**Contents**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contacts</td>
<td>3</td>
</tr>
<tr>
<td>Overview of the Manchester Medical School Curriculum</td>
<td>4</td>
</tr>
<tr>
<td>Years 1 and 2</td>
<td>4</td>
</tr>
<tr>
<td>Years 3 and 4</td>
<td>4</td>
</tr>
<tr>
<td>Year 5</td>
<td>6</td>
</tr>
<tr>
<td>Erasmus student placements</td>
<td>8</td>
</tr>
<tr>
<td>Teaching Hospitals</td>
<td>8</td>
</tr>
<tr>
<td>Entry requirements</td>
<td>15</td>
</tr>
<tr>
<td>How to apply for your placement</td>
<td>16</td>
</tr>
<tr>
<td>Accommodation</td>
<td>17</td>
</tr>
<tr>
<td>Health screening</td>
<td>17</td>
</tr>
<tr>
<td>Attendance</td>
<td>18</td>
</tr>
<tr>
<td>Assessment</td>
<td>19</td>
</tr>
<tr>
<td>IPad Policy</td>
<td>19</td>
</tr>
<tr>
<td>Living in the UK</td>
<td>19</td>
</tr>
<tr>
<td>English language courses</td>
<td>20</td>
</tr>
<tr>
<td>Buddy Scheme</td>
<td>21</td>
</tr>
<tr>
<td>Dress Code</td>
<td>21</td>
</tr>
<tr>
<td>Professional Conduct</td>
<td>22</td>
</tr>
<tr>
<td>Appendix 1- Description of modules in Year 3 and 4</td>
<td>23</td>
</tr>
<tr>
<td>Appendix 2 – Guidance on screening for Tuberculosis</td>
<td>26</td>
</tr>
</tbody>
</table>

**Please note:**
The information in this handbook is correct at the time of going to press, but there may be updates issued in the future
## Contacts at Manchester Medical School

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Email/ Tel./ Fax</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Studies Coordinator</td>
<td>Ms Miroslawa Tandyrak/Ms Emma Hamilton</td>
<td><a href="mailto:medicine.europeanstudies@manchester.ac.uk">medicine.europeanstudies@manchester.ac.uk</a> Tel.: +44 161 306 0464 Fax: +44 161 275 5584</td>
<td>Manchester Medical School Stopford Building Room G.011 The University of Manchester Oxford Road Manchester M13 9PL</td>
</tr>
<tr>
<td>Chair, European Studies Committee</td>
<td>Dr Stefan Meyer</td>
<td><a href="mailto:Stefan.Meyer@manchester.ac.uk">Stefan.Meyer@manchester.ac.uk</a> Tel.: +44 (0)161 446 3023</td>
<td>Manchester Medical School Stopford Building Room G.011 The University of Manchester Oxford Road Manchester M13 9PL</td>
</tr>
</tbody>
</table>

## Contact at the University’s International Office

| Contact for incoming Erasmus students | Ms Zaba Ihsan                           | [Zaba.Ihsan-2@manchester.ac.uk](mailto:Zaba.Ihsan-2@manchester.ac.uk) Tel.: +44 161 275 8262 Fax: +44 161 275 2058 | Study Abroad Unit The University of Manchester Second Floor, Rutherford Building Oxford Road Manchester M13 9PL |

Please note: European Studies Coordinator is your first point of contact when organising your placement and all queries regarding this should be directed to them in the first instance.
Overview of the Manchester Medical School Curriculum

The University of Manchester is the UK’s most popular university, receiving more applications for undergraduate study than any other British university. The University of Manchester attracts world renowned researchers and teachers and boasts no fewer than 25 Nobel Prize winners amongst its current and former staff and students.

The medical curriculum in the UK is different to that in Europe and other parts of the world. Students studying Medicine at Manchester Medical School graduate with an MBChB degree (Bachelor of Medicine, Bachelor of Surgery). As in other UK medical schools, Manchester students study for five years in order to gain their medical degree. They then undertake two years in Foundation year posts before officially qualifying as fully-trained doctors.

**Years 1 and 2**
Students begin their medical studies with two pre-clinical years, starting with Phase 1 (Years 1 and 2), which introduces students to Problem Based Learning and teaches them important communication skills. Phase 1 continues with a module per semester: Life Cycle, Cardio-respiratory Fitness, Mind and Movement and Nutrition and Metabolism.

**Years 3 and 4**
Phase 2 (Years 3 and 4) students are taught clinical skills at one of four teaching hospitals in and around the Manchester area, which are affiliated with Manchester Medical School. The hospitals are listed on pages 9-13 of this handbook. All students are allocated to one of these hospitals in Year 3, where they will be based until graduation at the end of Year 5.
In Year 3, students revisit the topics studied in Phase 1 with a strong clinical perspective. Year 3 starts with the Introduction to Clinical Learning course, which equips students with the basic communication and history-taking skills needed for their clinical learning. Students then undertake two modules, which are as follows:

- **Nutrition, Metabolism and Excretion (NME)**
  This module is concerned with the function of nutrition, metabolism and excretion and the disease processes that can affect these systems. Specific emphasis is on neoplasia. This allows consideration to be given to the pathology and epidemiology of neoplasia and also to the care of people with a serious and possible terminal illness.

- **Heart, Lungs and Blood (HLB)**
  Students study the function of the heart, lungs and blood, and the disease process that can affect these systems, and learn clinical skills relevant to these areas.

At the end of each module students undertake a Personal Excellence Pathway (PEP) which allows them to pursue a particular area of interest, undertaking a placement and writing a report about a patient or condition within a chosen area. If you need more details about what the PEP involves please contact the European Studies Coordinator.

