Pre-Health Preparation
Developing a competitive application for health professional school

Anna Brochet
Health Professions Advising Office
Jensen Student Access to Science & Mathematics Center
California State University, Long Beach

www.csulb.edu/sas
Health Professions Advising Office

• Staff: Anna Brochet, Maria Ramirez

• Services:
  – Individual and Group Advising
  – Workshops and Seminars
  – Resource Library
  – Letter of Recommendation Forwarding Service
  – Application Assistance
  – Personal Statement Assistance
  – Mock Interviews

• Website: www.csulb.edu/sas

• Location: Hall of Science -164
Learning Objectives

After the presentation, you will:

1. Have a general understanding of what health professional schools look for in applicants
2. Be able to identify areas you need to further develop
3. Grasp the degree of difficulty in gaining admissions to health professional schools
4. Learn where to access vital pre-health information
Warm up!

- What major should you be?
- Are you at a disadvantage because you are a community college student?
- Does it look bad on my application if I don’t graduate in 4-years?
- What are some pre-requisites courses for health professional schools?
- Besides GPA and pre-reqs, what other things are considered in an applicant?
The Exploration Stage: Thinking about becoming a health professional?

- Questions for self reflection:
  - Who or what is influencing your decision?
  - What about ________ interests me?
  - Do I ENJOY studying science?
  - Am I willing to prepare for a long course of study?
  - Am I committed to lifelong learning of people and medicine?
  - Am I ambitious/motivated/hard working?
  - Do I want to help people feel better?
Is __________ a good fit?

• What do I know about a career __________?

• What is it like to be a __________?

• What is __________ school really like?

• Am I willing to make the commitment?
Educational Path

Undergraduate Preparation

Medical College Admission Test

Entrance Exam

Medical School
4 years: Basic Sciences & Clinical Rotations

Board Examination
USMLE

Residency
3-8 years: Clinical Training

Specialty Exam
Medicine

MD vs. DO vs. DPM

• DO
  – Tenets
    • Body Unity
    • Structure influences function
    • Self healing mechanism
    • Rational treatment based on tenets
  – Residency – Primary Care Focus

• DPM
  – Specialize in diagnosing and treating conditions affecting the foot, ankle, and related structures of the leg
Pharmacy Settings

- Community Pharmacist - Chain Drug Store
- Hospital & Institutional Practice
  - Hospice/ Nursing Home/ Home Care Pharmacist
- Academic Pharmacist
- Managed Care Pharmacist
- Pharmaceutical and Health Care Distributors
- Long-Term Care and Consulting Pharmacy
- Public Health
Nursing: Educational Levels

- Scholar: Doctorate (DNP)
- Specialist: Masters level (NP, CNA, etc.)
- Professional: Bachelor’s level (BSN)
- Technical: LVN, RN
What Do Medical Schools Require?

1. Bachelor’s Degree or 3+ years of undergraduate work

Core Pre-Medical Requirements
- 1 yr. General Chemistry with laboratory
- 1 yr. Organic Chemistry with laboratory
- 1 yr. Biology with laboratory
- 1 yr. Physics with laboratory
- 1 yr. English (Composition + Literature)

Recommended (required at some schools)
- 1 yr. to 1 sem. of Calculus
- 1 sem. of Statistics (required at UCLA & UC Irvine)
- 1 sem. of Biochemistry (required at USC & UC Irvine)
- Upper Division Biology courses (UC Irvine requires at one):
  - Molecular Biology (required at USC), Physiology, Genetics, Immunology

No particular major is required or preferred
- Most students major in Biology
2. Letters of Recommendation
   - Most schools will ask for 3-5 letters
     • 2 from science faculty
     • 1 from non-science faculty
     • Additional letters from relevant volunteer, work, research and/or other involvements

3. Medical College Admission Test (MCAT)
Medical College Admission Test

MCAT

• Standardized exam to assess:
  – Academic preparation, achievement in science, verbal reasoning and written communication skills, and predicts which applicants perform adequately in medical school

• Computer Based Test
  – $240
  – Total content time = 4 hours, 25 minutes
  – 28 administrations per year (January – September)

• MCAT 2015-changes to MCAT
Academic Considerations for Health professional School

• **All** attempted college courses are considered
  – Incompletes, CR/NC, W, Repeat
  – Community College coursework

