Fédération Internationale de Médecine Manuelle
International Federation for Manual/Musculoskeletal Medicine
Internationale Gesellschaft für Manuelle Medizin
Международная Федерация Мануальной Медицины

The Secretary-General
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FIMM NEWS

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Content

http://fimm-online.com

Agreement on communication and cooperation FIMM – ESSOMM – UEMMA

Text prepared on February 2nd, 2013 and adopted by the three Executive Boards

MM Medicine is facing changes worldwide within the health care systems that sooner or later take influence on all physicians providing MM Medicine. It will not take for long and this development will implement the establishment of specially trained physiotherapists with an extended scope of practice acting as an interface between not specifically trained GPs and specialists providing surgical interventions. Specialized physicians for diagnostic and treatment procedures of pain and dysfunctions of the locomotor system who do not provide surgical interventions therefore dare to disappear step by step. All organizations in the scope of MM Medicine are invited to participate in developing a strategy that underlines the importance of diagnostic and non-operative treatment procedures by specifically trained physicians.

FIMM as a worldwide operating federation and ESSOMM and UEMMA, the organizations operating on European level, decided therefore to set up an agreement defining continuous information, consultation and cooperation. This shall take place regularly be it by internet or by face-to-face meetings.

In the view of these tree organizations the strategy mentioned needs a medical input by physicians in terms of continuous scientific research (basic and translational) and high quality education and training. The basic elements of this strategy are defined as follows:

- Non-medical professional groups today provide most manual treatments. Despite of all efforts by the involved medical organizations to slow down this development, an increase is observed. This is enhanced by more and more academically or otherwise specialized formation of physiotherapists, nurses, and similar professional groups. As the lack of economic resources of many health care systems enhances this process and as there are too few adequately trained physicians who cover the specific needs of patients with pain and dysfunctions of the locomotor system, it is difficult for organizations dealing with MM Medicine to encounter it.
- In terms of the benefit of patients with pain and dysfunctions of the locomotor system the involved organizations of MM Medicine aim the following:
    - Knowledge about pain and dysfunctions of the locomotor system and the possible treatment procedures has to be implemented in undergraduate training programs of all physicians.
    - An appropriate number of physicians including GPs and specialists for pain and dysfunctions of the locomotor system should know about such disorders and have competence in diagnostic and therapeutic procedures of manual medicine. An education program of a minimum of 120 hours shall provide this (CAS[1]-level, according to 10 - 12 ECTS).
    - A considerable number of highly specialized physicians of MM Medicine is necessary for diagnostics and therapy of pain and dysfunctions of the locomotor system (MAS[2]-level, according to 60 ECTS); besides taking care of complicated clinical cases they

[1] Certificate of Advanced Studies, see FIMM NEWS 2008 17;1:3-14
[2] Master of Advanced Studies, see FIMM NEWS 2008 17;1:3-14

will provide education and training in MM Medicine as well as the supervision of those who practice manual therapy.

- Attempts of legislations and similar administrative procedures disadvantaging certified physicians of MM Medicine and favoring non-medical professional groups in performing manual diagnostics and therapy will be answered by clear opposition of the involved medical organizations.
- All those working on high quality level in MM Medicine should cooperate as individual members in the International Academy for Manual/Musculoskeletal Medicine (IAMMM).

The Minutes of the 47th General Assembly 2012

September 20rd, 2012, 09.20-15.50 hours
Princess Hotel – Istanbul – Turkey
Michael Kuchera, DO, FAAO, FIMM Secretary-General

National Society delegates from around the world convened in Istanbul to participate in the 47th FIMM General Assembly. All were invited by President, **Cihan Aksoy,** and our hosts, the Turkish Society of Manual Medicine (Manuel Tip Dernegi, MTD) to also participate in the International Scientific Conference on Manual Medicine that follows the General Assembly (September 21, 2012).

1. **OPENING OF THE GENERAL ASSEMBLY:** Acting FIMM President and Vice President, **Wolfgang von Heymann**, opened the **47th General Assembly of FIMM** at 09:20 am. He recognized that FIMM was founded in 1962 meaning that this is the **anniversary of 50 years of FIMM** existing as a federation; its first Congress being convened in 1965.
   - The first order of business for this General Assembly however was to note the very recent passing of our FIMM president, **Palle Holck, MD,** and to reflect on this loss. During the roll call or societal presentation, each society expressed their condolences to the president's family and to his fellow members of the Danish Society of Musculoskeletal Medicine.
   - The FIMM General Assembly also recognized the passing of the last of our FIMM Founding Members, **Robert Maigne, MD** (1923-2012).
   - **Agenda as Distributed in Advance:** No changes proposed
   - The GA elected two counters of the votes: **David Watson (Canada)** and **Jun Yoshida (Japan)**.

2a. **ROLL CALL and PRESENTATIONS** of the FIMM National Societies (see .pdf consolidation of the presentations at www.fimm-online.com (National Society Presentations 2012).