For 2014-15 the Semester dates for the Year 3 modules are as follows:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Start date</th>
<th>End date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Induction Event at the Manchester Medical School (Meeting with Hospital Deans)</td>
<td>4th September 2014</td>
<td></td>
</tr>
<tr>
<td>Introduction to Clinical learning (3 weeks)</td>
<td>8th September 2014</td>
<td>26th September 2014</td>
</tr>
<tr>
<td>Module 1 (14 weeks) NME or HLB</td>
<td>29th September 2014</td>
<td>16th January 2015</td>
</tr>
<tr>
<td><strong>Winter Vacation</strong></td>
<td>20th December 2014</td>
<td>4th January 2015</td>
</tr>
<tr>
<td>PEP (4 weeks)</td>
<td>19th January 2015</td>
<td>13th February 2015</td>
</tr>
<tr>
<td>OSCE (EXAM)</td>
<td>16th February 2015</td>
<td>20th February 2015</td>
</tr>
<tr>
<td>Module 2 (14 weeks) NME or HLB</td>
<td>23rd February 2015</td>
<td>5th June 2015</td>
</tr>
<tr>
<td>OSCE</td>
<td>8th June 2015</td>
<td>12th June 2015</td>
</tr>
<tr>
<td><strong>Spring Vacation</strong></td>
<td>3rd April 2015</td>
<td>12th April 2015</td>
</tr>
<tr>
<td>PEP (4 weeks)</td>
<td>15th June 2015</td>
<td>10th July 2015</td>
</tr>
</tbody>
</table>

Year 4 continues with two modules as follows:

- **Families and Children (F&C)**
  Students learn about reproductive health and disease, the health and diseases of children, genetics, surveillance and screening, and the function and effect of families on health and disease. Particular emphasis is placed on communication and clinical skills for dealing sensitively with both children and adults.
○ **Mind and Movement (M&M)**
This module aims to enable students to recognise and assess the severity of common disorders in neurology, psychiatry, rheumatology, orthopaedics and geriatric medicine and to know about their basic multidisciplinary management.

**For 2014-15 the Semester dates for the Year 4 modules are as follows:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Start date</th>
<th>End date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 3 (14 weeks)</td>
<td>18&lt;sup&gt;th&lt;/sup&gt; August 2014</td>
<td>5&lt;sup&gt;th&lt;/sup&gt; December 2014</td>
</tr>
<tr>
<td>F&amp;C or M&amp;M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSCE</td>
<td>8&lt;sup&gt;th&lt;/sup&gt; December 2014</td>
<td>12&lt;sup&gt;th&lt;/sup&gt; December 2014</td>
</tr>
<tr>
<td>Winter Vacation</td>
<td>13&lt;sup&gt;th&lt;/sup&gt; December 2014</td>
<td>4&lt;sup&gt;th&lt;/sup&gt; January 2015</td>
</tr>
<tr>
<td>Module 4 (14 weeks)</td>
<td>5&lt;sup&gt;th&lt;/sup&gt; January 2015</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; May 2015</td>
</tr>
<tr>
<td>F&amp;C or M&amp;M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSCE</td>
<td>5&lt;sup&gt;th&lt;/sup&gt; May 2015</td>
<td>8&lt;sup&gt;th&lt;/sup&gt; May 2015</td>
</tr>
<tr>
<td>Spring Vacation</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt; April 2015</td>
<td>12&lt;sup&gt;th&lt;/sup&gt; April 2015</td>
</tr>
<tr>
<td>Project option (11 weeks)</td>
<td>11&lt;sup&gt;th&lt;/sup&gt; May 2015</td>
<td>24&lt;sup&gt;th&lt;/sup&gt; July 2015</td>
</tr>
</tbody>
</table>

For more information on the Year 3 and 4 modules please see the appendix at the end of this handbook.

**Year 5**

In Year 5, there will be eight four-week blocks. Blocks 1 to 4 will take place before the Winter Vacation and will rotate between:

- **Teaching Hospital** - highly specialised units, affording students the opportunity to focus on personal interests, while continuing to develop their skills in clinical teams
- **District General Hospital** – working as an apprentice attached to a firm, students are expected to work as full members, assuming responsibility for patients appropriate to their level of skills and knowledge
• **Community**- students work as a part of a clinical team, but a key element is to run their own consulting sessions and see patients independently, with close supervision and support

• **Student Selected Block**- provides students with a variety of learning opportunities which can include career tasters

A further four blocks each of four weeks will operate after the Winter Vacation with considerable choice on how these blocks may be used; this will include:

• **The StEP i.e. Subject to Endorsement Placement (formerly referred to as the Traditional Elective)** - students have the opportunity to explore a field of medical practice of particular interest to them in an unfamiliar setting where the scientific, social, economic or cultural standards are different, in a hospital outside the North West or abroad.

Students are assisted in their transition to their first post as a doctor by having a period of **shadowing** the Foundation Year doctor that they will take over from.

**For 2014-15 the Semester dates for the Year 5 blocks are as follows:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Start date</th>
<th>End date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 1</td>
<td>26th August 2014</td>
<td>19th September 2014</td>
</tr>
<tr>
<td>Block 2</td>
<td>22nd September 2014</td>
<td>17th October 2014</td>
</tr>
<tr>
<td>Block 3</td>
<td>20th October 2014</td>
<td>14th November 2014</td>
</tr>
<tr>
<td>Block 4</td>
<td>17th November 2014</td>
<td>12th December 2014</td>
</tr>
<tr>
<td>Revision activities</td>
<td>15th December 2014</td>
<td>19th December 2014</td>
</tr>
<tr>
<td><strong>Winter Vacation</strong></td>
<td><strong>20th December 2014</strong></td>
<td><strong>4th January 2015</strong></td>
</tr>
<tr>
<td>Revision week &amp; Exam period</td>
<td>7th January 2015</td>
<td>23rd January 2015</td>
</tr>
<tr>
<td><strong>Vacation</strong></td>
<td><strong>24th January 2015</strong></td>
<td><strong>1st February 2015</strong></td>
</tr>
<tr>
<td>Block 5</td>
<td>2nd February 2015</td>
<td>27th February 2015</td>
</tr>
<tr>
<td>Block 6</td>
<td>2nd March 2015</td>
<td>27th March 2015</td>
</tr>
<tr>
<td>Block 7</td>
<td>30th March 2015</td>
<td>24th April 2015</td>
</tr>
<tr>
<td>Block 8</td>
<td>27th April 2015</td>
<td>15th May 2015</td>
</tr>
</tbody>
</table>
Erasmus student placements

During your placement as a student in Manchester you will undertake a clinical placement at one of our four teaching hospitals as part of Year 3, 4 or 5 of the medical course. Students can request which year to join according to their current year of study in their home university, and the modules / placement specialities on offer at Manchester.

Years 3 or 4
Students interested in joining one or more of the modules in Years 3 or 4 should read the information on these modules on the previous pages and the appendix of this handbook.