• **Study Abroad**
  – International exposure

• **Advanced Placement credit accepted?**
  – varies from school to school

• **Recency rules**
  – varies from school to school
Quantitative Information

How competitive is the applicant pool?
<table>
<thead>
<tr>
<th>Section</th>
<th>Range/Scale</th>
<th>Avg. for All Applicants (Fall 2010)</th>
<th>Avg. for All Matriculants (Fall 2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal</td>
<td>1 – 15</td>
<td>9.1</td>
<td>9.9</td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>1 – 15</td>
<td>9.4</td>
<td>10.4</td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>1 – 15</td>
<td>9.8</td>
<td>10.8</td>
</tr>
<tr>
<td>Writing Sample</td>
<td>J – T</td>
<td>P (Median)</td>
<td>Q (Median)</td>
</tr>
</tbody>
</table>
## Allopathic Medical School
### 2010 Entering Class Profile

<table>
<thead>
<tr>
<th>Total Applications</th>
<th>First-Year Matriculants</th>
</tr>
</thead>
<tbody>
<tr>
<td>42,742</td>
<td>18,665</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applicants</th>
<th>Matriculants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science GPA (BCPM)</td>
<td>3.43</td>
</tr>
<tr>
<td>Non-Science GPA</td>
<td>3.65</td>
</tr>
<tr>
<td>Total GPA</td>
<td>3.53</td>
</tr>
<tr>
<td>Science GPA (BCPM)</td>
<td>3.61</td>
</tr>
<tr>
<td>Non-Science GPA</td>
<td>3.75</td>
</tr>
<tr>
<td>Total GPA</td>
<td>3.67</td>
</tr>
</tbody>
</table>

Source: AAMC Applicants and Matriculants Data 2010
## CA Medical Schools
### 2010 Accepted Applicants

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USC</td>
<td>11</td>
<td>11</td>
<td>12</td>
<td>Q</td>
<td>3.74</td>
<td>3.7</td>
<td>65%</td>
<td>90%</td>
<td>90%</td>
</tr>
<tr>
<td>Loma Linda</td>
<td>10</td>
<td>10</td>
<td>11</td>
<td>P</td>
<td>3.8</td>
<td>3.76</td>
<td>81%</td>
<td>80%</td>
<td>66%</td>
</tr>
<tr>
<td>Stanford</td>
<td>11</td>
<td>12</td>
<td>12</td>
<td>R</td>
<td>3.81</td>
<td>3.81</td>
<td>76%</td>
<td>90%</td>
<td>97%</td>
</tr>
<tr>
<td>UC Davis</td>
<td>10</td>
<td>11</td>
<td>11</td>
<td>Q</td>
<td>3.66</td>
<td>3.66</td>
<td>62%</td>
<td>95%</td>
<td>88%</td>
</tr>
<tr>
<td>UC Irvine</td>
<td>10</td>
<td>11</td>
<td>11</td>
<td>Q</td>
<td>3.74</td>
<td>3.72</td>
<td>68%</td>
<td>95%</td>
<td>95%</td>
</tr>
<tr>
<td>UC Los Angeles</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>Q</td>
<td>3.81</td>
<td>3.8</td>
<td>69%</td>
<td>93%</td>
<td>92%</td>
</tr>
<tr>
<td>UC San Diego</td>
<td>11</td>
<td>12</td>
<td>12</td>
<td>Q</td>
<td>3.86</td>
<td>3.88</td>
<td>64%</td>
<td>91%</td>
<td>94%</td>
</tr>
<tr>
<td>UC San Francisco</td>
<td>11</td>
<td>12</td>
<td>12</td>
<td>R</td>
<td>3.8</td>
<td>3.79</td>
<td>71%</td>
<td>91%</td>
<td>91%</td>
</tr>
</tbody>
</table>
## Entering Class of 2010

<table>
<thead>
<tr>
<th>School</th>
<th>Applied</th>
<th>Interviewed</th>
<th>Matriculated</th>
</tr>
</thead>
<tbody>
<tr>
<td>USC</td>
<td>6,444</td>
<td>526</td>
<td>174</td>
</tr>
<tr>
<td>Loma Linda</td>
<td>4,977</td>
<td>375</td>
<td>165</td>
</tr>
<tr>
<td>Stanford</td>
<td>5,873</td>
<td>434</td>
<td>86</td>
</tr>
<tr>
<td>UC Davis</td>
<td>4,596</td>
<td>514</td>
<td>96</td>
</tr>
<tr>
<td>UC Irvine</td>
<td>4,844</td>
<td>506</td>
<td>104</td>
</tr>
<tr>
<td>UC Los Angeles</td>
<td>8,603</td>
<td>854</td>
<td>187</td>
</tr>
<tr>
<td>UC San Diego</td>
<td>5,451</td>
<td>687</td>
<td>125</td>
</tr>
<tr>
<td>UC San Francisco</td>
<td>6,481</td>
<td>511</td>
<td>165</td>
</tr>
</tbody>
</table>
### Osteopathic Medical School 2010 Entering Class Profile