- **Present – FIMM Executive Board Members: Drs. Wolfgang von Heymann, Michael Kuchera, Viktor Dvorak, Bernard Terrier, Mac-Henri Gauchat, Sergei Nikonov**
- **Roll Call of National Delegates** (Note: dues have not been received from Belgium, the Czech Republic, New Zealand, Slovakia and Spain and some national society representatives were unable to attend this General Assembly (GA). This means that for this General Assembly there are 13 voting members from the National Societies of the countries in attendance. Five National Societies sent reports or letters however no Societies sent proxy letters for valid dues-paying members).
  - Australia (**Geoff Harding**, President of AAMM, delivered annual report via Skype but did not remain for voting).
  - *Belgium (No delegate attending; no dues paid; no vote):* Letter from Michel Dedee.
  - Bulgaria (**IlyaTodorov**, Secretary-General and **Todor Todorov**, President).
  - Canada (**David Watson**, past president of the Canadian Association of Orthopaedic Medicine).
  - *Czech Republic (no members attending; no dues paid, no vote)*: email report sent from National Society president, VlastaTosnerova.
  - Denmark (**Niels Jensen**, vice president of the Danish Society of Musculoskeletal Medicine).
  - Estonia – No representative present, no vote: Letter from **Leili Lepick**.
  - Finland (**Olavi Airaksinen**, President).
  - France – No representative present, no vote; Delegate **Nadine Fouques-Weiss** did not know she was re-elected until too late to realistically attend): National Society's report was emailed and presented by Wolfgang von Heymann.

- Germany (**Ulrich Smolenski,** President attending with **Wolfgang von Heymann** as delegate).
- Hong Kong – No representative present, no vote. President **Andrew Ip** unable to attend. Letters sent from both HKIMM president and vice-president.
- Hungary – No representative, no vote: President, **Gábor Ormos** unable to attend. Letter sent.
- Israel (President **Simon Vulfsons** attending as voting member accompanied by **Yacov Fogelman**).
- Italy – No representative attending, no vote. Dr. **Guido Brugnoni** had a masters course to attend to at this point in time. Italian dues have been paid but his report has been delayed and has not arrived. Letter from National Society section president, Guido Brugnoni, expressing condolences.
- Japan – (National Society delegate, **Shoichi Tsuchida**, was unable to attend but per his letter, the Japanese Medical Society of AKA report was presented by ***Jun Yoshida*** who was authorized to be the National Society's voting member).
- Kazakhstan – (**Nadezhda Karasnoyanova**, President of the Kazakhstan Association of Manual Therapists and Osteopaths**).**
- Netherlands – (**Sjef Rutte** attending for the Dutch Society of Ortho Manual Medicine).
- *New Zealand – No representative attending, no dues, no vote:* President, **Charles Ng** for the NZAMM sent a letter as did James Watt who has provided significant input to the GA committees and boards in the past.
- Poland – No representative attending, no vote; National Society president, **Jerzy Stodolny**, is not attending, no report.
- Russian Federation – (Professor **Anatoly Sitel** attending with **Sergei Nikonov**).
- *Slovak Republic – No representative attending, no dues, no vote.* (National Society president, **Stefan Bodnar**, is not attending and no correspondence was presented).
- *Spain – No voting representative attending, no dues, no vote.* National Society Vice President **Victoria Sotos-Borras** sent an email report. While she did not appear in person, she later joined via Skype interaction for brief interaction with the General Assembly.
- Switzerland – (**Marc-Henri Gauchat** reporting and serving as the voting member with **Bernard Terrier** and **Viktor Dvorak** attending in their FIMM officers' capacities).
- Turkey – (**Cihan Aksoy**, President of the host's National Society, **Manuel Tip Dernegi** or MTD)
- USA – (**Richard Feely**, Past president of the American Academy of Osteopathy attending as the voting member with **Michael Kuchera** in his FIMM officer's capacity).

2b. Presentations of the Representatives of the National Societies (limited to 4 minutes / delegate)

National Powerpoints used to present to this General Assembly have been compiled to provide details not presented here; the **.pdf file** of this powerpoint compilation is available for download at:
www.fimm-online.com (National Society Presentations 2012).

- **Turkey** (Report presented by **Cihan Aksoy, MD, PhD** [president]: The national society representing FIMM in Turkey is **Manuel Tip Dernegi** (MTD). This Manual Med association began in 2002 with professional interactions with **Prof Todorov.** There are now some 38 members who have indicated they will pay dues to this young organization. Since 2008 they have worked with Bilimsel Tamamlayıcı Tıp (BTR=Scientific Complementary Medicine and Regulatory Association) in conjunction with **Prof. Nazlikul** but they are actively seeking new teachers and new techniques to supplement the basic skills they have so far cultivated. Such a

proposal from the MWE branch of the DGMM (Germany's FIMM National Society) was extended to the MTD through a letter from **Wolfgang von Heymann** (see .pdf of the National Societies' Annual Reports – Turkey). It was noted that **Prof.Nazlikul** & **Prof. Aksoy** will co-chair an International Scientific Conference on Manual Medicine immediately following this General Assembly with lecture/workshop contributions to be offered by FIMM leadership (**Drs. Von Heymann [Germany], Nikanov [Russian Federation], and Kuchera [USA]**) as well as from **Ilya Todorov [Bulgaria]; Maxim Bakhtadze, Kiril Kuzminov, and Sergei Kanayev [Russian Federation]; and Nadezhda Krasnoyorova [Kazakshstan]**. Other delegates staying for the program will also provide insight into their country's manual medicine infrastructure. Supporting the evidence base for manual medicine and this small but enthusiastic manual medicine group was one of the main intentions of accepting their invitation last year.

