60 minutes to complete depending on your program size and the number of students you interviewed last year. The student's and program's preferences will be combined in a matching algorithm to determine how effective a matching system would be for genetic counseling programs. Programs will not be given the names or ranking lists of the surveyed first year students, and will only know if a matching program would have filled all of their applicant slots with applicants ranked by the program as "acceptable." Please only submit one survey per program.

This study has been reviewed by the University of Pittsburgh IRB and is designated as "exempt." Participation in this study is voluntary. There are no foreseeable risks associated with this project, nor are there any direct benefits to you. You will not receive any compensation for participation. This study is being conducted by Stephanie Newton, a graduate student at the University of Pittsburgh, Graduate School of Public Health, who can be reached at [Stephanie.Newton@hgen.pitt.edu](mailto:Stephanie.Newton@hgen.pitt.edu), if you have any questions. Thank you.

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**GC directors: Use of a matching algorithm in the admission process of genetic counseling programs**

**1. Please check the appropriate box identifying which program you are from.**

- California State University at Northridge, CA
- UC Irvine Medical Center Genetic Counseling Program, CA
- University of Colorado Health Science Center, CO
- Howard University, Graduate School of Arts and Sciences, DC
- Northwestern University Medical School- Graduate Program in Genetic Counseling, IL
- Indiana University, IN
- Boston University School of Medicine, MA
- Brandeis University, MA
- University of Maryland School of Medicine, MD
- Johns Hopkins University/NHGRI, MD
- University of Michigan Medical Center, MI
- Wayne State University School of Medicine, MI
- University of Minnesota, MN
- UNC Greensboro, NC
- Sarah Lawrence College, NY
- Mount Sinai School of Medicine, NY
- University of Cincinnati, Genetic Counseling Program, OH
- Case Western Reserve University, OH
- University of Oklahoma Medical Center, OK
- Arcadia University, PA
- University of Pittsburgh, PA
- University of SC- Genetic Counseling Program, SC
- University of TX- Medical School at Houston, TX
- University of Utah Graduate Program in Genetic Counseling, UT
- Medical College of VA/VCU, VA
- University of WI- Genetic Counseling Program, WI
- University of British Columbia, Canada
- University of Toronto, Canada
- McGill University, Canada

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**GC directors: Use of a matching algorithm in the admission process of genetic counseling programs** [Exit this sub](#)

2. Please list all the applicants from the 2004-2005 applicant pool which you viewed as acceptable and offered/would have offered admission to your program. Please rank in order of desirability, with "1" being the most desirable applicant. When ranking students, use the code that was assigned universally to applicants to genetic counseling programs. For example, Name: Libby West and SSN: 987098990 would be unique identifier: 8990LW. (If no social security number was available for an applicant, please use the first six letters of their last name). If birthdate is available, please include that after the applicant's initials in the format MM/DD/YY. You may add to the list appropriately to include all your applicants.

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**GC directors: Use of a matching algorithm in the admission process of genetic counseling programs** [Exit this sub](#)

3. How many slots did you have available to fill in the 2004-2005 admission cycle?

4. Did you have unfilled slots in the 2004-2005 admission cycle?

YES      NO  
     

5. If yes, how many?

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**GC directors: Use of a matching algorithm in the admission process of genetic counseling programs** [Exit this sub](#)

6. Did you have applicants accept admission but later choose another program?

YES      NO  
     

7. If yes, how many?

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8. What is your level of satisfaction with the current genetic counseling application process?

Very Satisfied   Satisfied   Unsatisfied   <sup>Very</sup> Unsatisfied

9. If very unsatisfied or unsatisfied, please explain why.

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10. What are your thoughts about the implementation of a match in the admission process for genetic counseling programs?

11. Would you be willing to have unfilled slots in your program if a match was implemented for genetic counseling programs?

YES

NO

12. Please list 3 ways you believe a matching program would add to or improve the current admissions process.

13. Please list 3 potential problems you see with a matching program.

14. Please use this space to add any additional comments you have concerning admission and matching processes.

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## **Appendix E**

### **STUDENT SURVEY**

1. Study description

I am conducting a research study to determine whether using a match program, similar to the one used by U.S. medical schools, would work well in the admissions process to North American genetic counseling training programs. The current national residency match program is used to match graduating medical students to a residency program by taking into account both the student's and the program's choices and preferences. A computer makes these matches, resulting in a binding contract. This contract stipulates that a medical resident must attend the program to which he/she has been matched to.

In this study I will be asking you, a first year genetic counseling student, to name the genetic counseling programs you applied to, interviewed at, and were accepted to in the most recent admissions cycle. You will be asked to rank these programs in terms of desirability and your interest in attending the program. You will also be asked about your feelings on the current and proposed admissions process. You will be assigned a unique and anonymous identifier number which will not be published or distributed to programs. You will also indicate the program which you currently attend. Genetic counseling programs in turn will be asked to also submit ranked lists of their most desirable candidate students, coded by the same unique anonymous identifier. The student's and program's preferences will be combined in a matching algorithm to determine how effective a matching system would be for genetic counseling programs. Programs will not be given the names or ranking lists of the surveyed first year students, and will only know if a matching program would have filled all of their applicant slots. Individual responses will not be published with identifying information.

This study has been reviewed by the University of Pittsburgh IRB and is designated as "exempt." Participation in this survey is optional. The questionnaire is brief and should take approximately 10 minutes to complete. There are no foreseeable risks associated with this project, nor are there any direct benefits to you. You will not receive any compensation for participation. This study is being conducted by Stephanie Newton, a graduate student at the University of Pittsburgh, Graduate School of Public Health, who can be reached at Stephanie.Newton@hgen.pitt.edu, if you have any questions. Thank you.

[Next >>](#)

1. To participate in the survey, please create your unique identifier by using a combination of the last four digits of your social security number and your first and last initial. For example Name: Libby West and SSN: 987098990 would be unique identifier: 8990LW. (If no social security number is available, please use the first six letters of your last name)

2. Also to aid in the matching process, please provide us with your birthdate in the format of MM/DD/YY.

3. Would you be willing to participate in a matching program that resulting in a binding contract with a genetic counseling program, meaning that you must attend the program that you have been matched with?

Yes  No

4. If you checked NO, please explain why.

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[Next >>](#)



4. Please check all appropriate boxes. Please note that the column "Was accepted" should include programs you were accepted to from the waitlist.

	Applied	Interviewed	Waitlisted	Was accepted	Now attending
California State University at Northridge, CA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UC Irvine Medical Center Genetic Counseling Program, CA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of Colorado Health Science Center, CO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Howard University, Graduate School of Arts and Sciences, DC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Northwestern University Medical School- Graduate Program in Genetic Counseling, IL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indiana University, IN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boston University School of Medicine, MA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brandeis University, MA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of Maryland School of Medicine, MD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Johns Hopkins University/NHGRI, MD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of Michigan Medical Center, MI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wayne State University School of Medicine, MI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of Minnesota, MN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UNC Greensboro, NC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sarah Lawrence College, NY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mount Sinai School of Medicine, NY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of Cincinnati, Genetic Counseling Program, OH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Case Western Reserve University, OH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of Oklahoma Medical Center, OK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arcadia University, PA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of Pittsburgh, PA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of SC- Genetic Counseling Program, SC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of TX- Medical School at Houston, TX	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of Utah Graduate Program in Genetic Counseling, UT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medical College of VA/VCU, VA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of WI- Genetic Counseling Program, WI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of British Columbia, Canada	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of Toronto, Canada	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
McGill University, Canada	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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5. From the list of programs where you INTERVIEWED, please rank the programs in order of desirability, with "1" representing the most desirable program that you most wanted to attend. Please provide just one ranking for a particular program. Rank all programs that you would have considered attending if you were offered admission. Do not include programs that you would not have considered attending.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
California State University at Northridge, CA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
UC Irvine Medical Center Genetic Counseling Program, CA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University of Colorado Health Science Center, CO	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Howard University, Graduate School of Arts and Sciences, DC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Northwestern University Medical School- Graduate Program in Genetic Counseling, IL	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indiana University, IN	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boston University School of Medicine, MA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brandeis University, MA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University of Maryland School of Medicine, MD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Johns Hopkins University/NHGRI, MD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University of Michigan Medical Center, MI	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wayne State University School of Medicine, MI	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University of Minnesota, MN	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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UNC Greensboro, NC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sarah Lawrence College, NY	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mount Sinai School of Medicine, NY	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University of Cincinnati, Genetic Counseling Program, OH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Case Western Reserve University, OH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University of Oklahoma Medical Center, OK	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Arcadia University, PA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University of Pittsburgh, PA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University of SC- Genetic Counseling Program, SC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University of TX- Medical School at Houston, TX	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University of Utah Graduate Program in Genetic Counseling, UT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medical College of VA/VCU, VA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University of WI- Genetic Counseling Program, WI	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University of British Columbia, Canada	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University of Toronto, Canada	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
McGill University, Canada	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Did you accept an offer of admission from one program and later attend another program instead?

YES

NO

7. If "YES", please describe how you came to this decision.

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8. Please list all the factors that influenced your decision regarding which programs to APPLY to. For example: location, financial aid, size of program.

9. Using your answers from the previous question, please rank the top three factors that were the most influential in your decision process. "1" Should represent the most influential factor, "2" represent the second most influential, and so on.

1.	
2.	
3.	

10. Please list all the factors that influenced your decision regarding which program you would accept the offer for an INTERVIEW.

11. Using your answers from the previous question, please rank the top three factors that were the most influential in your decision process to interview at certain programs. "1" Should represent the most influential factor, "2" represent the second most influential, and so on.

1.	
2.	
3.	

12. Please list all the factors that influenced your decision regarding which program you decided to ATTEND.

13. Using your answers from the previous question, please rank the top three factors that were the most influential in your decision process to attend a certain program. "1" Should represent the most influential factor, "2" represent the second most influential, and so on.

1.	
2.	
3.	

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14. If a matching system was implemented for genetic counseling programs and there was an associated fee, what is the most you would be willing to pay for this service?

- \$10
- \$25
- \$50
- \$75
- Other (please specify)

15. In your experience, how well do you feel the current admissions process works? This includes utilizing a universal notification date, and allowing 5 days to decide on which program you will attend.

16. Rate your satisfaction with the current admissions process.

- I am extremely dissatisfied with the current process and do not believe it worked well for me
- I am slightly dissatisfied with the current process
- I feel neutral about the current process
- I am satisfied with the process
- I am extremely satisfied with the process and believe it worked well for me

17. Please comment on your overall experience with the current admissions process, including any comments you have on whether or not it is stressful, or any suggestions you have to improve the process.

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## **Appendix F**

### **OPEN ENDED RESPONSES**

## **F.1 FACTORS INFLUENCING A STUDENT'S DECISION TO APPLY TO A PROGRAM**

- Location, size of program, quality of clinical rotations.
- Location-I am Canadian and wanted to attend the Canadian programs, Financial aid, scholarships, Variety of placement hospitals, Size of program, Reputation.
- Location, financial aid, how it "felt" when I attended the interview, organization of interview process, staff personalities, rotations offered, rotation locations, time rotations began
- Location, admissions requirements (whether I had completed them or not), size of program, awareness of disability issues, website, gut feeling about the program
- Location was my number one deciding factor although there aren't many programs close to my hometown. Next, I wanted a thesis requirement for graduation so I was interested in the research at each institution. Finally, program size was important. I was interested in a smaller program.
- Program features, ability to stay and work there after graduation, program faculty
- Location, rotations available, cost, program philosophy
- Cost of application, cost of travel for interviews, GRE requirement, if the program was accredited, Canadian program, cost of program, reputation
- Ranking of the programs, balance between psychosocial and genetics, length of the program, curriculum
- Correspondence with program director and repute of university. I applied to those that offered a positive response of the possibility of reviewing an international student application.
- Tuition, financial aid, location, class size, whether or not affiliated with a hospital/medical center, if subject GRE's were needed I did not apply, reputation, size of institution, general vibe
- Clinical rotations, laboratory rotations/experience, faculty, size/diversity of the location, TA opportunity, finances
- Location, financial aid, size of program, clinical rotation sites, cost of living, age of program (establishment), directors of program, educational layout.
- I only applied to one program because I was enrolled in the Human Genetics program
- Financial Aid, Variety and quality of clinical rotations, Reputation of school/associated hospital(s), Programs that made it feasible for international students to apply, Programs in cities that had a diverse population of people and patients



- Program curriculum (classes, research opportunities), size of program, organization of website
- Location, programs' foci, comfort
- I pretty much applied all over the place. I knew the competition was heavy.
- Location was a huge factor for me. I'm really close to my family and friends so I wanted a program that would allow me to get home in a sufficient amount of time if I needed to. Size of the program was also a key factor for me. I didn't apply to programs that only took a couple, because I didn't feel I had a chance with those programs.
- Inclusion of ethics in curriculum, curriculum forecast in general, intensity of science instruction, number and quality of rotations, thesis requirements, perceived strength of the program
- Psychosocial influence, location, financial aid, size of program, research emphasis, public health element, clinical rotation variety, starting time of a clinical rotation, current students, program director, program director's vision for genetic counseling and the program, faculty.
- Curriculum, reputation of school, clinical rotation sites, availability of a job for my boyfriend
- Location, length of time the program has been running, familiarity with the school, website, recommendations from family, friends, and professors
- I applied to programs that made it the easiest to apply. For example they had good websites, answered e-mails, could be contacted for help during the admission process. Also I choose programs that made it easy for international students to apply and that did not require applications to be submitted extremely early. No subject GRE\*
- I wanted to apply to mostly private institutions and not state-run institutions. I also wanted smaller programs (less than 10 students) as I thought the programs may be more personalized. I also wanted to apply to programs mostly on the East coast because I thought I would enjoy living there. Overall, the programs that I applied to (given location and type) were programs that had a strong focus on both psychosocial and scientific aspects of genetic counseling.
- Location, whether the city had good public transportation, whether I could find a lot of info from the website, less research-based programs