<table>
<thead>
<tr>
<th>Total Applications</th>
<th>First-Year Matriculants</th>
<th>Total Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>101,027</td>
<td>5,428</td>
<td>19,427</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Matriculants GPA</th>
<th>Matriculants MCAT Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science GPA (BCP &amp; Other Science)</td>
<td>Verbal Reasoning</td>
</tr>
<tr>
<td>3.36</td>
<td>8.69</td>
</tr>
<tr>
<td>Non-Science GPA</td>
<td>Biological Sciences</td>
</tr>
<tr>
<td>3.57</td>
<td>9.29</td>
</tr>
<tr>
<td>Overall</td>
<td>Physical Sciences</td>
</tr>
<tr>
<td>3.47</td>
<td>8.51</td>
</tr>
</tbody>
</table>
# Colleges of Podiatric Medicine  
2009 Entering Class Profile

<table>
<thead>
<tr>
<th>Matriculants GPA</th>
<th>Matriculants MCAT Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science GPA (BCP &amp; Other Science)</td>
<td>Verbal Reasoning</td>
</tr>
<tr>
<td>Non-Science GPA</td>
<td>Biological Sciences</td>
</tr>
<tr>
<td>Overall</td>
<td>Physical Sciences</td>
</tr>
</tbody>
</table>

**Total Enrollment**

687
### Applicants

<table>
<thead>
<tr>
<th>Total Applications</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>103,747</td>
<td>Men = 38.9%</td>
</tr>
<tr>
<td></td>
<td>Women = 59.6%</td>
</tr>
</tbody>
</table>

### Accepted PharmCAS Applicants

<table>
<thead>
<tr>
<th>Applicants</th>
<th>Accepted PharmCAS Applicants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total GPA</td>
<td>3.25</td>
</tr>
<tr>
<td>Science GPA</td>
<td>3.35</td>
</tr>
<tr>
<td>Total GPA</td>
<td>3.46</td>
</tr>
</tbody>
</table>

Nearly 80 percent of the applications to colleges and schools were submitted by individuals who had 3 or more years of postsecondary education.

Source: AACP Admissions Update Data 2008
A note about quantitative factors…

• GPA and test scores are **ONE** of many factors considered
  – It is important but not EVERYTHING
• You **MUST** be able to convince admissions committees that you can handle the rigorous curriculum of medical school
• After that, they want to know why they should pick **YOU** for their entering class
• Grades get you considered, but everything else gets you in!
The Big Idea: What Professional Schools Look for in Applicants?

1. Academic preparedness
2. Knowledge and commitment to the profession
3. Desirable attributes that are important for the profession
1. Academic Preparedness

• Demonstrated by:
  – GPA
  – MCAT
  – Performance in pre-reqs
    • Fulfill program requirements
    • Knowledge of content for standardized test
  – Rigor of course load
  – Upward trend
2. Knowledge and Commitment to the Profession

• Demonstrated by:
  – Exposure to the profession
    • Quality over quantity, depth over breadth
  – Personal experiences
  – Ability to articulate your motivations
  – Academic performance
  – Personal statement
  – Interview
3. Desirable Attributes Important to Health Professions

- Adaptability
- Critical Thinking
- Integrity
- Logical Reasoning
- Oral Communications Skills
- Personal Maturity
- Reliability
- Self-Discipline
- Work-Habits
- Compassion

**Demonstrated by:**
- Extracurricular activities
  - Don’t think of extracurriculars as “hoops” to jump through, rather, what does it say about you?
- Research
- What can you come up with?

- Commitment to serving others
- Cultural Competence
- Intellectual Curiosity
- Persistence
- Professionalism
- Resilience
- Teamwork
- Interpersonal Skills
- Leadership
- Love of Science/Learning
Change your perspective

• Don’t focus on thinking of ways to be the “perfect applicant” or what will “look good” on your medical school application

• Rather, seek opportunities that will help you become a better physician in the future or things that will make you grow as a person
  – By doing this, you will naturally be an attractive applicant
You Must Make the Commitment!