- **Australia** (**Geoff Harding** delivered his report via SKYPE technology): The Australian Association of Musculoskeletal Medicine (AAMM) was founded in 1971. Of **n=183** members on their mailing list, 40 practice full-time M/M musculoskeletal (manual) medicine. They work closely with the New Zealand Association of Musculoskeletal Medicine and the Australasian Faculty of Musculoskeletal Medicine. See the .pdf copy of this report at link. The major concern expressed was that few younger physicians were taking up Musculoskeletal Medicine (with its included manual medicine) while Musculoskeletal PAIN was being invaded by pain management physicians using radiologically-guided needle intervention and conventional pharmacological approaches without knowledge or application of manual techniques.
- ***Belgium:*** Letter from Michel Dedée (see .pdf copy at link).
- **Bulgaria** (**IlyaTodorov** [Secretary-General] for **Todor Todorov** [President]**:**The Bulgarian Society for Manual Medicine (BSMM) reports **n=35** members and uses three cycles of 58 hours each in education**.** Teachers are hard to find.
- **Canada** (**David Watson**, Delegate): Craig Appleyard sends greeting (another conflict of multiple meetings). Long time FIMM GA delegate and North American representative, Don Frasier, MD died age 84 in 2010. The CAOM has 51 members (mixed group of GPs and Pain Management physicians, etc) The Canadian College of Osteopathy (Quebec) allows MDs to attend and consists of a structured 5-year program with a Thesis. The program leads to "DOMP" (Diplomat of Manual Practice) with a bachelor of honors in osteopathy.
- **Czech Republic** (**Vlasta Tosnerova**, President): See .pdf copy of emailed report at link no discussion of dues or membership numbers in report this year.
- **Denmark** (**Niels Jensen,** Vice-President; Delegate and Vice-President presenting): The report began with an account of recently passed member and FIMM President, PalleHolck. (See .pdf copy of their report at link.) The Danish Society for Musculoskeletal Medicine (DSMM http://www.dsmm.org) reports membership of **n=680** (down from 702 due to retirement)**.** Most are General Practitioners but there are also rheumatologists, orthopedists, and radiologists (etc). 74 members garnered "300 hours" of 45-minute standard credits leading to a "diploma".
- ***Estonia, not present:*** A letter from EMSS President, **Leili Lepik**, noted the 20-year history of the manual medicine in Estonia (see .pdf copy at link). Major news in her letter was to note decline in membership to only 10 constant member and removal of "manual therapy" from official list of health care services in 2006. Since 2007 the name was taken by the Estonian Manual Medicine and Chiropractic Association and is broadly misunderstood by public and government alike. Tartu University this year closed the manual therapy courses for physicians (which had trained about 20 physicians per year but did not result in national society growth).
- **Finland** (**Olavi Airaksinen**, President, presented their strong national society's annual report--see .pdf copy at link). Membership is **n=260**.

- **France** (**Nadine Fouques-Weiss** delegate of SOFMMOO again had travel problems and so emailed her report to be presented by **Wolfgang von Heymann.** (See .pdf copy at link) to present her report.) Her report did not contain the number of members this year. She did note the former role and recent passing of FIMM Founding member, **Robert Maigne**. In her news, she pointed out that since 2007 non-MD osteopathic practitioners can legally practice leading to many private schools added to the 15 universities providing post-graduate education for Manual Medicine (still not recognized as a European specialty). A route exists for an MD to ask the Prefect to recognize and validate the MM diploma as an osteopathic diploma (as long as they can guarantee they have been taught 1250 hours in osteopathy). She points out now that one university (Rennes) has started delivering a osteopathic university diploma to non-MDs.
- **Germany** (DGMM president, **Ulrich Smolenski,** asked DGMM Vice-President, **Wolfgang von Heymann,** to present the report of the German national society): Total membership is **n=5301**.The DGMM umbrella organization is made up of the ÄMM (**n=826**), the MWE (**n=2938** fully qualified physicians) and the German Society of Musculoskeletal Medicine (DGMSM [former the FAC] **n=1527**). In 2009, the German Chamber of Physicians decided that "Osteopathy is part of Medicine" that established a need to set up qualifications and certificate regulation as well as a curriculum to be defined for Physician level. The DGMM will work within the limitations set by this regulatory Chamber which has ruled that Osteopathy shall "not be a specialty" but an additional therapeutic option and used immediately, not just in hopeless cases. This currently requires that physicians first earn a certificate in the subspecialty of manual medicine (320 hours…but also already includes 60 hours of introduction to osteopathic practices) and then another 160 hour certificate leading to an A-Diploma (by the Chamber of Physicians) and more education (B-Diploma). This totals 720 hours (320 M/M & 400 osteopathic) with 320 hours diploma hours required.The acknowledged task for 2012-13 is to prepare the curriculum of 160 hours to teach osteopathic techniques, based upon 60 hours existing background in the 320 hours M/M curriculum for their subspecialty certificate. This year the DGMM organizations agreed that another 200 hours of modular curriculum would be proposed leading to a certificate of the Chamber of Physicians based upon 600 hours training assessed by an official examination. (see .pdf copy of the DGMM report at link).
- **Hong Kong:** Letters from Hong Kong Institute of Musculoskeletal Medicine president (**Andrew Ip**) and Vice-President (**Stanley K.H. Lam**) may be seen on the .pdf copy at link. Established in 2005, they have 49 members. 22 members have enrolled in the second Certificate Course of Practical Musculoskeletal Medicine that begins this month. They recently collaborated in education with North American teachers from the American Association of Orthopaedic Medicine (a former FIMM national society). They plan an outreach for M/M to Macau in 2013 and basic courses to rehab doctors in the Sichuan Province in China. A key comment in their report was, "*We shall promote clinical research. We believe research will sharpen our vision, maintain the standard and upkeep the momentum of continuing education. We envisage musculoskeletal medicine will become one of the most important disciplines among the medical arena in the near future."*
- **Hungary (Gábor Ormos)**: Brief letter of regrets and condolences from **Gábor Ormos** and notation of the "special relationship" between the Hungarian and Turkish peoples (see the .pdf copy at link) Of note is the news that M/M has been accepted as Evidence-Based Medicine by the Hungarian Scientific Academy who also enrolled it as a CAM therapy. By Hungarian regulations, CAM therapies performed by MD physicians are taught only at medical universities.
- **Israel (Simon Vulfsons** presenting; see the .pdf copy at link): The Israeli Society of M/M (ISMM; לרפואהמוסקולו-סקלטלית החברההישראלית) has had a sizable growth to a membership of **n=81 MDs** and **56 non-MDs.** The society has several modular courses and is currently focusing on pain and on fascia ("the next frontier".)Their vision remains, "Musculoskeletal education for every doctor in Israel." A later agenda item will discuss.