## **F.2 FACTORS INFLUENCING A STUDENT'S DECISION TO INTERVIEW AT A PROGRAM**

- Whatever interview offered I took, because I had already decided I would attend any of the schools I applied to. Timing was good. Communication with the school for directions, housing for when I attended. Acceptance letter. Scholarship offered
- I was willing to interview at any of the places that offered. -If more than the 4 schools had offered it probably would have come down to the order of the offers. My first and last offer came nearly 1 1/2 months apart, so you have to respond to some offers before you know if you will receive others.
- Percentage of students passing the board exam, amount of clinic experience, director, professionalism and reliability of program.
- I accepted all offers for interviews, since I knew that the acceptance rates were low. Fear of not getting in anywhere, didn't want to miss an opportunity
- School reputation program's web/booklet information location coursework offered
- Desirability of location, "feel" of program based on previous visits to universities, responsiveness and helpfulness of person organizing interviews
- Cost of travel coordinating multiple interviews in 1 trip
- Offer of interview was basically my only factor. If I was offered, I attended the interview - location and associated cost of travel was a concern
- I only applied to 5 schools and accepted interviews at all of them.
- Anyone that offered me an interview, I accepted because I want to be a genetic counselor.
- Surrounding area of program, interview dates available
- Cost - only applied to 4 and I was very interested in all of them and could afford to go, so I did
- I accepted all of my offered interviews. The primary factor was odds of acceptance into any program. And, I suppose, I just thought that you went if you got an interview. Had I applied to more schools and been offered more interviews, cost might have made me narrow my scope.
- I would have accepted an offer from anywhere for an interview. The more interviews you have, the better your chances of getting in.
- Knowing how competitive and small some GC programs are, I knew ahead of time I would interview at all programs that invited me to do so.

- Previous understanding of and interest in program, location, availability of scheduled dates that fit into my schedule
- Quality and rigor of the program, location, amount of time devoted to clinical experience (good balance between clinic and class time), strong emphasis on genetics and science while balanced with psychosocial training
- I accepted all offers for interviews because I would have attended any of the universities, and I really wanted to be accepted. I also wanted the experience of visiting the cities and getting insight into how the programs worked.
- Research component, public health component, financial aid, discussions with current counselors, variety of rotations I only applied to two programs, both of which I was very interested in so I knew I would accept interviews at both. There was no picking that was different than the factors on where to apply.
- I accepted interviews at all 8 schools to which I had been offered them. I cancelled the 8th interview because by the time that interview rolled around, I had narrowed my choices down.
- I applied to a relatively small number of programs with the idea that I would not have to turn down an interview due to scheduling conflicts or financial concerns. Unfortunately, one school was not accommodating with scheduling the interview, and the interview I had already scheduled for that day was more important to me.
- 3 out of the 5 programs were local competitive admissions-interview everywhere
- Psychosocial influence, location, financial aid, size of program, research emphasis, clinical rotation variety, starting time of clinical rotation, program director
- I accepted all the interviews that I was offered. I thought it would be a good way to learn about each program, and I wanted the experience. (I didn't think I would be accepted, so I went on the interviews to prepare for the next year--when I thought I would have my "real" interviews.)
- When I was offered an interview at various schools, I accepted to all of them. I wanted to make certain that I had a chance to 'get a feel' for the school (i.e. program director, current students, faculty, facilities). For me, it is most important to SEE where I might go first hand, rather than read about it on a web site. SO, factors that made me accept an interview included: desire to meet program director, see facilities, and meet the students.

### **F.3 FACTORS INFLUENCING A STUDENT'S DECISION TO ATTEND A PROGRAM**

- I was waitlisted at two schools and accepted at one. I did not want to play the waiting game and I knew that the school that accepted me was a really great school so I was not really worried.
- I attended the program that accepted me.
- Directors/Professors- After meeting them I knew they would be great to work with. The director called me at home personally. Also they gave the interviews and were easy to talk to.
- Campus- Clean, friendly. Financial aid, and GA position. Assistance when I attended the interview- one school, the one I attend now, gave me a guest house across from campus to stay over in. Program was presented well, it sounded exciting. Personable campus
- Cost of tuition, living expenses (this was a huge factor considering this money has to be paid back on a genetic counselor's salary!!) -impression after interview (i.e. campus, directors, location of school)
- Location and the overall approach/focus of the program, i.e.: more holistic approach, focus on disability awareness and counseling and ethical issues in genetic counseling in addition to the science and medical stuff.
- Location interview process gut feeling about the program timing of first internships (summer vs. fall) disability awareness issues
- Personal experience, Location, Program Size, Ranking, First impressions based on the interview in order to obtain a better idea of the program's expectations and whether you are able to meet those requirements.
- The in-state tuition factor just about made the decision for me. Also, it was in the state where I grew up and wanted to be close to family. Other programs I liked were simply too expensive.
- Location, Cost, Assistantships, Personality of the faculty, The fact that I get to do a thesis, not a capstone project, A class in cancer counseling, Rotation sites, It just felt right
- Size, location, opportunity for PhD program, Director, "Feel" of program
- Laboratory rotation opportunities, clinical experience, offering of a bioethics minor, faculty, TA opportunity, financial assistance, research requirement
- Financial aid was a big factor. A friend in the city. Familiarity with the city. Reputation of the program. Cost of living. Desire for change.

- Cost, Location, program structure, not being fluent in French, impressions of the program from the interview, opportunities in the programs
- Friendliness; curriculum; surrounding community; dedication of staff; experiences of students
- Warmth of interviewers and current students; general feel for area; cost of living
- Received a tuition waiver felt very comfortable on campus/in building/with director of program liked curriculum liked area and other offerings of the institution
- I was only offered a place in one program. Before I knew that, I had decided that I liked one program over the other, due basically to the people I met during my interview. I felt like I fit better in one program
- Once I had interviewed and learned more about each program I could definitely rank them depending on what I thought about the people involved, the location of the program, and the size of each class. For instance, although I liked the people at one program, their class size was too small and I didn't want to live in a city. The school I picked has wonderful people, an excellent "just right" class size and I love the area I'm now living in.
- Location, cost of program, diversity of courses, diversity of teaching and mentoring staff, diversity of rotation opportunities, reputation of program, contribution of students to their own learning, personality of interviewers and students met on interview day, facilities available to students.
- Only choice (waitlisted on all others), in state tuition after 1 year, location part of medical school, opportunity to work, friendly students
- Cost of program, possible connections director of program could offer, distance to rotations, location, cost of living, goodness of fit at the interview, amount of second years with jobs already, anticipated stress of that particular program, transportation issues (do I have to ride a bus to school, is there parking, etc), and where my boyfriend would be willing to relocate.
- Psychosocial influence, location, financial aid, size of program, research emphasis, public health element, clinical rotation variety, starting time of a clinical rotation, current students, program director, program director's vision for genetic counseling and the program, faculty.
- Financial Aid, Location, Curriculum, Psychosocial Counseling Skills (Hours Spent on), Clinical Rotations (variety and time spent in), Supervision, Feeling of a "fit" within the program, Program philosophy/goals, where the director saw their graduates

- Location Program focus Rotations available Financial aid Curriculum Current students opinions of the program (strengths and weaknesses) Feeling I could fit into the program with ease. Whether or not the program helps students in seeking jobs after graduation. Diversity of population seen in clinics/rotations. Amount of teaching that was integrated into the curriculum. Reported pass rate of previous students taking the boards.

- Location, length of time the program has been running, familiarity with the school, recommendations from family, friends, and professors, enthusiasm of the students attending the program, my experiences with the program directors, organization of the interview process, friendly staff including secretaries and receptionists, financial aid

- Comfort level with faculty and students, program requirements (clinical rotations, coursework), feel of the school, the feel of the city that I might be living in for two years, financial aid that was offered (it showed me that the school wanted me as a student), how the interview actually went (did they ask enough questions, too many questions, did I get to meet enough staff, did I see where I would be going to class, working with patients), meeting the current students (VERY HELPFUL!)

- Welcomeness of Interview, Journal Club Presentation, Interaction with Students Currently Attending, Answer Key to an Exam - gave me an idea of the educational experience, Thesis Topics of Current Students

#### **F.4 EXPLANATIONS WHY STUDENTS ARE NOT INTERESTED IN PARTICIPATING IN A MATCHING PROGRAM**

- Perhaps I would change my mind or maybe something would come up such that going to a different school would be better for me personally and financially.
- I don't like the idea of entering into a binding contract without knowing exactly what I'm agreeing to.
- Why would I want to give up my freedom of choice? There are many things that go into the best fit other than academics and personality- like cost and location!
- I would want to be able to choose which one I felt was more suited to me if I was accepted to more than one program.
- I don't know if I feel comfortable with that idea. I spent a lot of time looking for programs that best suited me, including the locations of them. I don't think I like the idea of a computer deciding what program I attend. I think that decision should be left to the student to decide. I would not want to take the chance that I would be matched with a program that I decided was not right for me after interviewing there.
- We should ultimately be able to choose where we end up considering that all schools are not equal and people may or may not want to move.
- I don't think others can decide for you what your best "match" would be. I think you should be able to decide what's best for you. You are the best person to make your own decisions.
- It is very important to me that the graduate program that I attend be of my choosing. I would not like to be mandated to go to a program. Also, there are many factors that I take into consideration when choosing a program. Location and proximity to my home is a major factor, as are opportunities for financial assistance, and the caliber of the program and its focus.
- There were a couple programs I was interested in, but was put on the waiting list for my top choices. Had I been bound to the first one I got into to, I would now be at a program that was not my first choice, and harder to deal with as far as visiting family, significant other, and having a more difficult move.
- During my application process, I had ranked the schools that I applied to. However, after interviewing at the schools, my ranks had changed based on my experience during the interviewing process. Also, money was an issue for me as I was accepted to more expensive

programs, but declined due to the costs of tuition. If money was extremely important, I don't know if I would even consider ranking an expensive school for fear that I would be forced to attend a program that I simply cannot afford.

- I have many friends who just started residency who were matched at undesirable locations by this system. It is one of the major downfalls of the medical school process according to most med students.

- I would want to have the option to change my mind, things come up that cannot be anticipated.

- I might not want to attend that University solely on the basis of a matching program. If this program fails to match me with the University/Genetic Counseling Program that interests me the most, I don't want to be forced to attend this particular University. I also believe that it's important to first meet with interviewers and have a better idea about what is expected from students as well as establish the first personal contact.

- I would participate if that is the way genetic counseling programs were determined. However, I believe I would prefer the current method of knowing who accepted me and then choosing. The factor of being accepted to a program vs. being on a wait list for a program contributed to my decision.

- It would feel scary to not have a choice in deciding which program I attended.

- Because after visiting some of the schools during the interview process, my ranking of schools changed and there is no way I would have known this without visiting the schools. Therefore, I feel that ranking the programs before interviews is not advantageous for the student or the school.

- I believe that the choice of which program to attend depends on too many factors to be relegated to a computer algorithm. Regardless of how well the algorithm is programmed, it will never be able to perfectly match every student with their desired program. The choice should be there to decline or accept a position as the student sees fit.

- b/c the matching system does not take into account the fact that some universities cannot commit to financial aid/ or graduate assistantship at the time of interview. Without knowing that a candidate would not be able to rank the university of choice.

- I want to have a say in deciding where I am going. I do not want it to be decided for me.

- It is too stressful. There is enough going on with the interview process as it is. Acceptance day can be extremely stressful if you don't get your first choice right away. Then you are left



wondering who will call back, and how you should handle getting in to your runner up programs. How long do you wait? While a match system might cut back on this, I think it cuts down on individual freedom. There is no alternative, no room to choose. So if you are matched with your last choice, you have no hope or opportunity of going to a school you truly desire. It's too much of a mind game.

- I like to be somewhat in control of where I would complete my training. At this point, I don't feel comfortable letting someone else decide what is best for me as a student and future professional.

- I think it is helpful when making this decision to know all of your available options and weigh them carefully.

- I would want to have options and be able to decide what program would be best for me once I knew which ones I had been accepted to.

- I had some specific criteria I was looking for in the program I attended. I wanted to go to a program that had a balance between psychosocial and science based classes, but I have a strong science background. I may have been matched with a more science based program even though that's not what I was interested in. There are also some parts of the country that I am not willing to move to.

- 1. I had a unique situation where I got stuck deciding between 2 very excellent programs. The source of confusion was mostly financial. They were both expensive and both mentioned the possibility of financial aid during interviews. I ended up choosing a program that offered me an almost full assistantship upon acceptance. This program would not have been able to guarantee an assistantship during the interview process. If I had to rank both programs based on interviews alone, I would not have been able to afford the one that did not offer me nearly as much money.