Year 5
Students in the final years of their medical studies can apply for a clinical placement in Year 5 of the Manchester course. This will take the form of a period spent in a hospital placement in a particular department.

Students wishing to enter Year 5 of the medical course should note that we are only able to accept students if they undertake placements which fit in with our own blocks of study. The semester dates for Year 5 blocks can be found above.

IMPORTANT: Students should note that there may be placements available in blocks 1-4 of Year 5 but choices will be limited. This is due to the volume of students which are based at the teaching hospitals at this time. Please contact the European Studies Coordinator for further information. If these blocks are oversubscribed we may ask for mitigation as to why the placement has to be at this time.

Teaching hospitals

The Medical School currently has links with four teaching hospitals.
Three of these hospitals are based in Manchester and one is in the surrounding North West England district. Erasmus students should note that as our first priority is to allocate you to your first choice of clinical attachment you may not necessarily be based in a teaching hospital which is in central Manchester.

**IMPORTANT:** Please note that incoming students may undertake placements at one of our teaching hospitals or the smaller district general hospitals (DGH) which are associated with them. Although we do try to allocate you to your first choice of placement, this may not always be possible and is sometimes limited to the placements that our hospitals have to offer.

For a map detailing the associated teaching hospitals location please see: [http://www.medicine.manchester.ac.uk/undergraduate/medicine/hospitals/](http://www.medicine.manchester.ac.uk/undergraduate/medicine/hospitals/)

All of our teaching hospitals have a Hospital Dean, who oversees the workings of the hospital and the medical students who attend there. The Hospital Deans are happy to see any of their students who would like to discuss problems they might have. You can make an appointment to see them if you have any issues during your placement. Your first point of contact during your placement, however, will be your Hospital Administrator, who will also be available to answer any queries you have. The Hospital Administrators are located in the Undergraduate Centre of each base hospital. For more details on our University hospitals please refer to the following pages.

---

**Central Manchester University Hospitals NHS Foundation Trust (MRI)**

Oxford Road, Manchester, M13 9WL

Website: [http://www.cmft.nhs.uk](http://www.cmft.nhs.uk)

**Hospital Dean:** Professor Ray McMahon

**Undergraduate Medical Education Manager:** Judy Hadfield; email: Judith.hadfield@cmft.nhs.uk
First Point of Contact: Robert Leonard; email: Robert.Leonard@cmft.nhs.uk

Administrators:
Year 3: Jana Williams; email: Jana.Williams@cmft.nhs.uk
Year 4: Robert Leonard; email: Robert.Leonard@cmft.nhs.uk
Year 5: Amy Pearson; email: Amy.Pearson@cmft.nhs.uk

The Central Manchester Foundation Trust hospitals comprise the Manchester Royal Infirmary, Royal Eye Hospital, St Mary’s Hospital, Royal Manchester Children’s Hospital, University Dental Hospital of Manchester and Trafford General Hospital. These sites are all located at the edge of the Manchester University main campus. They are within 5-10 minutes walk of the main Medical School (the Stopford Building), with the exception of Trafford General Hospital, and 15 minutes walk from the Students’ Union and the centre of the Manchester University campus. The Trust’s catchment area includes some of the poorest residential areas within the Greater Manchester conurbation and the UK in general and the hospitals deal with an exceptional range of acute and chronic problems presenting to them. In addition, it is a tertiary centre, receiving patients from across the Manchester conurbation, Lancashire and beyond. It houses one of the two renal centres in Greater Manchester, together with the Manchester Heart Centre, which is one of the three major cardiac centres in the North West of England and a major nationally renowned centre of expertise. The Hospital has experts in every possible speciality. It is one mile from the centre of Manchester and one and a half miles from the main student village area of Fallowfield.

District General Hospitals: For undergraduate medical education, the CMFT Trust is linked to the following district general hospitals – Tameside General Hospital, Royal Oldham Hospital, Fairfield General Hospital (Bury), Rochdale Infirmary, Wrexham Maelor Hospital (Y5 only), Glan Clwyd Hospital (nr Rhyl) and Nobles Hospital on the Isle of Man. The latter two sites are used for Y3 PEPs and Y5 placements only and students will only be placed there if they identify these sites as a placement preference for Y3 PEP or Y5 blocks.

All students will undertake placements at North Manchester General Hospital, our Associate Teaching Hospital, during their clinical undergraduate years.

It is a certainty that you will spend time in one or more of these hospitals in addition to your placements within the Central Manchester Foundation Trust base hospital sites.

Trafford General Hospital is located in Davyhulme to the south-west of Manchester and is approximately 9 miles from the Medical School.
University Hospital of South Manchester NHS Trust  
Southmoor Rd, Manchester, M23 9LT  
Website: http://www.uhsm.nhs.uk

Hospital Dean: Professor Steve Hawes  
Undergraduate Manager: Marylyn Dickinson; email: Marylyn.Dickinson@manchester.ac.uk  
First point of contact: Cathryn Bostock; email: Cathryn.Bostock@manchester.ac.uk  
Administrators:  
Year 3: Amanda Crosby; email: Amanda.Crosby@manchester.ac.uk  
Years 4 & 5: Cathryn Bostock; email: Cathryn.Bostock@manchester.ac.uk

The hub of Undergraduate Medical Education in South Manchester is at University Hospital of South Manchester NHS Foundation Trust (UHSM) based at Wythenshawe Hospital. The Trust was awarded Foundation Trust status in 2006.

This hospital has approximately 900 beds and around 200 consultants serving the local population of 275,000 with a catchment area of 8 million for specialist services. All major medical and surgical specialists are represented with particular strengths in Cardiology and Respiratory Medicine, Cardiothoracic Surgery as well as an Academic Surgical Unit, Burns and Plastics Unit and Breast Care Centre. The hospital has close links with Christie Hospital with many staff having joint positions, making Oncology another clinical focus. Another site of UHSM is at Withington Community Hospital, which houses numerous outpatient, day surgery and community facilities.

Based at Wythenshawe Hospital, student facilities are sited in the purpose built Education and Research Centre (ERC), housing multidisciplinary learning as well as excellent library and IT resources. The Academy at UHSM focuses on shared learning and multi-professional education. UHSM have the unique facility of a mobile clinical skills bus, providing clinical skills facilities when students are on external placements.