- ***Italy:*** *See this brief .pdf copy of the note at* link*).*
- **Japan** (**Shoichi Tsuchida** [delegate] authorized Mr **Jun Yoshida** to represent the Japanese Medical Society of Arthrokinematic Approach [AKA]): See their .pdf report at link. It notes their journal, books, and educational programming needed for accreditation. The approach was trademarked in 2010 as the AKA-Hakata method. The group has **n=433** members**.**
- **Kazakhstan (Nadezhda Karasnoyanova** presenting): The official name of FIMM's national society representative for this country is The Kazakhstan Association of Manual Therapists and Osteopaths because their members include osteopathic method; last year they produced a book on MM and Osteopathy – this year there is a new book on Visceral Osteopathy following a visit from J.-P. Barral. The Association has **n=45** members. Their November scientific conference took place in Almaty and they invite our participation for another international conference there in October 2012.
- **Netherlands** (**Sjef Rutte** presented; **Jacob Patijn** was present as well): The Dutch national society is De Nederlandse Vereniging van artsen voor Ortho Manuele Geneeskunde (NVOMG) has a reported **n=139 members** most practicing M/M exclusively; they have 12 new students for a 2-year full-time education arranged around the Royal Dutch Medical Society of Specialists (KNMG) and the CanMEDS Physician Competency Framework. He noted that beginning in January 2012, CAM-MDs are obligated to pay a 21% value-added tax (VAT). See .pdf copy of the Dutch national society's presentation at link).
- **New Zealand** (Letters were forwarded from president, **Charles Ng** and FIMM contributor, **James Watt** for the NZAMM perspective. See their .pdf copies at link. In essence, they would like to examine and discuss the FIMM Guidelines on Basic Training and Safety prior to continuing their FIMM membership.
- **Poland** (No report; no representative).
- **Russia** (President **Antoli Sitel** presenting with **Sergei Nikonov** translating); "The Russian League of Professionals in Manual Therapy" has **n=429** members**.** See their national society's report (.pdf copy) at link). It discusses the "Unified Postgraduate Program in Manual Medicine" (576 hours including 258 hrs of lecture; 290 hrs of practice; 28 hrs of testing and an additional recertifying rate of 144 hrs every 5 years). The report has CT and ultrasound research and a discussion of the Specialist in Manual Therapy being an important link in the Russian Federation between the neurologist and the neurosurgeon.
- **Slovak Republic** (No representative so there was no discussion of numbers of members, why dues were not submitted, etc).
- **Spain** (emailed report was presented by Wolfgang von Heymann who noted that Spanish national society vice-president **Victoria Sotos-Borrás** had become president of UEMMA; she subsequently also presented via Skype on the education of teachers sometime after this report): The Sociedad Española de Medicina Ortopédica Osteopatica y Manual (SEMOOYM) has **n=96** members (most practicing Rehabilitative Medicine). See the .pdf copy of her emailed report at link.
- **Switzerland** (**Marc-Henri Gauchat**): The Swiss Medical Society for Manual Medicine (SAMM), has a physician membership of **n=1274**. SAMM's president is **Ulrich Böhni** – he has written a new standard book**.** In accordance with the Swiss Medical Association (FMH), they provide manual medicine education and CME. Their College of teachers (17 members) offer 8 basic courses (conducted in French and German); this is 320 hours (8 times 4 days over 2 years) in 8 modules plus a final exam resulting in an official Certificate of Competence in M/M (good for 5 years prior to recertification). Their yearly congress (Cervical Spine) will take place in Interlaken. See their .pdf report on link.
- **USA** (AAO President **Richard Feely** with **Michael Kuchera**): The American Academy of Osteopathy AAO) celebrated its 75th Anniversary; it is growing with a total membership of

n=7959 of which 6306 are pre-doctoral osteopathic medical students. Physician membership is **n=1675** (1504DO&62 MD). Neuromusculoskeletal Medicine (NMM) is recognized by state and national governments as a primary specialty. See the USA national society's .pdf presentation dealing with mission, emphasis on core competencies in predoctoral and postdoctoral training, and research emphases at link; Dr. Feely also described the progress on the AAO's new Foundation for Osteopathic Research and Continuous Education (FORCE).