- 3. Ranking programs for me did not occur immediately after interviews were over. While waiting to hear back from programs I did more research on my top choices by talking to alumni or individuals associated with those programs. That definitely helped me make better decisions.

With a matching program this extra research time won't exist. 2. Doesn't a form of matching already exist anyway? Students interview at several programs, rank them in their own head, then programs rank successful interviewees as well (as in offer acceptance versus place on a waiting list). The only difference a matching program would give is perhaps make the process more

efficient by not allowing 1 student to hold several seats while others are waiting to get in? I still prefer the non-matching process.

- That is too permanent! Just because a computer says that I might fit does not take into consideration my feelings and relationship with the staff or physical campus.
- I would like to have options.
- I am very limited to location and I may be looking for a part time position.
- I liked the idea of still having a choice at the end of the process. Granted it was very difficult being wait-listed everywhere, but I was ultimately accepted at two places and still had a choice.
- I liked having the option of choice available to me. I got accepted to two different programs and although it was hard to decide, at least I had the option.
- Without knowing more specific information about such a program, I would not participate. If I changed my mind or something changed in my life, it might affect my intention of enrolling in a program.
- I don't think I should be forced to attend a program. I'm perfectly capable if not more capable of choosing the right program for myself
- I would want more freedom than that in where I go. What if I really wanted to go to the program that ended up second? What if I matched to a few different schools?
- I picked based on location and would not want to be matched in a school that I did not like.
- Just because things match on paper doesn't always mean that they will match in the dynamic real world. What if I couldn't afford the program I was matched to?
- I did not know that much about each program before I interviewed.
- If participating in the matching program meant that I was legally bound to attend I would not participate. I would like to be in control of my own decision of where to attend. Knowing I'm a match would be helpful but I would also have to consider where in the country the program is, the tuition, etc.
- It would somewhat depend on how much time there is between when my rank list would be submitted and when the actual matching occurred. If a personal situation arose in the time between that would greatly affect where I would or would not consider attending, with the matching system, I would no longer have the option of choosing between multiple acceptance offers. In an emergency where deferring attending graduate school is necessary, is it possible to

decline the contract? If so, I wonder how declining a contract in the past would affect one's chances of matching with the same or another program in the future?

- I would want the flexibility to choose which program would be best for me out of the ones that I was accepted to

- Much of my decision to attend a program was based on the cost of the program to me. I was offered financial aid packages at many of the schools I was accepted to, but not at others. I would not be able to accurately rank my preferences until I knew my complete financial aid package.

- I was attending graduate school simultaneously with my boyfriend and we chose schools based on personal preference and mutual locations.

- I feel that a matching program would encourage students to rank their program choices strategically, rather than honestly. I think that a matching system could potentially result in excellent applicants (who would have otherwise been selected for admission) not being selected for admission. There are too many elements of luck and strategy. I am very uncomfortable with this idea.

- I would prefer that this not be the case, but if this were the only option then I would do it. I didn't know which program I wanted to attend before I received my acceptances, and so I wouldn't like a binding contract that was based on information before I was sure of what I wanted. I prefer the flexibility that exists in the current application process.

- Students may not know what school is their first choice at the time they participate in the matching program. People should have the flexibility to change their minds.

- Because you may not exactly know at the time of application which school you may ultimately want to go to, despite a ranking order upon application. Last minute decisions based on new information and experiences while visiting schools for interviews can make a big impact on the decision process.

- I would not want to risk not being accepted at my first choice of school simply to accommodate the best match for everybody. Further, I feel that because the programs are so diverse and relatively sparse, that the applicants have a greater sense of control over the outcome using the traditional system. If you have the luxury of selecting schools from greater than one acceptance, than there is a better chance of attending the school that you most want to. I am not terribly familiar with how the matching program works, however my sense is that there's an element of strategy to it which I am uncomfortable with.

- I'd like to have the ability to change my mind and choose another program, especially if something comes up at the last minute.
- There are "nonacademic" reasons for choosing one location over another. Because the programs are so small, I would want to make sure that I got along with the people in the program before committing.
- I think there should be mutual acceptance between the school and the student. Our profession is about providing choices to people; we shouldn't eliminate the option of choice for ourselves.
- I like the option of what school to go to and to be able to compare what I think is best for me at that time. I don't think it is a bad idea to match students, but I think I would rather have the choice.
- I would want to know all of the programs that I was accepted to and then make my own decision.
- I'd like to have a choice.
- I received a scholarship at the program I attended that I would not have known about prior to ranking programs. It was one of two factors (the other being a personal factor involving illness in a family member that occurred after the interview process) that affected my decision as to where to attend. If I had ranked without knowing about these two factors, I may have had to break a binding contract. A matching program would not account for financial variability that arises as the bidding process continues.
- I would participate, but only if ranking took place after all interviews were complete. I would want to visit the different programs before I decided how I would want to rank them.
- I am passionate about CHOICES!
- Although at the beginning of the application process I thought about how competitive it was to get into any program and that I would go to any program I was accepted to. However, after the interview process there were definitely some schools I certainly did not want to attend. Either because of the area or the people and I would hate to have been somehow matched to a last choice school and be forced to go there. I had a few offers on May 6th and I like that I myself could weigh the pros/cons of each one and decide where to go.
- I liked having the option of being able to choose the program I was going to attend. I found through the interview process that my feelings about the programs, both good and not so good, changed following the interviews.

- I like to have options and decide for myself where I fit in and what program is best for me.
- I had a very difficult time deciding between my two top choice schools, I didn't actually decide until after I had received acceptance phone calls from both. Another issue that might come in to play is finances. Some schools offer scholarships or financial aid packages at the time of acceptance to only certain students. If I needed that financial aid to attend that particular program over one that was less expensive, but could not be guaranteed that I would be a recipient, I would be wary of having a binding contract with that institution.
- I may have changed my mind about how much I liked the school after the interview.
- There are many things that were crucial to my decision, including the university itself and the city that were not brought up in the interview, nor should they have been. Additionally, I crossed some schools off of my list after visiting them because I did not feel the "connection" that I felt at other schools. One I just plain disliked after visiting and had I been accepted to only that school, I would not have attended. I think the freedom to choose the program that best fits me was appealing. There's more to the choice than just the program.
- So many factors influenced my decision as to which genetic counseling program I wanted to attend, and those were changing through the match process up until the day I made my decision. A lot of things may match up well using a computer, but I don't want a computer making my decision for me.
- I would like to choose a program that I liked. It would be interesting to see who I was matched with but not to be under a binding contract to attend. I think a binding contract would deter possible students. The matching program would help the prospective student and the program in the selection process. I would not like a matching program with a binding contract. I would like to make my own decision about the university that I would like to attend. I think a matching program would be helpful, but a binding contract would be a deterrent for those applying.
- I do not believe a computer matching program takes into account the complexities of the decision of what program to attend. I think a student needs to reflect within oneself to make such a decision. This is an important decision that reflects one's future and I believe it is extremely subjective. I do not believe a computer program has the ability to be this subjective or analyze the complexities of making a decision about one's future.
- I felt that freedom of choice was extremely important to me when making a decision about which school to attend. I would not want to be put into a program based on what a program said

was a match, but what might not have felt like a match for me. Furthermore, I question whether or not I would have such great classmates under such a system. I feel that our program heavily weighed our personalities and how much of a "match" we were for each other just as much as they considered how much of a match we were with the program. If the matching system showed results that eliminated those concerns, then I would be willing to consider such a system.

- I would want to be able to choose the program I would like to attend. Many factors influence what people choose and I would want to be able to make my own decision.

- I don't like the idea of being bound to a genetic counseling program. People's mind changes after hearing what programs have accepted them. Also some schools give out tuition waivers that you can hear about later in the week.

- I don't have enough info about how the system would work.

- I changed my mind several times about my "top" choice throughout the admissions process. Had I been forced to choose one at, for example, an early point in the admissions process, that program may not have been my first choice by the end of the process.

- The wording "binding contract" scares me. I would like to have a option if the option were available to me.

- I think that it is important that the individual student has the final say in where they are going to go to graduate school.

- Had I been accepted at my last choice program, I would have considered waiting another year to be accepted into a program I was more comfortable with.

- Residencies in medical school are fundamentally different in nature than genetic counseling training programs. The main difference that leads to my hesitation in being willing to participate in a matching program for programs in genetic counseling is due to the fact that the cost to attend each program is so variable. If I were to be accepted into multiple programs, the cost of each program and how I would be able to fund my education would play a very large role. With a matching program, I would essentially lose that choice.

- Lack of knowledge on the details of how the match works.

- I like the idea of a matching program, but I don't think I like the idea of having it be binding. Between the interview and your acceptance, you may either find out more about the program that you didn't know earlier that changes your views on it, or you may have had changes in your own

life that make a given program or city more or less desirable. A binding contract just seems to binding. But using a matching program without the contract seems like a great idea.

- First off, I would appreciate the definitiveness of the match program. Initially when I heard of this proposal, I thought there would be a lot less stress while waiting to hear a decision on that faithful day. However, I am hesitant to put my entire faith into a matching program because of the few people who may get lost in the process.
- Though the school I would be matched with would hopefully be my first choice, I would prefer to still make my own decision. Unforeseen circumstances might arise that would make it better for me to be in a particular location.
- I preferred interviewing at various programs and determining which was the best fit for me.
- I would like the opportunity to choose the program I would like to attend instead of have only 1 program I am bound to.
- The decision of attending a genetic counseling program is very complex, and I found myself not 100% sure of which school I would choose until after reviewing all of my offers and evaluating each school again. It was especially difficult because all of my top choices accepted me, so I had to really think about my decision, and would not have wanted that decision to already have been made for me.
- Because I would only want to go to a school that I felt fit me best. Not one that someone else thought fit me
- I do not feel it is an adequate way of allowing students to attend which school they prefer. I feel all of the Genetic Counseling Programs have the same overall agenda and that one should not rank over the other. I also feel that ranking students is wrong and many students want to attend the school of their choice due to location or due to how they space out studies in the two years, dealing with clinicals.
- It would depend on the timing of when the info that my match would be based on would have to be submitted. Even after my interviews this year when I was fairly confident of what my 1st choice school was, I was still debating between a few of the schools. So I am not sure how I would feel about having to make that decision before I knew where I was accepted.
- I would still want the last choice.
- I think a matching program would be good to give applicants and directors a good idea about which school would be the "best fit," but I wouldn't want to be obligated. What if, after filling

out the match program application, I change my mind as to what my priorities are in deciding on a program? I do, however, think a match program could be very useful, especially as an applicant faced with 25+ schools to sort through.

- I prefer to have the choice and not leave it up to the schools to decide my final placement. I would know better where I would be happy and where my family could live. - If I didn't like that school, I would not want to go there!!!

- I think that a match program could possibly work for a larger pool of applicants. I enjoyed having the ability to make a choice after I found out where I had been accepted because it made me feel as though I was an active participant in the decision making process.

- I liked how I got to choose which genetic counseling program I liked best.

- I don't know enough about matching programs to answer this question.

- It doesn't take into account the possibilities I have of paying housing. For example I had the opportunity to study at my university because I didn't have to worry about living expenses because I moved in with family. Therefore I would have to limit the places I would apply to only those I can find free housing in.

- I was very certain that I wanted to be at a specific school in a specific area.

- I would want to keep my options open, especially since there are other factors which I may take into consideration that are not accounted for in the matching. For example I would only want to live in certain areas.

- Things such as scholarships and additional unforeseeable circumstances may change your first choice rank between ranking and acceptance time.

- Even if a school is a reported match for you, there may be factors (i.e. location, price, personal relationship with program director, etc) that may make other schools better in certain circumstances

- It would depend on when I had to complete the information that resulted in my match. I would fear that after completing the initial match form I may come to a different decision about my 1st choice school and then if matched with the school I initially chose, be forced to go there. While I had basically made my decision about my top choice schools right after interviewing I still had to think about my decision upon learning of my acceptances.



- I would like to have the ability to choose where I want to go study my master's in GC. For example if the program matches me to my 2nd or 3rd choice, and I know that the following year I could apply again and get into my 1st choice I would wait that one year and reapply
- I may change my mind after interviews or with in the weeks preceding acceptance.
- I would like to be the one to make that final decision. After interviewing, I did change my mind about certain schools and would not have been happy to be paired with a program I applied to but no longer was interested in.
- I do not like the idea of a binding contract and there were issues I had to weigh after being accepted to different programs, including scholarships and graduate assistantships.
- I would like to choose which program I attend.
- I feel that choosing the genetic counseling program that is right for the individual is an important decision which should not be taken away from the individual. This can be a stressful process, but I think it would be worse on the students if they were forced to attend a school which really was not the program they felt was best for them. It is important to be comfortable with your decision and feeling forced into a situation would only cause anxiety.
- I want to have more control over what program I attend
- I feel like there are many other components that go into selecting a genetic counseling program that would not likely be considered by a match system, such as location and financial expense. I also would not like to give up my ability to have the final say of which program I would attend.