District General Hospitals: Currently, there are three additional hospital sites linked with South sector; two Associated Teaching Hospitals, Leighton Hospital, near Crewe (Mid Cheshire Hospitals NHS Trust) and Stepping Hill Hospital (Stockport NHS Foundation Trust) and Macclesfield District General Hospital (East Cheshire NHS Trust). Some students are allocated to an associated teaching hospital site for the main modules in third year and all students will be placed at one or more of our 4 associated hospital sites during Year 4 and 5. PBL is maintained in groups of 8 or 9 students and clinical firms are organised in small groups of 4 or 5 students allowing good opportunities to gain clinical experience.

Areas of South Manchester around Withington, about 4 miles from the hospital, are common sites for student accommodation served by local bus links. All students are entitled to a car park pass for the staff car park at a specially negotiated student rate. The Trust has a free bike loan scheme which students can apply for and there are cycle storage and changing facilities, plus showers and lockers for undergraduate use within the ERC.
Salford Royal Hospitals NHS Trust
Stott Lane, Salford, M6 8HD
Website: http://www.srft.nhs.uk

Hospital Dean: Professor Felicity Stewart
Undergraduate Manager: Keshi Minett, email: Keshi.Minett@srft.nhs.uk
Administrators:
Year 3: Gary Gardner; email: Gary.Gardner@srft.nhs.uk
Year 4: Diane Broughton; email: Diane.Broughton@srft.nhs.uk
Year 5: Linda Gillon Linda.Gillon@srft.nhs.uk

Hope Hospital is located 3 miles from Manchester city centre and is on a direct bus route. A tram (Metrolink) service operates every 12 minutes from the city centre. Salford Royal Hospitals NHS Trust serves the population of Salford who exhibit a high incidence of coronary heart disease, bronchitis, diabetes, asthma and stroke - all diseases that are typical of the national profile and representative of medicine in the 21st century. A mixture of inner city deprivation and affluence are seen. The Trust offers a wide range of services including a renal disease centre for Greater Manchester West; specialist dermatology and complex orthopaedics; a neonatal Intensive Care Unit; a pain centre and a national centre for intestinal failure together with its designation as the Neurosciences Centre for Greater Manchester.

District General Hospitals: In addition to the Royal Manchester Children’s Hospital and the Mental Health Services of Salford, Hope is linked to five District General Hospitals. These are: Blackburn Royal Infirmary, Royal Bolton Hospital, Burnley General Hospital, Trafford General and the Royal Albert Edward Infirmary (Wigan). You will spend a proportion of your studies in at least one of these hospitals either for HLB placements in Year 3 (Wigan & Bolton only), Student Selected Components, the Families and Children Module or during Year 5.
Lancashire Teaching Hospital NHS Trust (Preston)

Sharee Green Lane, Fulwood, Preston, PR2 9HT
Website: http://www.lancsteachinghospitals.nhs.uk

Hospital Dean: Professor Mark Pugh
Undergraduate Education Manager: Kay Cartwright; email: Kay.Cartwright@lthtr.nhs.uk
First point of contact: Kay Cartwright

Lancashire Teaching Hospitals NHS Trust is a major teaching hospital and provides a variety of services ranging from accident and emergency facilities to specialist services such as neurosurgery and disablement services. This organisation was created in August 2002 by the merger of two well-established hospitals. Royal Preston Hospital has a long history and is now a modern building close to the motorway network in the north of Preston. Chorley and South Ribble District General Hospital was extensively rebuilt and enlarged in 1994 and is situated close to junction 8 on the M61. Together the two hospitals have 1200 beds and approximately 120 consultants.

The two hospitals serve a population of 380,000 for District General Hospital services and 1.5 million in Lancashire and Cumbria for specialist services. Chorley Hospital provides A&E, general surgery, upper GI specialist cancer surgery and breast surgery, all non-trauma orthopaedics for upper and lower limb problems and general medicine with a full range of specialities. In addition, there is a limited midwifery led obstetric service, elective gynaecology, dialysis ward and out-patient services in ophthalmology, ENT, haematology, neurology, oncology and paediatrics.

Preston Hospital provides a full range of District General Hospital services, acute surgical admissions, lower GI cancer surgery, vascular surgery, axial orthopaedic surgery and trauma surgery along with some sub-regional specialities such as neurology, neurosurgery, nephrology, burns, plastic surgery and oncology. The obstetric unit delivers over 4000 babies per annum and the paediatric unit is very active. Preston is the hub of the North West Cancer network. In addition there are busy units dealing with maxillo-facial surgery, ophthalmology, and ENT. Mental Heath provision is through the Lancashire Care Trust, which has several excellent community units. Royal Preston Hospital has recently been appointed the new regional major trauma centre. It will provide treatment for major trauma patients from Lancashire and South Cumbria.

The Preston site houses a simulation centre, one of the most advanced in Europe. This is used for the training of Undergraduate and Postgraduate students as well as multi-disciplinary training of nurses and allied health professionals. The two versatile simulation rooms can be set up for any scenario.
High fidelity manikins are controlled from a central, covert control room. A separate observation room complete with audio visual monitoring allows others to observe the simulation. State of the art clinical skills labs are available at both the Preston and Chorley site.

Access to Manchester is relatively easy; the journey by car to central Manchester takes about 30-40 minutes at off-peak times. There are 3-4 trains / hour and the journey lasts 30-40 minutes to central Manchester. There is easy access to countryside locally and in the Lake District, which is only 1 hour by car.

**IMPORTANT:** Please note that incoming students may undertake placements at one of our teaching hospitals or the smaller district general hospitals (DGH) which are associated with them. *Although we do try to allocate you to your first choice of placement, this may not always be possible and is sometimes limited to the placements that our hospitals have to offer.*
Entry requirements

The University of Manchester has high academic standards and our entry requirements reflect this. In order to apply to study at The Manchester Medical School you must satisfy the criteria outlined below. You should also check with your home university as to whether they also have any requirements that you have to meet in order to be eligible to study abroad.