FIMM Member Websites

Australia: Australian Society of Musculoskeletal Medicine (AAMM)
http://www.musmed.com
Australian Faculty of Musculoskeletal Medicine (AFMM)
http://www.afmm.com.au
Austria: ÖsterreichischeÄrztegesellschaftfürManuelleMedizine.V. (ÖÄMM)
http://www.manuellemedizin.org/
Canada: Canadian Association of Orthopaedic Medicine (CAOM) /
Association Canadienne de MédecineOrthopédique (ACMO)
http://www.caom.ca
Denmark: Dansk Selskab for MuskuloskeletalMedicine (DSMM)
http://www.dsmm.org
Estonia: EestiManuaalseMeditsiiniSelts (EMMS)
http://www.manuaalmeditsiin.ee
Finland: SuomenManuaalisenLääketieteenYhdistysry SMLY
http://www.smly.fi
France: Société Française de Médecine Manuelle Orthopédique et Ostéopathique (SOFMMOO) http://www.sofmmoo.com
Germany: Deutsche GesellschaftfürManuelleMedizin (DGMM)
http://www.dgmm.de
Hong Kong: The Hong Kong Institut for Musculoskeletal Medicine hkIMM
http://www.hkimm.hk/
Israel: Israel Society of Manual Medicine (ISMM)
http://www.ismm.org.il/
Italy: SocietàItaliana de MedicinaFisica e Riabilitazione (SIMFER)
http://www.simfer.it/?SEZ=7&SOTTOSEZ=10&ID=30
Netherlands: Nederlandse Vereniging van artsen voor Ortho- Manuele- Geneeskunde (NVOMG) http://nvomg.artsennet.nl/De-vereniging.htm
New Zealand: New Zealand Association of Musculoskeletal Medicine
http://www.musculoskeletal.co.nz
Poland: Polish Medical Association of Manual Medicine (PTLMM)
http://www.medycyna-manualna.med.pl/
Switzerland: Swiss Medical Association for Manual Medicine (SAMM)
http://www.samm.ch
USA: American Academy of Osteopathy (AAO)
http://www.academyofosteopathy.org

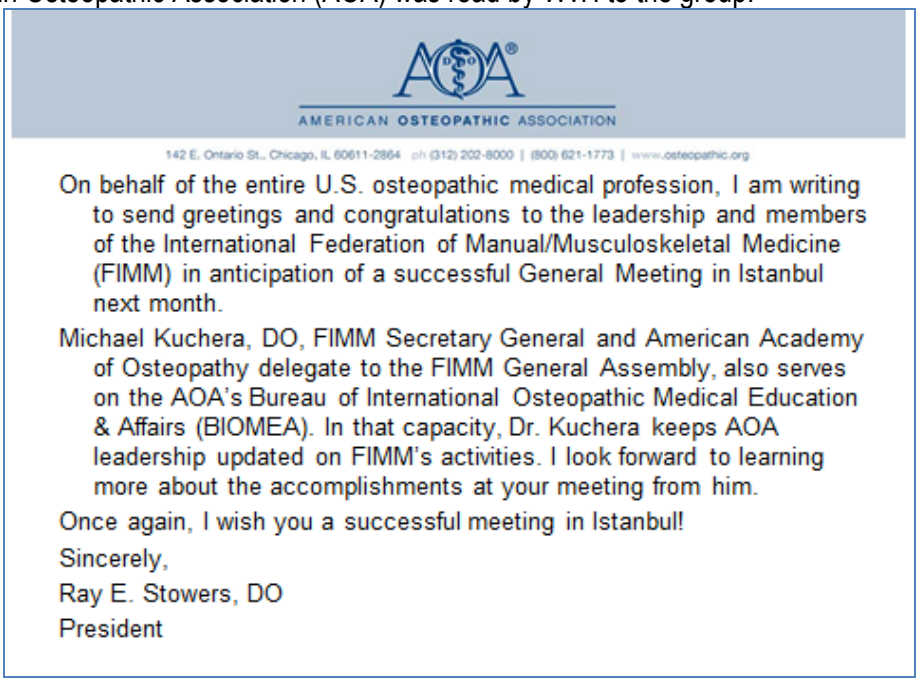
3. **Matters arising from the minutes of the last General Assembly (Potsdam)**
   - See FIMM-NEWS Vol.19, No 1,p 12-47
   - **VOTE: Minutes unanimously passed as previously and electronically distributed.**
4. **Report from the Vice President (Wolfgang von Heymann)**
   - The Vice President's Report's major points include:

- Dr. von Heymann met in February with Health Policy and Education Board directors in Zurich at which time the *Guidelines on Basic Training and Safety in M/M Medicine* draft v1.70 was reviewed. New distribution of the revised draft was timed to provide as much input as possible to represent the experience of as many groups as possible.
- The health of President Palle Holck was a serious concern and the Vice President had a phone conversation with him in June where President Holck expressed the potential to continue. He reported that he had improved and felt he could take on more again.
- Dr. von Heymann attended the ESSOMM in Rome August 31 – September 1, 2012 (two days). This semi-autonomous group is made up of organizations consisting of more than 100 MM-trained individuals that meet the FIMM 300+ hour educational minimum bar. (There are 10 member organizations that meet these criteria). An Executive Board & and Advisory Board have been established for ESSOMM and discussions could lead to increased commonalities in MM curricula.
    - ESSOMM Members (Rome 2012):
        - AEMM (D), President Johannes Buchmann
        - AEMKA (D), President Stephan Martin
        - AITEDOMM (I), President Manlio Caporale
        - AMTVDNS (BG), President Marietta Karadjowa
        - DGMSM (D), President Mathias Psczolla
        - DSMM (DK), Vice President Niels Jensen
        - MWE (D), President Wolfgang von Heymann
        - ÖÄGMM (A), President Hans Tilscher
        - ÖAMM (A), President Rudolf Lackner
        - SAMM (CH), President Ulrich Böhni
    - ESSOMM Executive Board:
        - Hermann Locher (D)
        - Ulrich Böhni (CH)
        - Federico DiSegni (I)
        1. Wolfgang v. Heymann (D)
        - Michaela Habring (A)
    - ESSOMM Advisory Board
        - Markus Schilgen (D)
        - Alexander Lechner (A)
        - Lothar Beyer (D)
        - Niels Jensen (DK)
        - Wolfram Linz (D)
    - The ESSOMM Second International Instructor Program (in Rome) included topics on: Health Policy information on UEMS, Manual Medicine and Translational Research, Not-sufficiently-classified Low Back Pain, Contraindications/ precautions to cervical HVLA-manipulations, a discussion on "What do we really know about the SIJ?" and Presentations of specific manipulation techniques for SIJ, cervical and lumbar spine.
    - For ESSOMM the Multidisciplinary Joint Committee (MJC) activity is possible within UEMS activities, giving MM-Medicine the voting power of a section. As a full membership for FIMM as a worldwide operating federation is impossible, the aim of setting up the semi-autonomous European subgroup was finally achieved. "Specialty status" must exist in ¾ or more of its EU nation representative societies for a group like UEMS to become a separate section, which cannot be reached. MM members of FIMM are encouraged to join the

MJC process by supporting ESSOMM, as this would be good for MM in Europe.

- The MJC as championed by sports medicine is the model that manual medicine seeks. UEMMA applied but no information was presented by Teyssandier to UEMS at their request, so that path still open when ESSOMM presents in October. A vote for UEMS as an interdisciplinary subspecialty organization to become a Multidisciplinary Joint Committee member could have been considered but was not on the agenda as such. This will be decided at the next meeting in Larnaca/Cyprus this autumn.

- A letter wishing the success of this General Assembly sent by the president of the American Osteopathic Association (AOA) was read by WvH to the group.



AMERICAN OSTEOPATHIC ASSOCIATION

142 E. Ontario St., Chicago, IL 60611-2864 ph (312) 202-8000 | (800) 621-1773 | www.osteopathic.org

On behalf of the entire U.S. osteopathic medical profession, I am writing to send greetings and congratulations to the leadership and members of the International Federation of Manual/Musculoskeletal Medicine (FIMM) in anticipation of a successful General Meeting in Istanbul next month.

Michael Kuchera, DO, FIMM Secretary General and American Academy of Osteopathy delegate to the FIMM General Assembly, also serves on the AOA's Bureau of International Osteopathic Medical Education & Affairs (BIOMEA). In that capacity, Dr. Kuchera keeps AOA leadership updated on FIMM's activities. I look forward to learning more about the accomplishments at your meeting from him.

Once again, I wish you a successful meeting in Istanbul!

Sincerely,

Ray E. Stowers, DO

President

He expressed his view that coming from the president of the largest group of manual medicine doctors in the world (nearly 80,000 physicians), that such positive recognition is something that FIMM should continue to cultivate.

- WvH is concerned that we cannot split our energies: IAMMM; UEMMA-ESSOMM, UEMMA & more societies … and to do such would require changes in bylaws. We need to unite the forces in M/M Medicine and may instead wish to build regional subgroups. Models of cooperation need to be found:
  i. Joined meetings between FIMM and IAMM
  ii. Cooperation between UEMMA and ESSOMM
  iii. More societies per nation, changing bylaws to encourage inclusion rather than exclusion of MM groups
  iv. Regional subgroups (such as ESSOMM) might be advisable to revisit.
- **VOTE: Move to accept Vice-President's Report: Passed unanimously.**
- Dr. von Heymann closed by thanking the rest of the Executive Board for their support during the transition: Michael Kuchera, Secretary-General; Bernard Terrier, Chairman of Health Policy Board; Marc-Henri Gauchat, Chairman of Education Board; Sergey Nikonov, Science Officer; Viktor Dvorak, Treasurer.