## **F.5 STUDENT COMMENTS ON EFFECTIVENESS OF EXISTING ADMISSIONS PROCESS**

- I am not a huge fan of the universal notification date but I can't come up with a better idea on how to notify people. I think it is important that for people who have been accepted to more than one place to have time to decide where they want to go - 5 days seems like a good time but I would not know.
- I felt that this process worked fine.
- I do not see any problems with the current system. Everyone finds out at the same time and this way waitlist clear quickly.
- I worked well enough for me, but I was only offered a position at one school, thus I did not have to wait on my first choice.
- I feel that it works fine - I got into a program (not my first choice) but I am happy there. however, the 5 day window to decide seems awfully narrow if you find out that you have been selected from the wait list on one of the last two days.
- I think the current admissions process works well. The universal notification date was great and five days was plenty time to decide since there is plenty of time after interviews to think about it. One thing that would have been helpful is if the interviews were offered around the same time so you do not have to accept offers before you know if other schools will offer.
- I think its fine. Kind of nice to know when to expect an answer although Program X did not contact me on the notification date by phone or email, just a letter weeks later!
- I had no problem with the current admissions process. I enjoyed choosing my preferred program that I felt matched with me.
- I feel as though there are some flaws...i.e., having an accepted applicant wait too long to decide whether to attend a program or not..etc, but I feel a matchmaking process would resulting in more applicants being accepted to places they may not have ideally wanted.
- I didn't get into any programs on the notification date, so it was helpful that everyone had to make a decision within five days - that way I knew more quickly if I were going to get off the waitlist or not. It would be more frustrating to have to wait over a month to find this out.
- I think that the admissions process works well currently. I got into 2 schools and I wanted to make sure I went to the right one for me. I feel that I made the best decision.

- It works well, although it was very stressful waiting for phone calls of acceptance during those 5 days.
- I think it works very well. Our programs are small and deserve individualized attention during the process. If a computer matched me and there was no human connection I would be much less likely to participate. I think the universal date works very well, there is no wondering then about what might happen and when.
- The admission process should include a UNIVERSAL application such as medical school use.
- It works fine, just a nerve-racking experience.
- its fine
- I have no complaints about the current admission process.
- It is obviously not an ideal situation, a lot of things need to be considered when moving to a new location. I like the process because if you have more logistical questions that come up when making an actual decision to move, they can be answered before you are committed to a university /college.
- fine
- I like the universal notification date. I was not wait listed but I think a match process could alleviate some of the stress for those who are.
- I didn't have any problems with the admissions process, but my situation was much different from most applicants.
- It worked fine for me
- It worked fine. I received my acceptance letter quickly. It was not enjoyable to wait until April to find out when I interviewed in February.
- For me, it worked out just as I had hoped, so I am happy with the current process. However, due to some issues I had concerning housing and financial aid, I would have preferred an earlier notification date.
- I feel that the process is very stressful. I got into my second choice right away, but was waited listed to my first choice. I had to wait until the last day to find out that I got into my first choice. On the positive side, it all worked out in the end and I am where I want to be.
- I think the current process works well. It is nice to hear from all schools on the same day so that you can make your decision based on knowing all schools where you have been accepted or

waitlisted. I think having 5 days to decide is long enough as I think most applicants already have a good idea of where they would like to attend.

- The universal notification date works extremely well. At least it did for the minimal number of programs I, personally, applied to. The five days was extremely reasonable given that the waiting period gave applicants more than enough time to "order" their choices. Being wait-listed at my program of choice, I also appreciated the quick turn-around time so that I was not waiting for too long to find out if I'd be offered a position. The admissions process emphasizes the importance of face-to-face contact and communication through the interview and necessitates acceptable written communication in order to qualify for the interview in the first place. I believe that this set-up is quite effective, although the limited positions in Canada understandably make the process quite stressful for Canadians wishing to study in their own country.

- it's a fairly good system.

- Chaotic. I would be really glad if the match system came about.

- I think hearing from all schools on the same day is a lot to handle, but generally good because you know on what day you will get your final answer. I think that 5 days is too short to make such a big decision, but I understand that it needs to be quickly because of people on the wait-list. I think that maybe a week or so would be a more appropriate time.

- I think it works well. It is stressful, but I think it is the best way to do it. If there had been a match process, I do not know if I would have gotten the opportunity to attend my first choice.

- It worked well. I knew what school I wanted to attend. Then I waited for the notification. I had all my schools ranked before the decision day.

- I really appreciate the universal notification date and the time period that follows to finalize the decision. I feel that this alleviates a lot of the stress that could go into accepting or declining positions if you knew about certain programs earlier than others. Paying to attend interviews can be expensive, but I believe that is the best way to decide whether or not a program will fit your needs and help achieve your goals.

- I felt that the universal notification date allowed me to make the decision on all of the facts (as opposed to having to make a decision before I heard back from some schools entirely, like other graduate programs). The 5 days allowed me to weigh the decision carefully and I think was a fair amount of time with which to make a final decision.

- The universal notification date is seems too late, especially if you've interviewed in February. It leaves little time to make a decision and make plans to move, or make alternate plans if you were unable to attend a school. wish schools would inform you of acceptance once they had made their final decisions
- current admission process works well
- I am not very satisfied with the admissions process. Although I do like the use of the universal notification date so that you know exactly when you will hear from the programs instead of waiting by the phone or mailbox everyday.
- It seemed to work fine. The only problems I had were associated with the individual programs' admissions offices being disorganized.
- It worked for me, but I got accepted everywhere so I don't think I represent the majority. I think it might be nerve wrecking for those students who are waiting until the 5th day to get into a program of their choice while top candidates take their time to decide.
- I really enjoyed the process. It seemed very organized. Although, Program X was horrible at communication and did not follow through with their own notification protocol regarding post cards.
- I think it works well enough for the student, but it is very stressful.
- I think its works well, it is hard because it can take a few days for everything to get straightened out with the waitlists.
- I feel that it should be streamlined and we should be able to use one application for all of the schools. It would increase competition for great students.
- I think it worked well.
- It's a tough process as a student, but I think it worked well. Although, it would be nice if the universal match day would be earlier than May.
- It's a tough process as a student, but I think it worked well. Although, it would be nice if the universal match day would be earlier than May.
- I really like it. Even though I was waitlisted at all 4 schools, at least I knew that on the same day and thus didn't get an offer from a school I wasn't excited about and then decide to accept it before I had heard back from a more desirable school. And I like that even after I had heard from the two schools I got into, I had some time to decide.

- Having been waitlisted, it was stressful not knowing if I would be offered a position based on other people. In the end it worked for me and I don't really have anything else to compare it to.
- I feel it is an effective system. It provides a fair chance for everybody, both schools and applicants.
- I thought it was ok
- Fine for me, but must be hard if the person doesn't have a school already picked in their mind.
- There should be a universal interview invite date as well. It should be a requirement that each interviewee gets to meet with the program director. I went to an interview where I was not interviewed by the program director, while other interviewees were, and was not given a chance to meet with her personally.
- I think the universal notification date is a positive thing in our current admissions process. It allows all the candidates to have a couple days of going over all the schools they got accepted into before they decide what program they ultimately want. To be honest, I don't really have any problems with the current admissions process.
- I thought it worked pretty well, no complaints from me. Five days might have been too little amount of time for me to decide though.
- I think the admission process works well.
- Moderately well
- It was a stressful process but it allowed you time to make a decision and provided you the opportunity to really think about where you wanted to attend once you knew your options.
- I believe the current system worked well. By the time the notification date arrived, I already had an idea of how I would respond to any acceptances.
- For me the current admissions process worked fine. I was waitlisted at all institutions I interviewed with, but was later able to attend my first choice. It was a little nerve-racking to get all those calls in May, and then to wait to hear from everywhere again to find out if a spot had opened up. But the process was not so stressful that I'd rather just be matched to my number 3 or 4 choice (and another fee after all the application fees is not appealing)
- I understand the use of a universal notification day (although it is extremely stressful), but the 5 days to decide is really difficult and I think it should be changed! That is a big decision to make in 5 days!!

- I thought it worked well for me. I had my choices narrowed down from the beginning, so there was not much deciding that I needed to do.
- I think it works pretty well but there would be less waiting if there was a matching system.
- I felt it worked well, though I realize that my experience with the process was limited as I only applied to one program this year.
- I think the process needs improving because it was confusing and there seemed to be a lot of change after the 5 days
- I thought it worked well. One improvement would be for programs to email waitlisted students every evening with an update on their status.
- It worked well, and allowed for the chance to consider personal factors, such as location and family commitments, etc. although it was frustrating not knowing for a week
- While I feel that the current admissions process works, it is very frustrating to feel you have so little time to decide. It also seems that the universal notification date is extremely late which made it difficult to coordinate summer plans and school plans.
- It is stressful, but I think it works well considering the limited number of programs and available spots in each program.
- I think it works remarkably well. It was nice to have all my options laid out in front of me, and have some time to decide. It is unfortunate that some decisions hinge on the decisions of other students, but I felt that things worked out over the weekend following the universal notification date.
- I feel that the current admissions process works very well. It allows students to honestly evaluate their preferences, and for the programs to not place any weight on the student's preference. The universal notification date is excellent. This way, you are never forced to accept one offer (while hoping for another), and having to later decline the original offer you accepted, which is not fair to the program. Allowing 5 days to decide which program is sufficient. I had already given my choice much thought, and had considered my decision ahead of time.
- I think it is excellent. I really like the fact that there is a universal notification date, and having the days to think about it afterward. I think this is a very good structure, and I prefer it to what I have heard and know about other application processes (e.g. for medical school).
- I was satisfied with the admissions process as a whole. Narrowing down candidates from a larger list is necessary, given the nature of the small number of acceptances. I think that

interviews are an important part of the process. I did not like that some schools chose to send out emails regarding their notifications. I agree with the use of the universal acceptance deadline. While it was stressful, it was good to know where you stood on one day as opposed to spreading that out. I think that the five days is adequate time for making that decision, as the candidates should have a good concept of what they want, and simply weigh final decisions once acceptances are sent out.

- The universal notification date is very important. It is important to notify applicants about their status so they can make decisions whether to accept or reject other offers. The 5 days to decide is an appropriate amount of time, allowing both accepted and wait-listed to make decisions.

- I was satisfied with the admissions process as a whole. Narrowing down candidates from a larger list is necessary, given the nature of the small number of acceptances. I think that interviews are an important part of the process. I did not like that some schools chose to send out emails regarding their notifications. I agree with the use of the universal acceptance deadline. While it was stressful, it was good to know where you stood on one day as opposed to spreading that out. I think that the five days is adequate time for making that decision, as the candidates should have a good concept of what they want, and simply weigh final decisions once acceptances are sent out.

- I felt it worked very well. I like the universal notification day. I feel like it could have problems if everyone waited until the 5th day to make decisions, but in my limited experience and discussions applicants were respectful of the fact that there were others perhaps waiting for their spot and informed programs as soon as possible of their decision.

- I think it works well, although this may depend on your relative success in the process. I think it is probably a very anxiety-inducing process for those on wait-lists. However, it is very nice to know all at the same time where you've been accepted. Then you know exactly what you're facing in terms of making a decision. Further, I think it's informative to know how you've "stacked up". ex) if you're on a few waitlists the first year of application, there's a decent chance of being accepted your second year of application

- Nerve racking but effective.

- I think the current admissions process works well. The universal notification date is very helpful in relieving the stress of not knowing when you will find out if you are even being considered for an interview.



- I like the system.
- I think it works very well except that the decision is very late in the year. The late date interferes with financial aid awards.
- I think the current process works well except I think that most students would like to know earlier to make plans. I think it is good that there is a universal notification date and that everything is decided in 5 days.
- I really like the use of the universal notification date. I also think that the 5 days to decide is good in order to expedite the wait list process.
- The Match Day system works well if you're only waiting to hear from a limited number of programs, but if a candidate has applied to numerous schools, waiting to hear from each one delays the acceptance process. Also, programs lose valuable candidates by allowing 5 days for each applicant to accept/decline placement--if a candidate accepts at one program and decides at the last minute to attend another, the first program may have lost other applicants who were interested in attending due to the time delay.
- I feel that it is a great process. I feel that program directors should call to tell interviewees if they were accepted or not accepted.
- It's a different way of doing things, but it seems fair and works well.
- I think that the current system works well enough. I thought part of the excitement was waiting until May 5, and then seeing which programs you would get calls from.
- I don't see any problems with it
- I think the current process sounds a little crazy when I tried to explain it to friends/family last year. but it really works. most programs have a small class size and in the end you want all those spaces filled. allowing people to juggle what they want against what programs want I think allows for more people to attend where they want to go. for instance, on may 6th I received 2 offers and 3 waiting lists. I was on a waiting list for my first choice. if I had just been given those 2 offers without hope of a waiting list I would probably be attending a different school, which is a sad thought.
- I found that it was best to hear from all schools on the same day, as my first choice was the last school to contact me. I was able to open up spots at other programs to other students almost immediately because I knew where I was accepted and would be attending.
- I think it is set up well.