- Commitment implies:
  - Passion
  - Intensity
  - Persistence

- The psychic and physical energy that motivates
- Drives the effort
- Sustains the effort during difficult times

Source: Astin & Astin - W.K. Kellogg Foundation

It's not whether you can, but rather are you willing?
How will you demonstrate commitment…

- To school/education?
- To the activities that you are involved in?
- To serving others?
- To becoming a health professional?
Activity: You be the judge!

• Don’t think of extracurricular activities as “hoops” to jump through, rather, what does it say about you?
• Look at these student profiles. What does the student demonstrate to you?
Benjamin Beach

- Science GPA 3.40
  - (upward trend, 4.0 in last 3 semesters)
- Overall GPA 3.52
- MCAT: 27
  - VR: 8, BS: 9; PS: 10
- Work part-time throughout college as an EMT
- Volunteer at a hospital
- Tutors on campus
The Application Stage

What does the application require?
Application Process

• Begins each year in June
  – Apply at the end of 4th year if you’re on a 5 year plan for admission immediately following graduation

• 2 Step process:
  – Primary application
    • American Medical College Application Service (AMCAS)
    • American Assoc. of Colleges of Osteopathic Medicine Application Service (AACOMAS)
  – Secondary/Supplemental Application - to individual schools
Primary Application
AMCAS/AACOMAS Sections

1. Identifying Information
2. Schools Attended
3. Biographic Information
4. Course Work
5. Work and Activities – up to 15 experiences
   – Clinical Exposure, Community Service, Leadership, Research, Work etc.
7. Medical Schools
8. Personal Statement
9. Standardized Tests
AMCAS/ AACOMAS Application Fees

• Fees
  – AMCAS- $160 for the first school + $32 for each additional school
    • $ 768 for 20 schools
  – AACOMAS-$ 175 for the first school + $32 for each additional school*
    • $ 783 for 20 schools*
  *If applied to at the time of original submission; after submission: $50 for the first school, then $32 for each additional school
Secondary Applications

- At the request of individual medical schools
- July to January
- Selectivity depends on program
- Components of Secondary application:
  - Pre-requisite satisfaction
  - Essays
  - Letters of Recommendation
  - Secondary Fee - $30 to $130
Interview

- Interviews from August through April
- Typical format:
  - Two one-on-one interviews with Faculty and/or current medical student
    - Open vs. Closed file
  - Tour, Financial Aid info., Q &A, lunch with students
- Admissions offers on a rolling basis
- Multiple Mini Interviews
Final Recommendations

You can gain admissions!
Pre-med expenses = expensive!

• Let’s do the math…
  – MCAT
    • Prep courses
  – Application fees
  – Supplemental fees
  – Interview expenses
    • Professional attire
    • Flight
    • Other transportation
    • Hotel

• **Save money now!!**

• How can you keep costs down?

• Keep your debt low for medical school
  – Financial Information, Resources, Service, and Tools: FIRST
  – FIRST for Students and Applicants:
  – [http://www.aamc.org/programs/first/students/start.htm](http://www.aamc.org/programs/first/students/start.htm)
Tips

- Get academic support early
- Challenge yourself but take a course load you can excel in
- Get involved with student organizations, community service, clinical exposure, etc. NOW!!
- Keep in touch with your professors!
- Challenge yourself
- Be prepared for the cost- save your $$
- Apply Early!!
Resources

• Websites:
  – Explore Health Careers:
    • www.explorehealthcareers.org
  – Association of American Medical Colleges
    • www.aamc.org/students/start.htm
      – Medical School Admissions Requirements (MSAR)
        » www.aamc.org/msar
  – American Association of Colleges of Osteopathic Medicine
    • www.aacom.org
      – Osteopathic Medical College Information Book
        » http://www.aacom.org/InfoFor/applicants
  – American Association of Colleges of Podiatric Medicine
    • www.aacpm.org
  – American Association of Colleges of Pharmacy
    • www.aacp.org
  – American Association of Colleges of Nursing
    • http://www.aacn.nche.edu
As each application is received, it's reviewed. Interviews are offered and conducted. Decisions are then made at the next Admission Committee meeting.