5. Report from the Secretary-General (Michael Kuchera)

- Throughout 2011-2012, the Secretary-General was quite active in teaching and research related to promoting a better understanding of manual medicine.
  - He was on the Scientific Committee and a moderator for the **International Fascial Research Congress (Vancouver, British Columbia, CANADA)**. FIMM was an organizational sponsor at his request. Over 800 attended this Congress where scientific underpinnings for many manual techniques were presented.
  - Eleven **Research Presentations** were delivered by the Secretary-General in 2011-12:
    - IAMMM – 9/11 Copenhagen
    - Nordic Congress – 9/11 Copenhagen
    - AOA Scientific Convention – 10/11 Orlando Florida
    - OsEAN /OIA (Kappa Workshop) – 10/11 Potsdam
    - MWE Annual Meeting – 10/11 Berlin
    - London School of Osteopathy – 12/11 London
    - AAO Convocation – 3/12 Louisville KY
    - International Fascial Research Congress – 3/12 Vancouver
    - National Osteopathic PM&R Conference – 4/12 Philadelphia
    - American Astronautical Society – 6/12 Denver (Paper)
    - ATSU-KCOM & West Point Collaborative Training – 6/12
  - Thirteen (13) twenty-hour national/international invited programs (260 hours):
    - MWE/DAAO – 10/11 Isny Germany
    - MWE/DAAO – 10/11 Bad Iburg Germany
    - MWE/DAAO– 10/11 Bad Iburg Germany (X2)
    - MWE/DAAO – 11/11 Bad Iburg Germany (X2)
    - MWE/DAAO – 01/12 Bad Iburg Germany (X2)
    - MWE/DAAO – 06/12 Bad Iburg Germany (X2)
    - AAO Systemic Dysfunction – 7/12 New York
    - MWE/DAAO – 07/12 Bad Iburg Germany (X2)
  - The Secretary-General encouraged National Society representatives to encourage qualified scientists and educators to apply for IAMMM membership.
- Final symbolic transitional observations were offered by the Secretary-General:
  - In Istanbul, the **bridge** next to the conference centre could represent many things:
    - In reality, it links 2 continents and in many contexts, it "bridges" between the past &the future.
    - Sadly, two FIMM leaders "crossed over" this year – an active founding member and our current president.
    - As FIMM chooses to transition, the analogy of the bridge raises many questions: Where are we to go? Who will help direct traffic? What future will we build on the past? Can we afford to pay the tolls to get there?

  - What do I consider to be our best opportunities for a meaningful transition? It is vital that FIMM do what it can to insure that MM Medicine is and remains relevant. It is time to take an active and proactive role in shaping Health Policy: We need to complete our Health Policy document & agree upon a "White Paper" regarding its implementation.
  - I'm not unique. In this GA, many are actively involved in teaching; several are top leaders of the International Academy of Manual / Musculoskeletal Medicine; and many are active in MM Research. You all give of yourselves to your patients; that you are here: testament to commitment to advance MM.
- **VOTE: Secretary-General's report unanimously accepted.**

6. **Report from the Treasurer (Victor Dvorak)**
   - **2011: The overall result for the year 2011 is positive.**
     - 25 Member Societies representing about 12,000 physicians have contributed.
     - The aim to get budget balanced (calendar-year–running-costs for basic expenditures and extra cost for projects) was achieved.
     - Why: There was more income in than budgeted.
     - The result is a surplus of 4,434 Euro (including the debts).
     - Assets on accounts are 30,155 Euro.
     - Question from the Assembly on past deficits: are these all paid off? Yes, all paid off.
     - Question from the Assembly on debtor countries: Even if they leave FIMM, they are expected is to pay their debts.
   - **2012: Preliminary report to-date.**
     - FIMM cut down on projects as decided. No surcharge will therefore be requested.
     - Thanks to good organisation of the Turkish Society for Manual Medicine the cost of an expensive city (Istanbul) was less expensive than thought and the GA 2012 therefore costs less than budgeted.
     - An overall result of 4,000 Euros is expected.

7. **Report of the Auditors**

   Todor Todorov presented the auditors'reports (Craig Appleyard absent, but his written report sent and read) – there was no problem with bookkeeping, the documentation was correct and complete.
   - Both reports were approved as written/presented
   - **VOTE: Passed: Unanimous 13-0-0**

8. **Election/confirmation of the Auditors**
   - **VOTE:** Both auditors wish to continue (no floor nominations): **Unanimous (13:0:0) approval to elect Todor Todorov and Craig Appleyard as Auditors for 2012.**

9. **Report from the Chairman of the Education Board (Marc-Henri Gauchat)**
   - Russian group asked to replace Maxim Bakhdatze for Vladimir Bartashewich…(13-0-0)
   - Members participated in Health Policy development rather than Education Board work which was less important
   - New propositions in HPB document will need to adapt FIMM Basic Syllabus and Glossary (possible by e-mail activity, no face-to-face meeting necessary)

10. **Report from the Chairman of the Health Policy Board (HPB) – Bernard Terrier (5th report)**
    - **Report about the Board activities**
      - **Recalling the Origins and Progression of this HPB Project**
      - **Ongoing projects including budget request included in the 2012 Budget**
        - Two messages that are favourable:
          - Task of HPB is 98% finished with mandate started in 2008
          - HPB Director will not read the Guidelines as they comprise 53 pages

    All national societies received v1.70. All delegates confirmed to have received the electronic version by e-mail and do not need a printed version. **Terrier** thanked Turkey as hosts for the last meeting of the Board the previous day. As the General Assembly has guided the paper as

an extensive consensus document the national FIMM member societies will receive the next revised version in the first half of 2013 to be discussed again and then finally voted on during the 2014 GA.