- It worked well for me, but I only applied one place.
- It seemed a bit odd at first, but it definitely works. There is quite a bit of anxiety building up to acceptance day though! Since I was accepted to my top choices, I didn't experience what others must have - to have to wait to hear from your top choice. I don't know how I might react to this experience in a span of 5 days, or over a span of a month or two.
- I feel that it works well, and allows more freedom of choice for the applicants; more than if they were just thrown into a program.
- I'm not sure how well it works. Five days is a lot of time. I don't see why it should take that long. It just allows for people to procrastinate.
- I think it's a good system: I liked knowing the day that I should receive phone calls and I liked having a short amount of time in which to make decisions. It kept the process short and less traumatic than it otherwise could have been. I appreciated receiving offers and then being able to decide on my own without too much pressure.
- I think the process works pretty well. The schools get their top choices (which is part of what makes a program strong) and you get to choose from the schools you get into. I felt 5 days was appropriate, because I knew the deadline ahead of time and prepared by ranking my choices, making my decision easier. The universal notification is good too, you have all your choices presented at once, instead of having to answer to someone weeks before you might find out if you got in somewhere else. My only criticism is that programs don't let you know where on the wait list you are. Knowing I was 3rd v. 26th would make a big difference in whether I accepted more readily somewhere else or not. more information = more informed decision.
- It is nice because it is uniform across all programs. It is also nice because you get a chance to think about your options, talk to people- especially those the decision impacts, and make a personal choice. Sure, the wait and uncertainty can be unnerving, but I'd rather be able to make the choice myself as opposed to a computer.
- I think this works great, but then again I was only accepted to one program. Five days might be too short to decide if you were offered attendance at two different universities. I like the current admissions process in that all of the school notify students on the same day, but I don't like the late date of notification. Also, I was only offered to attend one university, if I had been offered two or more, the five days to make a decision may have been too rushed.

- I think the process works well with the universal notification date and allowing 5 days to decide.
- I felt that it worked well. The length of time between when programs made their decisions and when we were notified seemed unduly long, though. And the five day wait was horrible, but I think fair.
- I think it works well
- It works Ok, but the date of notification is a little too late. It only gives 3 months for those who are in the working world to fully prepare for life without an income. Until that date, you can plan for the possibility, but it is much different once you have confirmation. - I think the method used now is very efficient and gives equal opportunity for both students to look over offers and programs to go through waitlist.
- I felt satisfied with the universal notification date and allowing 5 days to make a decision. I was able to hold my spot at my 2nd choice until I heard from my first choice.
- I am happy where I am, so I guess the system worked for me. However, I didn't apply to a school if I didn't think I would accept an offer of admission.
- I think the process works, and I like the universal notification date. I know that the 5 day deadline might seem too short to people who get accepted to more than one program and who have to make that decision, but to those who are waitlisted at every place they applied, the 5 day deadline is a long time. It's a long time to wait and see if someone who got into your dream program rejects the offer.
- This process was successful for me. Although my situation was different than most.
- In my experience the current admissions process works well, although it is stressful. I feel that I was lucky in that I was not waitlisted by any of my top choice schools.
- I think the process works well however if you waitlisted everywhere like I did it makes for a very long, unpleasant weekend.
- As most program directors tell us, I feel like the admissions process works itself out fairly well eventually, though I might feel differently if I had not been accepted anywhere. It was certainly stressful and frustrating, but I respect the need of applicants to carefully consider such decisions. I liked the universal notification date. I did not like the inconsistency between programs when it came to status updates (some programs were wonderful, some were awful when it came to keeping me informed on waitlist status, etc.)

- The universal notification date is excruciating! The wait is a bit ridiculous - I would have liked to have been able to prepare for such a large life change (i.e. moving, etc.) a little earlier.
- I like very much the way the system is set up now. I feel as though students have a better chance of getting into A program without the match system
- I think that it is stressful but works pretty fairly. It is difficult if you get wait-listed at your first choice. Then you hold up the whole process by not being able to notify other schools of whether or not you accept their offer, while you wait to hear back from your first choice.
- I think universal notification day was hard for me. I was accepted the second year I applied. The first year I applied notification day was the day before my undergraduate graduation. I wish that notification day was earlier in the year. It would have allowed me to make plans for a job before I graduated. This would have relieved a lot of the stress I experienced when I didn't get into a program. Allowing 5 days to decide seems appropriate to me.
- I thought the current admissions system worked relatively well. The process was a bit drawn out, with applications due on January and the universal notification date not until May. It was nice to hear from all of the schools on one day, so that way you did not have to worry that you might hear back from another school after you had already accepted a different school.
- I thought the process worked well, but I wish the interviews were set up for specific ranges of times as well instead of having some so early and others so close to the notification date. And even though it's necessary, it still is not fun to have to wait for a particular date to be told whether you are going to school X, Y, Z, or none of the above.
- I think it creates problems for people who are accepted to one school but it is not their first choice because they may want to wait and see if they get into their first choice.
- I think it's a fine system, but the notification date should be earlier in the year
- Based on my experience, the process works fine. However, I was called Friday morning at 9:30am with an acceptance from my #1 choice.
- I think the current process is stressful but is the best way for students all to have an equal chance at deciding which program they would like to attend.
- I think it works very well. Programs and applicants are both given the ability to choose what is best for them. The process worked very well for me, and I am confident I am in the program that is best suited for me. It was also nice to know a specific day or days when the decision would be made rather than wondering when you find out after the interviews ended.

- I think the program works ok except for the fact that there is not enough time to complete interviews if interviewing at several schools. I think the universal notification date is good but needs to be earlier than May because of the stress of graduation (for those of us still in undergrad while applying). I think the applications should be due earlier in the year, for example, December 1 and the universal notification date should be in late March or early April. I like having only five days to decide.
- Very well. I like the universal notification date and 5 days to decide. I enjoyed the interview process because it allowed me to get to know each program and their students and the environment. I don't think I would change the current admission process.
- The process involves a lot of time and money as you do not learn of admission status until the universal notification date. I feel that if the system was on a rolling basis, the student and the program could save time, money, and effort. However, it was nice in the end to know that I had made a fully informed decision and had felt that I chose the program that would be the best fit for me.
- I thought that it was a good amount of time because we have already had a whole semester to think about it
- I like the 5 days to decide but I just wish the entire interview process would happen earlier so we are not finding out about it in May which is late
- I found that the process worked well. However I can see that if people had applied and been accepted to more schools than I, this may have been a trickier situation with all of the movement of people from waiting lists and such.
- It worked fine for me because I was only waitlisted at one school, and that school was not my first choice. The universal notification date is good but maybe chaotic for those who are on the waitlist.
- It's good to know all your options at the same time, but hard if you're wait-listed for a program you really really want. The 5 days was NOT an issue for me, because I made a prioritized list ahead of time.
- I thought it was great
- I think it works very well.
- The universal notification date is a GREAT method. It takes away the nerves of not knowing when you might be contacted. I knew that on that day, I would be close to the phone and my

friends and family were there to support me. Giving us the weekend and a few days to decide, again was also a good thing. It is enough time, but not so much time that you become uncertain of yourself. It allows one to discuss the possibility with friends and family. Also, we were all given fair warning, so I had a decent idea in my head after all of my interviews as to where I might like to go. This system, although unique, works.

- I think the notification date is really late compared to other graduate school programs. I was about to graduate and still did not know what I would be doing or where I would be going while all my friends were celebrating getting in wherever they wanted to go.

- It worked well for me. I was waitlisted, but accepted at my first choice school. I like the universal notification date, it allows the people who were accepted figure out where they really want to go.

- It's good because you don't have to keep a program that accepted you waiting until you have all the other schools' responses.

- It is stressful. It is good that you know you will all hear back from them within a certain time frame. While it was hard to have that one nervous and possibly disappointing day at least you are aware of when it is going to happen and it is very straightforward.

- For me it worked well, since my first choice accepted me. It is nerve wrecking waiting for the date to come and then waiting for the phone to ring.

- I thought it went fine, but I was notified on the first day and immediately accepted.

- I would have preferred rolling admissions...especially since location was a big factor for me, if I knew I was accepted in NY I am not sure I would have interviewed elsewhere

- I think it works very well as is. Although stressful, I like the universal notification date and the sorting out of various factors afterward.

- I feel the universal notification date works well - this was a person isn't forced to wait too long to give schools their final decision because they know for sure if they are waitlisted or accepted. It's good that all the programs coordinate this.

- It works quite well, though I hope that there is at least some dialogue between programs in terms of acceptances.

- Fair

- I think it works OK. It is a long process, but you are not stuck making a decision before hearing from all the schools you interviewed. Maybe communication between programs would be

helpful for students waitlisted in one program and not responding to the program that she/he is accepted.

- Not well, it is nice to have time to decide but for those waitlisted it is horrible.
- I think it creates a very stressful time for everyone. I also think the notification date is too late. Some people find out their school in May and must move and start school by August.
- I liked hearing from everyone at once. However, I felt pressured to make a decision very quickly even though we were told we had 5 days to decide. I got calls "checking up" on me when some programs had not heard from me yet which I did not like.
- I think this process works well
- It works well, but I feel programs put too much pressure on applicants to decide within the first day or two. Applicants should not receive so much pressure to make a decision quickly.
- I think that this system works well, but it might be better if the universal date was earlier in the year, maybe at the beginning of April, to give people more time to get ready for graduate school.
- It worked well for me. I think that having one notification day eliminates having to make a decision about a school potentially weeks or months before hearing from other schools, as is the case with other graduate programs.

## F.6 STUDENT COMMENTS EXISTING ADMISSIONS PROCESS EXPERIENCE

- It was very stressful - I snapped at one of my co-workers that day. Luckily he called me on it and I apologized. Perhaps informing people while at home would be best. Say an interviewer asks an interviewee when he/she wants to be notified either way, the interviewee could give them a time when they feel it would be best to contact them.
- It was a roller coaster because one day I got waitlisted, and then 3 days later (I suppose as people accepted other offers) I was accepted. I did not take too long, thankfully, for me to hear an answer.
- It is stressful, but at the same time nice knowing when you are going to get an answer. I think the worst part is waiting to see if you'll move up on the waitlist and be accepted into the program.
- Overall I had a good experience with the interview process. It was stressful, but I think that is to be expected. It was difficult because I applied to 10 schools and they all had such different requirements in terms of personal statements, deadlines, and course requirements.
- It is stressful, but it's supposed to be! It's not unmanageable.
- Have the "match day" earlier in the spring and have interview start earlier so we have time to find housing and figure out everything we need to do by the time we start attending the program.
- I like having the official acceptance date...so as not to wait to wait and wonder for months. I also find it a lot less stressful when you have directors of programs informing you of your waitlist status throughout the whole 5 days of deciding.
- The process is definitely stressful, but I don't think that that's unique to GC programs. Interviews are stressful, but again, that's to be expected. The universal acceptance date was nice in that I didn't have to sit around and wonder when I might hear back from the schools - I knew when I would find out from all of them. My experience was full of highs and lows - the high points were being invited for interviews at all of the schools I applied to, the low point was getting rejected by half and only waitlisted by half.
- The process was as stressful as any admission process usually is. I am not sure that a match system would alleviate any of that stress. My experience was great and I prefer having the opportunity to choose the best school for me once I have been offered admission.



- I believe it is stressful, and that it should be, as applying to graduate school should be a well thought out decision and require hard work and patience to get through to the end goal.
- It is very stressful, but that is to be expected. It was fairly costly, gas and hotels, and very time consuming.
- It was just good to be able to make the decision after you had heard from all of the schools. It was stressful. There should be set times each school calls.
- It is a little stressful to wait for THE email in order to find out if you've been accepted or not. However, the waiting period is reasonable and bound to be stressful no matter how long you are required to wait. A matching program may be a speedier method for providing students with admission results, but as I mentioned in the beginning of this survey, meeting with interviewers or visiting a university of interest is crucial for students prior to completing an application.
- I do not think there is a way to make the process not stressful. The inherent nature of being accepted / not accepted is a stressful situation. Also this is a total change in life, I am not sure if changing the way we find out and choose the school we attend will improve how we feel about the change.
- It is fine
- I thought it was stressful but overall I think it works well. The match process could improve the admission process but I don't think it would make it less stressful.
- We interviewed for 2 days and I thought that was excessive.
- My experience was neutral. I don't have any complaints or praise to offer
- I did not like waiting so long for an answer when the application was due early in January.
- Undoubtedly it was stressful, but I think that would exist regardless. With this system, I think that my worst fear was that I would be accepted at a school that I didn't really want to attend and waitlisted at the one I really wanted. So, I was afraid maybe there was someone else out there was waitlisted at the school I was accepted at (which maybe they really wanted to attend), and the school that they were accepted at was the one I really wanted. Therefore, there we would be, each hoping that someone out there would turn down their acceptance to the programs we really wanted, but not able to know and make the right decision. I think that this fear would have made me procrastinate my acceptance to the school I didn't really want to go to, and that might hurt another's chance of getting into that school. How many people do you think wait until the last

second to make that choice and end up hurting another person's chances of getting into the school they really want?

- I feel that the process is very stressful. I got into my second choice right away, but was waitlisted to my first choice. I had to wait until the last day to find out that I got into my first choice. On the positive side, it all worked out in the end and I am where I want to be. Some of the programs offer money to certain applicants when they accept them. Part of my decision making process was centered around the amount of money I was offered. With a matching system, I don't know how this would work. You would have to pick your top choice before you knew if they were going to offer you money.

- The admissions process is stressful because of the amount of interviewing done in such a short amount of time. However, I do feel that because the programs are so small it is important to interview candidates before offering a position. I think it is also stressful for those who know for certain that this is what they want to do, but have little control over the process. I think it would be good if all schools included an orientation to the University and program during the interview process so that prospective students can have an opportunity to learn more about the school - some programs do this and others do not. I think it would also be useful to have a universal deadline for schools to offer interviews so that it makes it easier to coordinate travel schedules, etc.