1) Current undergraduate
You must be a current undergraduate of the European university with which we have an Erasmus exchange agreement. The partner institutions we have exchange programmes with are listed below:
Charité - Universitätsmedizin Berlin
Universidad de Granada
Medizinische Hochschule Hannover
Medizinische Fakultät der Universität des Saarlandes
Université de Lausanne
Universidad Autónoma de Madrid
Universidad Complutense de Madrid
Universidad Rey Juan Carlos de Madrid
Université de Nantes
Université Pierre et Marie Curie Paris 6
Université Paris Diderot – Paris 7
Université Paris Descartes – Paris 5
Université de Rennes 1

2) Academic standing
We require at least a B average or a minimum 3.0 cumulative grade point average for academic systems operating on a 4.0 scale. This average should be maintained during the period of study immediately preceding the semester or year to be spent at The University of Manchester.

3) English language proficiency
All Erasmus students are expected to have sufficient knowledge of the English language and we ask that in selecting students that our Erasmus partners ensure that this is the case.
The minimum acceptable level for admission is either:
- International English Language Testing (IELTS) average score of 7, with not less than 5.0 in any one component.
- Test of English as a Foreign Language (TOEFL) minimum score of 550 (213 on the computer-based test)

If your English language proficiency falls below the required level when you make your application then we may still be able to offer you a place at the University, however this will require you to improve your test score before the start of the planned period of study.

English language tuition is available at The University of Manchester through the University Language Centre (see English Language Courses section on page 22 for details of the courses available)
How to apply for your placement

In order to apply for a placement with Manchester Medical School you will firstly need to contact the Departmental Coordinator in your University with details of your desired placement, length of stay and modules/clinical attachments as appropriate. You can also ask our European Studies Coordinator any questions you have about the placement.

All students applying to join The University of Manchester as Erasmus students must apply using the online application system accessed via this site:

http://www.manchester.ac.uk/international/studyabroadandexchanges/erasmus/

When you access this page, you should click on the relevant section (Erasmus student) and then navigate to the “How to Apply” page within this section.

The application is a 9 step process that will take approximately 30 minutes to complete. You can save your application at any stage before submission and return to it at a later time/date. You will need to make a note of the email address and password that you select at the beginning of the application process, as you will need this to sign-in to make changes/additions to a saved application.

Please note the application must be submitted no later than Friday, 21st March 2014.

Once received, our European Studies Coordinator will check that your application form is completed correctly. If there are any problems with your form you will be contacted by email so please make sure that you provide us with an up-to-date email address. The European Studies Coordinator will then contact our base hospitals and begin to arrange a placement for you.

Once a placement has been found you will be notified by email, and then our contact from the hospital you have been allocated to will be in touch to finalise the details of your placement. If you have any problems or questions regarding your placement at this stage you can email our European Studies Coordinator who will be able to help you.

You should make arrangements to arrive in Manchester 2 weeks prior to the start of your placement to undertake administrative activities, health screening (see below) and settle into Manchester.
Accommodation

Teaching Hospitals
The National Health Service has decommissioned much of its accommodation within NHS Trusts. As a result there is no accommodation within Teaching Hospitals available to any student. This applies to home as well as visiting and exchange students.

University accommodation
Please find below the link to the University accommodation office website for more information about University-owned accommodation, eligibility and application procedure: http://www.manchester.ac.uk/undergraduate/accommodation/

Typically the Accommodation Office offers licence agreements on a 40 week or 51 basis starting either September 11th, 13th or 14th 2014.

If you need to arrive before the accommodation licence agreement starts the Accommodation Office may be able to book you into accommodation on a 'vacation residence' basis – but this may not be in the room to which you will be permanently allocated. If your course end dates go beyond the full licence agreement end date in June 2015 you may be able to extend you stay on the same ‘vacation residence’ basis. Further information is available from The Accommodation Office by writing to accommodation@manchester.ac.uk or on-line at www.accommodation.manchester.ac.uk.

If you are interested in applying for short stay accommodation, the accommodation office may be able to offer a ‘first semester’ contract which would run from September 11th 2014 to late January 2015. As mentioned above, if you need to arrive before the accommodation licence agreement starts they may be able to book you into accommodation on a ‘vacation residence’ basis. Further information available from The Accommodation Office by writing to accommodation@manchester.ac.uk or on-line at www.accommodation.manchester.ac.uk.

Private sector
As an alternative, we advise students to apply for private sector housing. More information on this can be found at Manchester Student Homes website: http://www.manchesterstudenthomes.com/
Email: msh@manchester.ac.uk
Telephone: 0161 275 7680.

You will also be sent a list of rooms that Manchester students have to rent whilst they are on their Erasmus exchange period.

Health screening

In order to begin your placement you will need to be screened by the University Occupational Health Service to ensure that you are medically fit to start on clinical practice.

This includes viral screening in line with UK Department of Health Guidelines. The viral screening mentioned will be for, Hepatitis B Surface Antigen, Hepatitis C Antibodies, HIV, Measles Antibodies, Rubella Antibodies, Mumps Antibodies and Varicella Antibodies. Your status for Tuberculosis will also be assessed as advised by the UK Department of Health guidance; each case is dealt with individually. Prior to arrival you should have completed a course of Hepatitis B vaccinations followed by blood test to confirm your Hepatitis B antibody status and immunity.
Students should co-operate with all necessary requirements; failure to do so will prevent them attending the course/Clinical Placement.

Before you arrive you will need to complete a confidential Pre-Acceptance Health Questionnaire. This will be sent to you by the Departmental Coordinator once your placement has been confirmed. The completed questionnaire has to be stamped and signed by your doctor and sent back for the attention of: Elizabeth Aniteye, Occupational Health Services, to the Manchester Medical School’s address on page 3 of this handbook. When completing the questionnaire please declare any health concerns you may have that may require additional support or adjustments. This will ensure that between Occupational Health Services, the Medical School and the Disability Support Office appropriate additional support can be implemented. Please bring with you any specialist reports if available. It would also be helpful to bring copies of any blood tests that you may have had done in your home country. However, any necessary screening/blood tests will be undertaken by Occupational Health Service on arrival (see below). Additionally, please complete the vaccination history section on the Pre-acceptance Health Questionnaire as accurately as you possibly can so any boosters you may require can be assessed and offered. It is advisable to have the Meningitis C vaccine and to have had 2 MMR (Measles Mumps Rubella) vaccinations prior to arrival. If, however, you are unable to have these you will be offered the vaccines when you attend Occupational Health Services for your screening.