- The limited positions in Canada understandably make the process quite stressful for Canadians wishing to study in their own country; however, it would be difficult to structure the process differently given that an interview is a necessity and no student likely desires to be judged solely on the basis of one aspect of their academic career (marks, volunteering, etc) As a first time applicant, I found the experience rigorous, but well-structured. There was never a time when I felt that I didn't know why I was being asked to provide certain information. The only suggestion I would have would be to implement video-conferencing as an option for interviewing applicants who lack the money to travel long distances to every interview. This was an issue during my applications and I was lucky to have been able to find the funds to travel to the interviews. The issue is that there are so few spots, a student on a limited budget must weigh cost of travel with chances of success. With so few spots, I feel some students may be choosing not to accept interviews which they would otherwise attend purely because of associated travel expenses.

- Stressful b/c the universities could not confirm about assistantships and financial aid till AFTER all candidates had accepted (or rejected). I would love the match system to come about, but I don't think it should be binding b/c some universities do not mention the financial aid they can offer at the time of interview.
- It is extremely stressful. The build-up to that day is insane. However, in the end I think it works well because the wait-lists move quickly.
- I was accepted at one school on notification day. I was waitlisted at the other two. It was stressful because I had to wait four days to hear from the other two. Eventually I was accepted to all three, and I got to attend my first choice. I think more advice or instruction should be given to potential students about the process. I felt bad about turning down the other two schools, and having to keep one waiting so long for my reply. Perhaps someone during the interviews could discuss notification day more.
- The biggest stressor for me was organizing the logistics of each trip (i.e. hotel, transportation, etc.) Some programs were more helpful than others at coordinating this or giving information about these items. I really appreciated programs that had current students "house" interviewees and handle transportation to and from the airport, university, etc. This greatly reduced the stress that went along with the interview process. - I felt that the process worked well for me, however because I was not wait-listed for any of the schools I did not experience the frustration of having to wait to hear back from schools that were waiting to hear back from students. I felt there was a distinct advantage to knowing all at once which schools were possibilities so that I could really think about the pros and cons of each program.
- Stressful to be so close to your undergraduate date of graduation and not know if you've been accepted and have a plan!
- I had a good interview process, slightly stressful but overall it was what I expected.
- I have had a unique experience being that I only applied to the school I was already enrolled in but the faculty were very helpful and supportive and I have a good experience
- The current admissions process is fine. Of course it is stressful, but any process will be. I can't think of anything that would make it better.
- Of course it is stressful, but it made the waiting less stressful since you didn't have to worry until the last day!

- It worked fine for me, but I was on the wait list for a day or 2 and was very nervous. If a matching program could eliminate that, it would be great.
- I think it would be helpful for those at the top of the waitlist to know what number they are, that way they will know if they have a chance of getting in.
- It's stressful because we need to complete separate applications for each school. I think we should make it easier by filling out one application and set of essays. This would make it easier for those of us that are graduating from undergrad while we apply.
- It was stressful because of all of the competition and my parameters of part time and location where prohibitive.
- It was very stressful being put on the waitlist as all schools, but I think the process served its purpose.
- It's hard to wait for the universal notification date, but at least you know that it is THE DAY and you'll know something then. I really, really liked having a universal notification day, I only wish it maybe could have been a little sooner.
- It is very stressful, but it is nice having a declared date that you will be notified. My stress and difficulty were compounded by travel, so in that sense, it was not very easy.
- It certainly is stressful, but I don't think there is any way around that.
- It is about as stressful as I thought it would be. It was really about what I expected.
- Of course applying is stressful! But the only improvement is maybe finding out where you're accepted sooner.
- I felt like a "piece of meat" that the programs were fighting over - I did not enjoy the process
- The process is incredibly stressful. Especially the universal acceptance date being in May. At that point in time (if you are an undergrad), your undergrad years are coming to an end. I was on an emotional roller coaster already. I was leaving a place I'd been for the last four years, graduation was approaching. It was incredibly stressful because I didn't find out until after my college graduation if I was accepted or not. I couldn't make any plans about my life. I think the date should be moved up.
- It is stressful but I think that if you have the qualifications and a little beyond to help you stand out, prepare for interviews, and do all that you can, you will get into a program. It would not be as fulfilling to get into the program you want, if it wasn't a difficult/stressful process.

- Well , it is not very stressful, but a little inefficient. computer system should be updated frequently for people that apply online.
- I was stressful! But not so much that I'd rather have a matching process. One reason that I did not find it stressful was that each time I got a call from a program to tell me I was wait-listed they all said I was close to the top and it would be likely they would be calling again with an opening. In addition, I had spoken to others who had applied to GC programs in the past and they had also been waitlisted and then later accepted. I think in the back of my mind I knew that even though I was waitlisted I still had a good chance of going where I wanted.
- Waiting for a universal notification day was difficult, and having so many offers/rejections/etc. thrown at you in one day is difficult, but the hardest thing for me was deciding which offer to accept in only 5 days! I felt extremely rushed and pressured and really would have liked more time!
- It was stressful since my future depended on whether I got accepted anywhere. Therefore, it would be a stressful any way that it was approached.
- I did not feel that it was stressful going through the process but waiting to hear where I was accepted was stressful since I had to wait for only one reply
- My experience with the admissions process was very positive. The director of the program I currently attend called me right away on the notification day to let me know I was on the waitlist and that she would call me again as soon as a change had occurred. She called me back promptly on the morning of the next business day to let me know that I had then been accepted. The interview process was positive as well. On my interview day, only two other candidates were being interviewed, so I did not feel intimidated or overwhelmed. I had an opportunity to have lunch with some of the current 1st year GC students as well, which provided a great insight into the program.
- The current process was stressful, it didn't allow time to apply to different schools if you were not accepted to the first set you applied to. There was also a long wait between applying and finding out if you were accepted.
- I think it is successful. It is a little stressful, but overall it worked very well for me. I would not want a matching program. The whole issue of financial aid is a difficult one. With MD residency programs, this isn't an issue. All residents receive the same pay.

- Overall the experience was certainly stressful, although I do understand the need for a universal acceptance date. If that date were a bit sooner in the spring and there was a few extra days to decide, I think that would improve the situation.
- I thought it was pretty stressful, but also exciting. I was dissatisfied on available information for programs before actually going to the interview, and even then, sometimes left frustrated.
- Perhaps limit students to holding no more than two or three spots over the weekend, thus making preliminary cuts if they are offered more than one admission. This might move the process along for others on the waiting list.
- I had an excellent experience with the admissions process. Yes, it is stressful to apply and be interviewed as there is much competition, but I do not feel that a matching system would improve the process.
- I think that it was stressful, but I think this is inevitable when you are applying for something that you really want. I believe that it was much better than the experiences of some of my friends who were applying for programs such as medicine or midwifery. I do not think it should be changed.
- The overall experience was positive. By nature of being waitlisted at all of my schools, it was very stressful waiting for acceptances, but I do not really know of any way to make this less stressful.
- The experience was somewhat stressful for me because I was accepted into one program, but wait-listed at my first choice school. The few days before I found out that I was accepted were tense, but luckily I found out before the 5-day deadline.
- It was very stressful, but I don't feel like a matching system would alleviate much stress. Much of the stress I experienced was waiting for notification day to find out if I got into either of my two choices. I believe it is helpful to tell those who are waitlisted where they are at on the list. I was told, but don't think that everyone is told this.
- The universal notification day, although effective, is a VERY stressful day. However, in a field this small, I think it works well. However, I think it should be more strongly encouraged that individuals with multiple acceptances should decline the extra offers in a time efficient manner. By hanging on to those acceptances, it plugs up the whole system. Further, I can imagine that the following scenario happens: person A gets accepted at school B, but really wants to go to school

D; and person C gets accepted at school D but really wants to attend school B. Is there any room for "trades"? (given agreement by the schools, of course)

- I was extremely pleased with the process. I received admission invitations from both schools I applied to only the schools I most wanted to attend. The ranking-matching model would have been difficult to me because I was equally motivated to attend both schools for different reasons. I waited for information to make my final decision regarding financial aid, which I would not have been able to do under a matching program.

- My overall experience was great, although stressful as expected. After being waitlisted, I was given an approximate date as to when I might know if I was accepted, which I found very helpful.

- It is stressful; but that's the nature of applying to graduate school. The big downside is the cost of traveling to the interviews.

- I did not like to wait and see where I'd be accepted but this stress is inevitable.

- I do not believe it is any more stressful than the admissions process involved for any other graduate programs. I do not think that stress can be avoided. I feel like for me personally, a matching program would feel more stressful because it would feel like I had less control over the final decision.

- It is stressful because there are so many applicants and the programs only accept a few students, but there is nothing that can be done about that.

- It's nerve-wracking but it seems to work. I think I would have more insight if I knew it from the admissions people view.

- Any admissions process is stressful. Going to a match system will be less stressful come decision time (perhaps), but would be much more stressful during ranking. I think things work themselves out in the end the way it is set up now. Also, a match system may accept applicants that are not qualified. With the current system, programs have the option of not offering a spot if they see a drop off in talent or if the next person on the list doesn't fit well with the class they already accepted. With a match system that may be a tougher call to make.

- I thought the current plan works well, and did not find it stressful, though I was only dealing with two programs. I can understand how more programs would increase the confusion/frustration of people waiting to be notified of admission status.

- More program choices would improve the process

- The only thing I can think of is that there seems to be a LONG time between the interviews and May 6th. a long time to wait to hear something. especially when you're probably going to have to move quite soon. May 6th is cutting it a little close as far as having time to organize everything and possibly move to a new state.
- I appreciated the schools willingness to help with finding someone to stay with while I was there for the interview process. It was however very expensive and sometimes difficult to set up interview and travel, when the dates conflicted with other interviews or were only offered on a limited number of days. I also appreciated the schools that were willing to help with my travel expenses.
- We had a two-day interview process which I thought was too much.
- Like I said previously, there was quite a bit of anxiety building up to acceptance day, but I was able to choose and accept to Program X in one day. Part of my reasoning, though, for trying to make a quick decision and answer, was that I knew there were other applicants waiting for the spots that I was holding at the other schools.
- I had a problem with some schools emailing and some calling and I had previously understood that they would all be calling. If this method of notification were to continue, I would suggest that using one means of notification be required. I also didn't hear from one school at all and was only sent a letter about 3 weeks later. Not helpful.
- I did not like the admission process. On the Wednesday following match day I still was on the waitlist for the school I wanted to. They kept putting me off every time I called and didn't give me a good estimate to where I was on the waitlist. In the meantime another local school was calling me to see if I would accept. It is very stressful and I felt like I needed to choose that day because it was getting so late and I had no assurances from my priority school. I think there should be some sort of way students can rank their preferences. Therefore when they go to do the waitlist maybe they can take that into account.
- The admissions process for anything is universally stressful. I liked the two-tiered format: applications, then interviews. I thought that the interviews are an absolute necessity in order for the applicant to gain a truer understanding of the program and what it has to offer. This sort of experience cannot be replaced by a website. The only thing that I'd change about the process would be to instigate a universal application, filled out via internet, with a fee per school. This could then be forwarded on by an oversight committee to the appropriate schools. Nonetheless, I



wouldn't change anything about the interview process: I like how each program is allowed to run its own interviews. It allowed me to see a bit of the school's (program directors?) personalities, even at that level.

- My experience was good. It was very stressful waiting for the day, and the 5 days after match day were pretty stressful as well. I guess being computer matched would take away the stress of making a decision, but many (including myself) may be dissatisfied without being able to make a decision. I wouldn't know for sure if I would like being matched or not, unless I went through it. In essence, I thought this process was satisfactory, just wanted to know more specifically where I stood when I got wait listed. (The X program was the only one who was pretty honest about that, letting me know with one spot still open that I was 3rd on the list).

- It is stressful because you know you could be waiting for other people to make their decision before you can make your own. However, it would be worse if it was not coordinated between the schools. But getting into graduate school is stressful in general.

- The admissions process was very stressful. I think the acceptance date should be earlier to allow for more time for decision making and planning. Med students usually find out by February where they have been accepted. May is very late compared with other continuing education programs. The process went smoothly, but I think the notification date should be moved up. Most other graduate programs announce acceptance much earlier than May. Most pre-med students know by February or March where they will be going for med school.

- I believe the whole process is very organized. I think it is inherently stressful, because as an prospective student, one is anxious about being accepted into a program. My only suggestion is that it would be nice to have programs consider how the students would interact with one another.

- As stated before, my only suggestion would be to move up the universal notification date. I applied late October and found out in May that I was in. Seven months seems like a long time to have to hear.

- It was very stressful because I was a college senior getting ready to graduate and was actually schedule to have a final on notification day.

- I think it is a stressful process especially as you wait to hear from schools at which you have been waitlisted. I think it is important that applicants and program directors keep in touch

throughout the process to minimize the stress and allow people to make decisions which will obviously impact others as well.

- It was certainly stressful, but I don't think it should be a stress-free process. This is a decision that will have a big impact on one's future, so I don't think it should be taken lightly. That said, I was never overwhelmed or at my wit's end or anything during the process either.

- I think the overall process, as it stands for all GC programs is fine. I think individual programs could make some changes that made the interviewing process a lot less stressful. However, I don't love the admissions process, so perhaps a match system would work better. Then you wouldn't have the 5 day wait. You would just know on one day whether or not you got in and no decisions would have to be made...where you got matched is where you went.

- Yes the process is stressful. The idea of being on the waitlist is upsetting because you wish that the students who were offered positions would make up their minds sooner. It is nice that some schools give a general idea of where you are on the waitlist (high, middle, or low). Although the process worked just fine for me, I would have liked my top two picks to know that they were my top picks after I had interviewed at all of the schools.

- I feel that the process was stressful. I think it would be helpful if programs that were not offering admission or waitlist sent an e-mail rather than phone. Also, when programs waitlist students I think they should volunteer the information of where you are on their list.

- Overall, it was a very stressful time for me, and I am not surprised. Towards the beginning of the interviewing process, I was completely unsure of my impressions of each school I interviewed at, but as I went to more interviews, I was able to get a feel for how I felt about each and felt more comfortable with it. As far as acceptances and notifications, I ended up being accepted at my two top choices and not at my bottom three, which surprised me because I felt (not surprisingly) that these were the two best -- how could I be accepted in two great programs when two not-so-great ones didn't want me? However, I came to realize that these were great programs for me, while the other three were not the right fit. So, I feel like it worked out that I was accepted into the programs that were the best ones for me as an individual. I like that each program expresses its individual personality in the way the interviews were held. I don't have any specific complaints or suggestions for the process.

- It is incredibly stressful!

- I like the universal date of finding out. I think it takes pressure off, I do think waiting 4 weeks is a long time and believe this wait time could be shortened. I also think students should have more than 5 days to make a decision. (more like 2-3 weeks...some may wish to go back to the school/city and look more closely if it is right for them)
- As I said before, I wish that interviews and notification day could happen earlier in the year. It would be nice for notification to occur in March.
- Any admissions process is stressful. I did not feel that this process was any more or less stressful than another process. If there were a way to shorten the entire process (not as much delay between when applications are due and the universal notification date) that would make the process much better.
- It was stressful, and I think the process would work better if: 1) websites were more accurate and informative 2) all programs invited professors to meet with students and not just directors and other students and 3) if things could happen a bit faster with interview notification, etc.
- It is very stressful.
- It's extremely stressful. I personally was wait listed at both schools that I interviewed with on Friday and then both accepted me on Monday. a very stressful weekend
- I had a good experience with the process. Even with an ideal outcome, however; I experienced stress during the process. I believe this stress to be a natural part of any selection process, and a match program would not improve stress levels.
- The process was stressful. It was difficult to have phone calls coming in at the same time because then you had to call the director back.
- I think it was very successful. It seems to be the best choice for putting all applicants and all programs on as equal a playing field as possible to allow both to make choices to have the best suited applicants for each program.
- I think my answer above addresses this, but in general, I feel this is a very stressful process because of the timing of the due dates and when interviews have to occur. I also feel that it is very costly, especially for someone who ended up interviewing in several different states. Some programs refused to let me stay with a student when I asked and this did not help with the high cost of interview travel expenses. I also feel that waiting until May was very stressful, especially when compared to other students who were applying to grad school at the same time and learned of their acceptances by March or April.

- It was not stressful at all. The only thing I would suggest is for the programs to be more flexible allowing people to coordinate their interviews. For people who have to travel far to interview it would be nice to have all the interviews scheduled within the same week to cut down on costs.
- It is a very stressful process because it extends for a long period of time and the acceptance date is rather late in the year. Rolling admissions may make the process better, at least for the student. I don't think a matching program would be appreciated, because I know that I enjoyed being able to make that final decision, especially since some schools are much more expensive than others and I would not have wanted to be bound to contract to a school that in the end may have not been able to afford. Also, I may have wanted to go to a school that I was waitlisted more than a school that I was their first choice.
- I thought it was good
- Stressful as to I found out if I was accepted the same week I was graduating undergraduate. I kind of put my life on hold until I found out if I was accepted or not. It would have been nice to know sooner.
- I think that admissions is slightly stressful however I think that this stress is more due to the fact that you are awaiting news that will affect your life. Not so much because of the process itself. Overall, I was satisfied with the admissions process.
- I didn't find the process stressful, but those who were on the waitlist may have. However, admission to any program has the same problem, so it is probably unavoidable. I think the universal acceptance date & limited time to respond is really effective b/c it minimizes time spent stressing & juggling.
- It can be stressful, especially at first, deciding which ones to even apply to. A match program would be great for narrowing it down. It would be nice if it was like med school, where you have one big long application, but it's standardized, and you send the same one to every school. It's a little stressful keeping track of all the different requirements. I'm not sure how to improve the offer process, unless you had all the applicants and all the schools provide a prioritized list (after all the interviews), and a third party figures out how they all line up - and then the results from that 3rd party are all disclosed on the same day. This would be different from the match program to help you figure out what schools you may be interested in applying to. It definitely doesn't make someone feel good when their #1 school says that they're wait-listed. You want to go to a school that wants you the first time around! However, with a 3rd party system, maybe you could

avoid that. It would force people to concretize a prioritized list ahead of time, but you've gathered all your decision-influencing info by the time the interview is over anyway.

- It was a nice, smooth process. I thought it was very nice

- Any application process is stressful!

- Admissions is always stressful. Even with a match it would be stressful. Although it may seem easier for the directors to have a match system, I think that keeping a bit of the human aspect in on this system is a good thing. It works.

- It was very stressful, but only because I knew genetic counseling was what I really wanted to do. I think the stress comes along with the small number of people that are accepted into each program. My first interview was in Feb., so having to wait so long to know whether or not I got in was really stressful. My life was on hold. I think the notification date should be earlier.

- The current system worked for me, but I think it would be helpful for programs to have an idea of where students would want to be. I did like having the chance to weigh my options. After my first choice, some school were tied in my mind of where I'd like to go. I would have needed to figure out where I wanted to go, had I gotten into my 2nd and 3rd choices.

- It is very stressful to know when exactly you are given a response, but in the end I guess this is the best way to do the process.

- The hardest part is waiting for the universal date. Part of the stress comes from trying to impress people at the interview, while on the day they call it is all about which school impressed the applicant the most.

- If we were to match, it should definitely be after interviews so that we can "rank" schools appropriately. As far as admissions, I was really lucky. My backup was to wait a year and then apply to several schools in the meantime, but my heart would have been with Program X.

- I found it stressful to wait until April to be notified. I would have preferred an earlier notification date.

- I feel the universal notification date works well, however it is very late in the academic year... I remember I graduated the day after notification. It would have been nice to know where I was going to grad school more in advance so I could make alternative temporary career plans if necessary/not be so anxious.

- I was just glad to be accepted somewhere that I applied. I'd have made it work wherever I was accepted. Beyond that, the admissions process didn't matter all that much to me.

- It just left me ridiculously nervous on that day, and wished that there was a way that I could get all the information together (which school I was wait-listed, accepted or rejected) so that the decision making won't be so tough. And also it would help to know how far along the wait-listed list I am on and chances of getting in.
- The process was stressful and it took a long time, however I think it works. The one thing that would be helpful is to have one standardized application process and date. Instead of having a computer program to match a student to a school, there should be a computer database that a student fill out and send their documents (transcript, letters of recommendation...) and choose which school they want the computer database to send their information to.
- It was stressful because it seems like each program has an agenda but they don't tell you what it is or what they want.
- It was extremely stressful. I jumped every time my phone rang on match day. I think a matching system could help to reduce the stress.
- I like having an exact date of when I was going to find out as opposed to waiting by the mailbox every day in case a letter would come. I think that there could be a more uniform system of contacting applicants (i.e. all phone calls or all e-mails).
- It was slightly stressful, but applying to graduate school is a stressful time
- Definitely stressful.
- The most stressful parts about interviewing were the cost of traveling/lodging and the dates that were offered. It would be nice to have interview days on the weekends for people who have to work Offering funding for students traveling a long distance for interviews would be ideal, although understandably difficult
- It is stressful because your future is hinged on one day but it is better to hear from all the schools at the same time rather than being left hanging as the offers straggle in over weeks. I realize that I was lucky to receive many offers and therefore could make a decision right away. I could see a potential problem if someone was offered a place in one program and waitlisted at another that was her first choice. As she waits to see if she has been accepted at the other school, she is holding up the process at the first school by not declining their offer. I do not know how often this happens. It could potentially be remedied by identifying where she is on the waitlist so she has an approximation of her chances of being accepted.

## F.7 PROGRAM DIRECTORS- THOUGHTS ABOUT A MATCH

- I am willing to go along with this, although I am afraid that the applicant pool is too small for this to work. I think that applicants often chose programs based on what works for them.
- I don't have enough data yet on how amenable our population would be to the match, but hopefully this project would shed some light and we will be able to provide some more informed feedback. It is certainly an interesting possibility, though anxiety provoking.
- I don't feel that a match would substantially improve the system. The most time intensive part of the process involves interviewing, and we would still need to interview people to determine if we want to rank them. It might cut down on some of the "game playing" that some applicants use to maximize the number of offers they receive, and that some programs use (i.e. making more offers than they have slots for), but it would probably create other challenges that are just as difficult.
- I have a number of apprehensions. Students may try to guess where they will be matched to and rank accordingly instead of ranking their choice. Programs may rank based on who they think will rank their program (for example, your first choice lives in another province where they also have a program, so you may not rank them appropriately if you assume they will pick the geographically closer program)
- I don't think it will work because of the vast differences in terms of the cost of each institution. Being at a private institution money and financial aid is always a big concern for my applicants. I often lose my best applicants to state programs. I unfortunately do not know how much financial aid I have available until later in the process.
- Initially it may be difficult, getting use to the process, etc. Also it would be especially difficult if our program had unfilled slots. As a very small program, it would be very difficult to have an unfilled slot.
- Do not feel we need this for the Canadian programs. We have never had trouble filling our class, and have had minimal need to offer positions to students on the waitlist.
- Our current process is working well for our program. We rarely go far down our waiting list and have never in 20 years been left with a slot unfilled. If it ain't broke... you know the rest!
- I think that a match would help minimize the anxiety of the program directors, but not sure that it will be worth the cost

- I am a little concerned about disadvantaging the students. The way we do it now, students have choices after all of the interviewing is done. With a match system, that will not be true.
- Too expensive for both students and programs. Am not certain that it will solve the problem of geography constraints of significant others, etc. Our situation differs from that of residency programs that offer a salary, and financial concerns are a much bigger variable in the equation. We may have funding for only one student (or none!) and need to be able to have the flexibility to use this as things change within the reply week.
- Might be useful
- I prefer the present system, flawed as it is, with additional guidelines for the students re. their responsibility to a program once they accept it. I think the match would be difficult in terms of ranking students and, because of money differences, would make it hard for programs at private schools to fill their slots. I also think it could be unnecessarily expensive for the programs. And...philosophically I think the current system is better in giving students the full spectrum of their options before they need to make a decision.
- Full support!
- Mixed feelings but am very glad it is being considered. Cost and less overall flexibility are main concerns.
- I am not sure that this is necessary and I have concerns about the cost (and whether this would be passed on to applicants) as well as the effects on the process. Since I am satisfied with the current process it is not clear to me that this needs fixing.
- This is our first year, so we don't have a lot of experience. It's scary to see programs not fill their class. This is a reason for match. On the other hand, I would be worried that a match could result in less qualified candidates.
- My major concern is that we don't become like the medical school/residency match. In that case, most of the interview process seems to be around trying to figure out if the med student wants the residency program so the program would get a "good match" and therefore appear successful.....rather than interviewing for the right candidate for the program. In other words, in the residency match process, the focus is on the match itself. - We really want it.
- I would love to see it work.
- I have mixed thoughts. It would alleviate the hassle associated with the universal call out day and the two weeks following. Although I've viewed the website that gives an example of how the



match system works, I can't help but to be anxious that because our program interviews and ranks numerous candidates that the match system might not match some of our lower choices for a "best fit" model to fill all of the programs rather than the possibility of us getting some of our higher ranked choices if we were to call to offer positions. While I guess I am interested in learning if a match system is possible, I would be perfectly satisfied for the application process to remain as is.

- I know my medical director would much prefer a match. It would make me a little nervous. I know I am always nervous when we get down to our last student we consider acceptable.

Because the one below them was unacceptable and there may not be that much difference. I would worry that a match could have us end up with #16 to #20 rather than in our top 8 or 10.

- I think there are pros and cons, like with every process. Most years, I am happy overall with the current process, but my biggest "gripes" are when programs don't "play fair" and manipulate the system, or when applicants play programs against each other at the last minute (or drop out completely). I know many people fear a loss of control over admissions process if we move to a match, but honestly I don't think it would change that at all (we don't have as much as we would like to pretend, it just changes when we all have it).

- I support the idea of a match process. I believe that if developed correctly, we would be able to fill all of the programs, and decrease the "negotiations" between students.

- I am concerned about the costs and lack of choice.

- I open to learning what the results are from your study but overall we have had excellent luck filling and in accepting folks who are targeting our program. I have some trepidation over losing control over the negotiations.

- I would be opposed as the current system works well for us. We never have a problem filling a class and do not have program funds to pay for a match system. If individual applicants have to pay into a match system, this could further distance financially challenged students from applying to GC Programs.