As soon as you arrive in Manchester, you will need to attend a compulsory health screening at the Occupational Health Service. The appointment’s date will be sent to you via email. Once your screening is complete you will be issued with your Clinical Placement Documents which confirm that you are medically fit to commence placement in the hospitals. The UK Department of Health Guidelines require all blood tests performed in a non-UK laboratory to be repeated. You will therefore need to have any tests previously done in your home country repeated.

Please note that it is vital that you attend this appointment as YOUR HOSPITAL WILL NOT ALLOW YOU ON THE WARDS WITHOUT THE RELEVANT DOCUMENTS.

We suggest that you arrive in Manchester and have your occupational health screening at least 2 weeks before the start of your placement in order for any blood tests to be processed in good time. This will also allow you time to settle into your accommodation and register as a medical student. More details on registration will be provided by the Departmental Coordinator once your placement has been confirmed.

Attendance

Manchester Medical School offers a wide variety of teaching experiences, both formal and informal, delivered in a variety of settings. We strongly advise you add to your learning experience by attending all possible learning opportunities. We expect you to take responsibility for your own learning, and therefore attendance is not monitored in all classes. However, we expect you to attend 100% of sessions unless there is a good reason (e.g. illness) why you cannot. Poor attendance (less than 80%) could reflect a less than professional attitude (unless for valid reasons). If your attendance falls below 80% this is considered to be unsatisfactory by the Manchester Medical School and we will notify your home University. If you are prevented from attending any element of the module you must provide your Teaching Hospital and DGH (if on placement) with the dates and a written explanation of the reasons for your absence together with any relevant supporting papers (see below).
If you are absent for any reason you must:

a) Contact the administrator at the Hospital and/or the supervisor by telephone either in advance (if the absence is planned) or on the morning of your first day of absence to inform them that you will be absent. If you are unable to do so yourself, ask a friend/relative to inform the offices for you;
b) If you are absent for more than 1 or 2 days, contact the hospital to inform them of your situation;
c) Upon return, hand in to your hospital a written note giving the exact dates of your absence and a clear explanation of the reasons for it. N.B." because of illness" is insufficient.
d) If you are absent for more than one week because of illness you must obtain and hand in a certificate signed by a registered medical practitioner.

The note must be lodged THE DAY YOU RETURN after your absence.

Assessment

The incoming Erasmus students are entitled and encouraged to sit exams during their placement in Manchester if they wish to do so, and many Universities accept the exams and assessments sat in Manchester. They need to note however that these exams are not mandatory and the University of Manchester is not responsible for arranging resit exams if they fail these or any other formal and summative assessments towards their degree. The overall responsibility for the assessment lies with the home University. The students should note however, that in the case of PEPs, the written report is a mandatory part of the placement and must be submitted in order for the placement to be complete.

iPad Policy

At the Medical School, we provide all our students on clinical placement with an iPad and relevant resources. As an Erasmus Student studying in Manchester, we would like you to have access to the same opportunities as your fellow students on the course. We therefore offer the use of an iPad for your time at Manchester.

If you take up the offer, you would be subject to the terms and conditions of use and be required to return the iPad at the end of your placement. You will be contacted shortly before your arrival with details on the offer, how to collect your iPad and the terms and conditions of use.

Living in the UK

Useful information and advice on moving to Manchester and living in the UK can be found on the following website: http://www.manchester.ac.uk/international/arrival/.

The University of Manchester arrival guide for incoming students, which contains essential advise, information and guidance for students at the University of Manchester is available on the following website: http://www.studentnet.manchester.ac.uk/crucial-guide/

Our University International Office is an excellent place to find information on various things, such as an airport collection service, orientation courses and English language courses. For more information please see the International Office website: http://www.manchester.ac.uk/international/support
The Study Abroad Unit is part of the International Office and is a good place to find answers to any queries you may have. The contact for incoming Erasmus students is Zaba Ihsan, and you can contact her on 0044 161 275 8262 or at zaba.ihsan-2@manchester.ac.uk.

The Manchester European Studies students receive up to four years of language training alongside the medical course in one of the three languages: German, Spanish and French. These students, as well as their language tutors would be very pleased to welcome you in Manchester. If you would like to visit any language class during your stay in Manchester, please feel free to contact the language tutor to arrange the best time to attend the lesson. The contact details of the language tutors can be found below:

- **French** Option: Mr Benoît Guilbaud (tel. 0161 275 3479; e-mail: benoit.guilbaud@manchester.ac.uk)
- **German** Option: Ms Barbara Fitzpatrick (tel. 0161 306 2036; e-mail: B.Fitzpatrick@manchester.ac.uk)
- **Spanish** Option: Dr Ana Nino Alonso (tel. 0161 275 3305; e-mail: ana.m.nino@manchester.ac.uk)

Manchester has a wealth of attractions for the students, from arts and culture, to pubs and clubs, sport, and the nearby countryside. See the links below:

http://www.visitmanchester.com/
http://www.manchesteronline.co.uk/

### English Language Courses

The University Language Centre offers pre-session courses in English Language throughout the summer as well as courses during the academic semester. These include a number of broader courses for students who wish to continue to improve their English within the context of learning more about Manchester life and culture, business English etc.

We strongly encourage all non-native speakers of English to undertake an English Language Proficiency test on arrival and to take advantage of the non-credit-bearing in-sessional English Language courses provided by the University Language Centre at no charge: http://www.langcent.manchester.ac.uk/english/academicsupport/

The International Society offers English language classes for students who need some extra help with their language skills. These classes are affordable and provide excellent support for students who are not totally comfortable with their language abilities. For more information please visit the following websites:
Buddy Scheme

For ERASMUS students the Buddy Scheme is a terrific opportunity to meet somebody who has had a similar experience of studying or working abroad, who knows about the Manchester University Medical school and is someone whom you can practice your language skills together.

The Buddy Scheme is an informal way of getting in touch with friendly and approachable Manchester students from a variety of backgrounds, who have volunteered to help you get to grips with University life. Your buddy will pass on information about the University, help you get to know other students and, most importantly, encourage you to enjoy yourself!

The main role of a Buddy is to:

- help you settle into Manchester
- tell them a little about Manchester social/sports life and its traditions
- go out for a coffee or a drink

To participate in the scheme contact the European Studies Coordinators (see page 3 of this handbook for contact details). We will match you with a buddy based on your selections.