## F.8 PROGRAM DIRECTORS- BENEFITS OF A MATCH

- 1. Decisions would be final 2. Quick (one day)
- 1. A more direct sense of who really wants to come to your program 2. applicants might feel more committed to a program that they matched to
- 1. Would reduce delays in confirming classes 2. Reduce administration time
- 1. Speed up the process- I dislike the 5 decision days 2. I think that it might increase applicants in some programs that applicants might not have considered. 3. Hopefully, ensure that all applicants who are qualified get into a program
- 1. Would take less time 2. May decrease the anxiety of not knowing whether or not a class has filled 3. May decrease applicants' anxiety of waiting to hear and making decisions about which programs they are really interested in
- 1. It might reduce the incidence of students saying yes to more than one program, causing some programs to be left with a slot unfilled. 2. It might make it less stressful for program directors; they could avoid the mad scramble for students that occurs towards the end of the notification week. 3. It might make decision-making easier for some students.
- 1. Less scrambling after the offer date 2. Force applicants to think more during the interview process 3. Drive programs to distinguish themselves more from each other
- 1. It would be easier for the programs. 2. The process would move faster.
- 1) Might reduce some of the craziness of the four days. 2) Would ensure that as many students got placed and as many programs filled as possible. 3) Supposedly would make everyone as satisfied as possible.
- It might encourage those who would consider "changing their minds" to think first and accept when certain
- The match would decrease my anxiety during the 5 day admission process but I might be ready to commit hari-kari at the end of the match if our program ends up not full. However, if direct conversations between PD and applicant indicate that each would rank the other highly, then anxiety and uncertainty might be lessened to some degree.
- 1) Eliminate the five days of uncertainty 2) Reduce the overall anxiety experienced by the applicants and program directors 3) Increase the chance for applicants to get a slot in their top choice(s) and decrease the chance of applicants accepting an offer at a lower choice out of fear

- 1. Simplify process for applicants 2. simplify process for programs 3. prevent the recent problem of applicants accepting and then withdrawing from a particular program
- 1. It would remove (somewhat) the stress of the match period, at least for students who matched and programs who filled. 2. It would provide opportunities for qualified applicants who did not match to be considered for admissions by programs that did not fill their class, especially if some type of a "post-match" match were included in the process. 3. It would force (encourage?) applicants and admission committees to carefully review their options and rank their choices ahead of time.
- I assume it would make it more likely that classes would be filled. It would make the process less painful for programs. It's possible that we would have more qualified students.
- 1. Formality of rules and regulations for programs and students 2. ?Shorter time frame for finalizing admissions?
- 1. Higher likelihood of all programs filling their slots. 2. Decrease the anxiety that is associated with the current process. 3. Encourages better planning on the part of the student.
- Those students who don't get in would potentially have a place to go to school
- 1. It would alleviate the hassle associated with call out day and the one to two weeks following when it seems like all a program director gets done is calling, recalling and answering calls from applicants. 2. Although we've not have problems with a student going back on their acceptance to our program, it would eliminate this for all programs.
- 1. quicker 2. seems better for students, especially those that end of wait listed for much of the week. (we haven't had unfilled slots for as long as I can remember. so while this might be a problem for others, our program is so small, it hasn't been one for us.)
- 1. reduce the time of anxiety about the process (aka no week of waiting to see who will come) 2. reduce opportunities for programs to manipulate the process once offers are made 3. might allow more programs to fill equally.
- 1. Applicants will not have to wait to find out if they are accepted into a program after being on a waiting list for several days. 2. It will take away the stigma of wait listing. 3. Program directors will not have to "sell" the program based on the match day; instead students will make choices on their interview experiences.
- Simplifies the match process, lets a computer take the responsibility for the match, assures filling slots

- Prevent changed minds and therefore help programs fill 2. Free up directors from spending days negotiating with applicants 3. Helping to maximize the "match" between applicant preferences and those of programs overall

- I really don't know. We are satisfied with the current process and would like to continue same.

1. Hypothetically, perhaps it could increase student satisfaction. However, I can think of several examples of students who told me that they were not keen on coming to this program at first, but sometime later decided they were glad they did. 2. If it helps other programs fill their classes then this would result in more GCs trained.

## F.9 PROGRAM DIRECTORS- LIMITATIONS OF A MATCH

- 1. Applicants might refuse to participate 2. Applicant pool is too small
- 1. Potentially not filling a class when you have candidates out there (although most programs should fill)
- Expense - applicants are already spending thousands of dollars to apply and attend interviews --
- what's the limit? It would not cut back on most of the work of the process --- interviewing It might limit choices for candidates who have significant others who also need to "match" to a school or work location.
- 1. Will lose ability to balance class by selecting those with complementary backgrounds 2. Second guessing number of variables in ranking 3. Will this be effective for Canadian Programs?
- 1. Private/ more expensive programs may find it difficult due to the differences in tuition cost. 2. Students may find themselves in places that they prefer not to be in, i.e. cities; costs, etc. 3. Programs may wind up with a class that doesn't have a good fit/ feel.
- 1. May be very confusing to applicants as the process is not something that is commonly used in undergrad or other areas (except health care) that I am aware of 2. Concern about what happens if the program does not fill 3. Requires all programs to be part of the process, if programs decided to opt out - may be difficult to continue with a match
- In justifying university funding for our program, we successfully argue that we get a high rate of acceptance from our top ranked candidates using the current system. Some of the students in Canada only apply to Canadian programs in part due to the cost differential. I fear these students may suffer in the match process. We do not have the same requirement of filling diversity quotas, and in fact have generally had pretty diverse classes each year, with 2 or more ethnic groups represented in our class of 6.
- 1. I think the financial cost to students and/or programs would be high. 2. Student satisfaction might be lower if they don't have the final say about where they go. 3. A match process is somewhat depersonalized.
- Cost, Increase competition between programs
- The final choice is not in the student's hands. We would have to work out a system of what to do with the applicants that don't match. Programs with high costs could be most disadvantaged in that students might not risk ranking them at all.

- 1) It's an unnecessary expense for both parties. 2) It would reduce the opportunity for programs to end up with some very good students whom they wouldn't have chosen at first blush. 3) It would give the programs less flexibility in adjusting applicant and program needs.

- Unfilled slots

- Expensive programs won't fill - scholarship money is often not known until final decisions are made - or they may end up with lower ranked students. Medical residency programs are much more similar in terms of costs/etc that this is less of a problem there. It is not reasonable to expect an applicant to make a decision without consideration of finances. It would depersonalize the admissions process - contrary to the nature of the profession. Unlike the MD's, this is not part of "our" culture and I worry that it would turn students off from applying to GC programs.

- 1) Programs will not be able to "balance the class personality" according to the first few applicants that accept 2) Students will not be able to discuss their offers with their significant others before making a final decision.

- 1. Cost 2. Loss of wait list flexibility

- 1. I think this process potentially favors the programs and puts the student at a disadvantage. Students would only be able to rank programs that they could afford (potentially without necessary information about financial aid/ scholarships). Or they may rank a program that they cannot afford, get matched, not get the amount of aid they need or anticipated and end up needing lots of loans, etc. In my situation, offers of tuition waivers/ assistantships are linked to admission offers - so students have this information available when they make a decision whether or not to accept the offer. 2. My understanding is that the process is expensive and it is not clear how these costs would be handled - either by programs or passed on to applicants. Applicants already invest a lot in the process due to the requirements of most programs for personal interviews. 3. I think we are already dealing with a need to do everything we can to encourage students to consider GC as a profession and enter into the admission process. This is tied to the issues of increasing diversity in the applicant pool and the profession. We need to combat the myths about how competitive / difficult the admission process is. I think a formal match could add to the perception that this is a unique, highly competitive and difficult process.

- It might result in less qualified students for us. Rather than making the process less painful, it might simply make it painful in a different way. It might make it less likely that we would fill our class.

- 1. Same as noted re: becoming like med student/residency match process 2. Potential to have slot unfilled. Tuition income to program dependent on full class. 3. Cost to program. It would become a required annual fee.
- 1. Not filling all of your slots 2. Potential costs related to matching program.
- We have such a large program.
- 1. Programs that rank more applicants may potentially be filled with their lower ranked applicants; this is a suspicion, not known. 2. It takes away some of the leeway a program has in ranking; if a program submits a ranking list, it's fixed. If, after interviews, an applicant provides additional information/interaction with a program, either positive or negative, the program could adjust their internal ranking system accordingly until call out day.
- 1. expense 2. I must admit, I like control (and my control under the current system is maybe only imagined!)
- 1. money 2. faculty hate the concept of having to "rank" to this degree, so we'd have to push that more than we already do 3. it might bump up our timelines from the current process (we generally do all our interviews in April, since our students graduate in March).
- 1. Some programs will not fill. 2. Some students will be matched with institutions that they really do not want to go to (cost, location etc.)
- Students may distrust such a system; they are not medical students and think differently about choices. Could result in upset people re: where they get in, could increase tensions for best students.
- The lack of opportunity to negotiate with applicants as they are deciding. 2. Hesitation about whether we would fill in the same way we have been successful doing so in the past 3. The rankings of our top five candidates are arbitrary really. We want them all to come. So, we will have to enhance our criteria for listing those positions.
- 1. Cost to programs 2. No perceived benefit to my program and others that have no problem filling 3. Too complicated to explain to applicants. Didn't we just work on enhancing applicants' understanding of the universal acceptance day by writing a fact sheet because so many students still don't quite understand it? 4. Cost to students seems too burdensome.

## **F.10 PROGRAM DIRECTORS- DISSATISFACTION WITH ADMISSIONS**

- I think that five days is too long. I think that many applicants do not want to accept early on in the process, but would rather wait until the last minute waiting for a better offer from a waitlisted school. I had two applicants try to bargain with me this year in terms of telling me what other programs were giving them i.e. financial aid and housing. I didn't like being in this position.
- I would love to see a match program. The current system creates too much stress for both parties. Plus, it creates self-doubt in applicants who are put on a wait-list.
- Overall, the admissions process has worked fine for our program; however, some years the admissions/acceptance process has been more challenging than others. The waiting period seems to have become more difficult for both applicants and programs. In recent years there seem to be more applicants not responding within allotted time period or waiting until the very last minute, which has resulted in less satisfaction recently with this admissions process for our program.
- The process seems to have created an increase in the number of applications/interviews students seek (in order to increase their chances). It seems that the very top students are interviewing at several programs and that the programs are recruiting the same group of students. It seems that everyone "gets in" in the end. The process began as an agreement among a group of programs and was without much formality. I like the written statement that was developed this year because it adds formality to it for programs and for students. We have so many programs now we cannot rely on verbalized understanding anymore and need more formality.
- I think the acceptance date is too late.
- The process takes a long time and leaves wait listed students in limbo for too long. In addition, I know I lose applicants who are higher up on my list while I'm waiting hear from the "definite" offers. i.e. #'s 6 through #15 may go with definite offers rather than wait to hear back.
- I believe that the match day process is stressful for all involved. Providing people with 5 days to decide on a program, after having several months to consider their options is excessive. If we were to use a match system, this would alleviate some of the stress and allow programs to fill.



## F.11 PROGRAM DIRECTORS- ADDITIONAL COMMENTS

- Can we consider a universal application process as well. I think that an online universal application process might streamline the entire application process. I worry about the costs of such a program. I question whether switches can be made if a spouse can't find a job in the match city, etc..
- Our program requires that students have a working knowledge of French, since half of our patients speak French and it's the official language of Quebec. I don't know how that would be worked in to the process. I suppose there would be a way to do this, but... Mainly, I don't think the 3 Canadian programs need a match process. Things are working well for us.
- I think the admissions process is quite good right now. It could be improved by a faster turn around time between acceptance date and applicant response date and the whole system could be improved with a formal pool whereby students who interviewed but not admitted could be linked up for consideration with programs that did not fill.
- I'll be interested to see the data. It was instructive to go back and look at our ranking now that we've had a change to work with the students for a semester. It's probable that we would be missing three very good students if we'd gotten our top ranked ones!
- Not certain how well a binding match would work, but am willing to try
- We are not medical residency programs - we are smaller, fewer in number and we offer graduate degrees, not post-grad work. A match approach would add a level of anxiety for the interviews on both parties- and PD probably would end up calling applicants and wooing them before the match starts to ensure high rankings. I also think it would increase competition between programs and PD's and increase the pressure on applicants, many of whom are still in college.
- I support efforts that the AGCPD is making to create a process that is reasonable, and equitable. I think the recent decision to provide uniform information about the process to all applicants is very good. I do not support a match because I do not think it is necessary, it potentially disadvantages applicants and it may, inadvertently increase the (incorrect) perceptions about how difficult it is to gain admission to a GC program, and thereby have the unanticipated effect of reducing our applicant pool even further.
- I think this study is a great idea.

- Before we implement change from the current system, much more detailed information would be necessary for assessment of impact of process. Current process including newly implemented written statement should be evaluated prospectively this year and carefully and compared to thesis results.

- I'm very glad that you're doing this. Having to put my answers in writing was harder than I imagined.

- I think the universal acceptance date is a major form of working together but to move beyond this into a domain that is costly seems out of our league. I would rather the programs expend our energies to work together on some other topics rather than this. Thanks for undertaking this project. I am very interested in appreciating the perspectives of the student respondents.

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