Dress Code

Doctors in the UK do not wear white coats as in other countries. Therefore there is a dress code that needs to be adhered to in a clinical environment. It has been shown that non-verbal communication is at least as important as verbal communication, so how a student or health and social care professional appears to patients, clients, service users, relatives, professionals or colleagues may communicate as much as what is said. Extremes of dress compromise communication channels between health and social care students and other patients and professionals, regardless of either party’s gender, or cultural or ethnic background. Styles of dress or articles of clothing that introduce barriers to communication or that compromise, or could potentially compromise, hygiene must be avoided. Styles of dress should inspire confidence and add to, not detract from, effective and sensitive communication. In general, students should be clean and smartly dressed. Thus the following are not permitted in settings in which a student is interacting with patients, clients or service users:

- T-shirts with slogans;
- Denim jeans;
- Visible body art or nail varnish or extensions;
- Extremes of hair styles;
- Body and face jewellery (except small stud earrings and wedding rings);
- Wrist bands/string;
- Revealing clothing;
- Open-toed sandals (all footwear should be low-heeled and well-fitting round the ankles);
- Trainers;
• Clothing that covers most of the face. Peaked caps, hoods, and the Niqab are examples of unacceptable clothing in this context. Clothing like the Hijab that only obscures the hair and the top of the head is, however, acceptable. This applies not only in clinical settings but also in educational elements of the programme where communication skills are relevant, such as some types of group work and role-play exercises. The University also reserves the right to check the identity of students who wear clothing that covers most of the face (as defined above) on key occasions such as examinations;

• Strong odours, perfumes or aftershaves.

For cross-infection reasons, NHS Trusts may not permit healthcare workers (including students) to wear wristwatches and ties other than bow ties. The following are examples of good practice:

• Wearing approved clothing;
• Wearing identification badges or University/Trust identity passes;
• Tying back of hair if it interferes with, or adds risk, to a clinical interaction.

When on NHS premises such as a hospital Trust or a Primary Care Trust, a community setting such as a GP practice, or in the homes of patients, clients and service users, students should dress according to both the University’s and the appropriate local guidelines and regulations.

**Professional Conduct**

The General Medical Council requires Medical Schools to pay close attention to the attitudes of their students throughout their training. The GMC offers guidance to students in their publication 'Medical students: professional behaviour and fitness to practise'. This guidance sets out: the professional behaviour expected of medical students; areas of misconduct and the sanctions available and the key elements in student fitness to practice arrangements. This guidance is aimed at medical students and anyone involved in medical education. You can download the guidance from:

http://www.gmc-uk.org/education/undergraduate/professional_behaviour.asp
Appendix 1

Clinical Placements in Phase 2 (Years 3 and 4)

In Phase 2 of the Manchester Medical School's curriculum the focus of the clinical placements are the following modules: “Nutrition, metabolism and Excretion”, Heart, Lungs and Blood”, “Families and Children”, and “Mind and Movement”. Clinical learning and programmed teaching during this period will address the development of the student-doctor as a Scientist and Scholar, Practitioner and Professional as per GMC guidelines.

Each module will deal with multiple “clinical scenario” case histories listed under the Indexed Clinical Situations for each week. Major cases will be complemented by several smaller supplementary cases in order to increase the scope and depth of the curriculum and to nurture students into learning through comparing and contrasting between related clinical conditions/presentations. Detailed learning outcomes of individual modules are available on the web resources.

Year 3:

- **Nutrition, Metabolism and Excretion (NME)**

This module is concerned with the function of nutrition, metabolism and excretion and the disease processes that can affect these systems. Specific emphasis of this module is also on the principles of cancer

**Objectives:** By the end of the module, you should:

a. Understand the structure and function of the gastrointestinal, excretory and endocrine systems and the processes of nutrition, metabolism and excretion (to be covered in the Progress Test examination - PT).

b. Understand the major pathological processes that may affect these systems (PT).

c. Understand the epidemiology of these pathological processes and their impact in society (PT).

h. Understand the effect of biological, psychological, social, cultural and environmental factors on both the development and perception of these processes (PT).

e. Understand social influences on diet and nutrition (PT).

f. Be able to identify appropriate investigations to elucidate the pathological processes (to be covered in the OSCE examination).

g. Be able to define problems related to these systems and to include psychological and social aspects (OSCE).

i. Be able to access information on appropriate management (OSCE).

In view of the emphasis on cancer, by the end of the module, you should also have considered the following general objectives:

- Understand the importance of body image.

- Understand the process of long-term monitoring.

- Understand the process of conveying bad news to a patient or relative.

- Be able to ascertain patients’ views and expectations.

- Show a respect for a patient’s value systems.

- Recognise their own emotions, concerns, and ethical conflicts especially when faced with death (group assessment: assessed by tutors and self-assessment).
Clinical Skills:

- **Consultation**: continue to work towards the communication objectives for the Year; elucidate problems in the relevant systems and their effect on the patient (OSCE).
- **Examination**: neck examination including thyroid; abdominal examination; rectal examination (OSCE).
- **Image interpretation**: interpret an abdominal radiograph (OSCE).
- **Laboratory**: perform near-patient blood glucose measurement (OSCE).
- **Procedure**: male urethral catheterisation; female urethral catheterisation (OSCE); assist in theatre; nasogastric intubation; proctoscopy; (self-assessment).

**Hearts, Lungs and Blood (HLB)**

Students study the function of the hearts, lungs and blood, and the disease process that can affect these systems and learn clinical skills relevant to these areas.

**Objectives:** By the end of the module, you should:

a. Understand the major pathological processes in the heart, lungs and blood and immune systems and the changes people experience because of these (PT).

b. Understand the effect of biological, psychological, social, cultural and environmental factors of both the development and perception of these processes (PT).

c. Understand the frequency and impact of heart, lung and blood disease within society (PT).

d. Be able to access information on appropriate management and understand how this may be used (OSCE).

e. Be able to assess whether psychological factors are contributing to the patients ill-health (OSCE).

f. Recognise their emotions, concerns, and ethical conflicts (group and self-assessment).

Clinical Skills:

- **Consultation**: continue to work towards the communication objectives for the Year; elucidate problems in the relevant systems and their effect on the patient; discuss patients’ lifestyles in relation to the cardiovascular, blood and respiratory systems whilst showing respect for them and the decisions they make (OSCE).

- **Examination**: mental state examination; lymph node examination; assessment of hydration/volume; cardiovascular examination; respiratory examination (OSCE).

- **Image interpretation**: interpret a chest radiograph; interpret an ECG (OSCE). Procedures: arterial puncture; measure peak flow; emergency defibrillation; endotracheal intubation; record an ECG (OSCE).

- **Therapeutic**: use a bronchodilator inhaler; use a nebuliser (OSCE).

**Year 4:**

- **Families and Children (F&C)**

Students learn about reproductive health and disease, the health and diseases of children, genetics, surveillance and screening, and the function and effect of families on health and disease. Particular emphasis is placed on communication and clinical skills for dealing sensitively with both children and adults.

**Objectives:** By the end of the module, you should:

a. Understand the normal form and function of the reproductive system and the processes of reproduction and child development (PT).
b. Understand ‘the family’ as a unit:
   - which may be healthy or diseased
   - which can influence or cause the presentation of disease in its members
   - which can be affected by disease in its members (PT)
   - how good health is promoted and monitored

c. Understand, for child, reproductive and family health:
   - the disease processes which can affect health
   - the causes, effects, frequency and impact on society of the common diseases (including psychiatric) (PT)
   - appropriate investigations and management of those diseases (PT)

d. Be able to analyse their reaction to ethical conflicts and other emotive issues surrounding child, reproductive and family health (OSCE and self-assessment).

e. Understand surveillance and screening and genetics as applied to family health (PT).

Clinical Skills: You should be able to:

- **Consultation:** build rapport with a child and parents through history-taking; construct a family tree; obtain a family history; communicate with men and women about reproductive health and disease (OSCE).

- **Examination:** approach and examine a child; measure and plot height and weight; assess development; examine the pregnant abdomen; examine the breast; examine the inguinal region; examine the testes; perform a vaginal examination including use of speculum (OSCE) neonatal examination; assessment of the stages of labour; assess and stage sexual development (self-assessment).

- **Procedures:** perform a cervical smear and take swabs; take swabs from the cervix, urethra and vagina; take male urethral swabs (OSCE); normal delivery (self-assessment).

- **Therapeutic:** establish drug dose for a child (OSCE).

**Mind and Movement (M&M)**

This module aims to enable students to recognize and assess the severity of common disorders in neurology, psychiatry, rheumatology, orthopaedics and geriatric medicine and to know about their basic multidisciplinary management.

**Objectives:** By the end of the module you should be able to:

a. Demonstrate a competent clinical assessment of a patient with either chronic physical or mental illness (as defined by the index clinical situations and the skills in the core curriculum).

b. Discuss the investigation and management of a patient with disability using your clinical experience and your knowledge of behavioral and biological sciences.

c. Use your knowledge of behavioral and biological sciences to predict how chronic illness will impact on a person and within a community.

d. Demonstrate how anatomical structures and relationships affect the clinical presentation, investigation and management of patients with locomotor or neurological disease (as defined by the index clinical situations and the skills in the core curriculum).

e. Discuss how health and disease are affected by, and influence, psychological and social stresses and behaviour.

f. Have knowledge of the provisions that can be made to support patients with chronic health problems in the community.
Clinical skills:
- **Examination**: Conscious level: assessment; mental state examination; cognitive assessment; assess suicide risk; neurological examination; locomotor examination; functional status assessment.
- **History Skills**: Take appropriate history, including a psychiatric history; take alcohol and substance misuse history; take a history following self harm; communicate with people with mental health problem
- **Procedural Skills**: Fracture immobilisation; lumbar puncture; interpret locomotor radiographs.
- **Management Skills**: Disabled patient: assess rehabilitation needs; Discuss psychological disorders with the family with due attention to issues of confidentiality; judge point of referral to specialised services
- **Integrated Skills**: To be able to assimilate history and examination in forming a differential diagnosis, commenting on aetiology, management and prognosis.

Appendix 2:

**GUIDANCE ON SCREENING FOR TUBERCULOSIS**

Those with a documented history/ date of having a BCG previously – no action other than to record the facts in the notes.

Others are subject to Mantoux Testing and subsequent action as follows:-

- **Reactive** – See Guidance
- **Non – Reactive**
  - UK origin or from low risk groups/ area for HIV infection – proceed to BCG.
  - Immuno-compromised e.g. drugs; medical condition (HIV) – Gamma interferon.
  - From high risk area/ group for HIV infection – offer screening for HIV and respond as above depending on the results.

There will be individuals who are unable to have BCG as a result:

- Tuberculosis Policy in native country.
- BCG contraindicated as a result of a medical condition/ medication etc.
- Decline to have BCG.

In these cases Gamma Interferon Testing should be undertaken every 6 months and individuals would be normally be excluded from clinical areas with an obvious high risk of exposure to Tuberculosis. These may include such areas as:-

- ICU, Pathology/ Microbiology/ Histopathology/ Laboratories, infectious disease units, Sexual Health Clinic, Oncology, Transplant Units/ Post Mortem Rooms and Respiratory Wards.
- It is important that any recommendation is based on an individual assessment and it is acknowledged that there are no clinical areas where there is ‘NO risk’
Gamma Interferon Test

If negative this test only confirms that the person does not or has been in contact with Tuberculosis recently. It is therefore essential that they are checked on a regular 6 monthly basis and also issued with advice as to possible symptoms and signs of Tuberculosis to enable them to seek further advice. An individual may suffer from Tuberculosis which is latent having been contracted at an earlier stage and is non-infectious. However, it can be reactivated in situations where an individual becomes immuno compromised as a result of infections or treatments or indeed due to advancing age. Staff/students with a positive Mantoux and/ or Gamma Interferon Test will be referred to the Tuberculosis Clinic for further investigation. Active Tuberculosis will obviously be treated but those found to be infected with Tuberculosis which is in its latent stage may be considered for treatment.

Certificate for clinical placement

Where it is necessary to restrict a student’s area of practice this should be clearly indicated on the certificate for clinical placement. For reasons of confidentiality no reason should be given as to the underlying cause.

Updated January 2014