Synopsis: The document already differentiates four levels of education and training: **Undergraduate, Facility, Capacity, and Specialty.** To finalize the document, there is some additional work needed on the **Introduction** and the chapters on **Contraindications, Complications, and Safety** as well as on the **Annexes** and the **References.**
The HPB-Director noted that the term **"MM Medicine"** throughout the document means "Manual & Musculoskeletal Medicine" and noted with respect to the Prague 2011 meeting that the HP Board accepted the proposal of **James Watt (NZ)** to focus just on the Manual Medicine toolbox within the Musculoskeletal Medicine Specialty syllabus.
Time table for further work on the document:

- Reading and completing Safety chapter and comments due by Oct 7, 2012
- **Version 1.76** will be sent to FIMM national member societies by Oct 11, 2012. **PLEASE RESPOND, WE NEED YOUR SUPPORT**
- Society deadline is Nov 30, 2012
- **Version 1.82** will again be sent to all national member societies and published on the **FIMM website** in February 2013 for final checking
- **Version 2.0** will be ratified by the FIMM GA 2014 and then be published.
- Implementation of the **White Paper, Kuchera** is working on (and maybe Simon Vulfsons will help) (see .pdf version June-2013)

Terrier thanked all FIMM national member societies for their cooperation in compiling the Guidelines.

- **VOTE: The Health Policy Director's report was accepted unanimously (13-0-0)**

11. Report from the Science Officer of the Executive Board (Sergei Nikonov)

It was a hard work to find results of scientific work being appropriate to be presented in Turkish Society meeting. The final scientific program compiled for the International Conference an MM Medicine consisted of these presentations:

- **Michael L. Kuchera:** The Dirty Half-Dozen: Six Somatic Dysfunctions Involved in Chronic Recurrent Low Back Pain
- **Wolfgang von Heymann**: RCT-Study on acute LBP in comparison manipulation to NSAID and placebo
- **Maxim Bakhtadze:** Cerebral perfusion in patients, suffering from chronic neck pain
- **Cihan Aksoy:** Common procedures combining Manual and Physical Rehabilitation Medicine
- **Sergey Nikonov:** Manual therapy in lumbar compression syndromes, caused by disc herniation (posterior lateral and posterior medial).
- **Dimitry Bolotov:** Manual therapy tactics in chronic headache treatment
- **Hüseyin Nazlikul:** Segmental correlations and the role of the autonomous nervous system in segmental dysfunction
- **Ilia Todorov:** Clinical reliability of the most commonly used practical tests for diagnosis of the functional disorders of the sacroiliac joints right after manual treatment
- **Sergei Kanayev:** Carpal channel syndrome. Diagnostics and Manual therapy
- **Wolfgang von Heymann:** Indication/contraindication to MM manipulation therapy
- **Michael L. Kuchera:** Lymphatic Pump Manual Treatment: Implications in Pain, Inflammation, and Vascular-Immune Function

- **'Nadezhda Krasnoyarova**: Manual therapy tactics in spine disorders treatment
- **Kirill Kuzminov:** Ultrasound diagnostics of structural changes of the intervertebral disks of lumbar spine in manual therapy

- **VOTE: The report of the FIMM Science Officer was accepted.**

12. Decision on the membership fees for the next year (See # 7 above):

The treasurer FIMM **Victor Dvorak** had already presented his slides for the 2013 Budget

- Simon Vulfsons discussed the question for potential for outside funding. No decision was taken on this proposal.
- At the actual state of FIMM an outside sponsor was estimated to be most unlikely. In the past the FIMM Foundation failed to bring in significant monies. May be a Task Force (**Bernard Terrier**) can start the discussion of the needs for extra monies
- The Executive Board recommends to leave dues as same (without additional surcharge) for 2013
- **Vote: budget and membership fees accepted unanimously as proposed by the treasurer (13-0-0)**

13. Membership (National Society admission presentation and vote): No application for membership was submitted. No national member society offended the bylaws, so no discussion on exclusion was necessary.

14. Elections – None this Year

15. Date and Place of the General Assembly 2012

Israel applied to be the host in 2014 in 2012; there has been an indifferent response made by President Palle Holck, but with his illness this application was not pursued further.

- **Simon Vulfsons:** Jerusalem has usually quite pleasant weather in October and November. There is not a special personal danger coming to Israel although it cannot be denied it is in the centre of a site where a bomb is not completely unrealistic. Other cities to meet would be Haifa or Tel Aviv. As the arrangements for meetings – GA in combination with board meetings in advance and the Society invitation in the night prior to the GA – must be completed as early as possible, the GA would prefer a meeting between the end of September and the end of October.
- **Niels Jensen:** Denmark last year also applied to become host for the GA in 2013; they still could see whether this is possible. But with the passing of President Palle Holck a lot of groundwork has to be done. Therefore the DSMM would prefer to propose 2014 to host the GA in Denmark.

- **Vote: GA 2013 in Israel (Jerusalem or Tel Aviv) during first two weeks in October: accepted 11-0-1 (Germany abstained)**

16. Any other business

- **Bernard Terrier** asked the GA permission to form a task force for elaboration of further strategy of FIMM including experts that are not members of a FIMM national member society (i.e. Peter Skew) – **accepted unanimously**
- **Michael Kuchera:** Information on the International Fascial Research Conference (IFRC): **accepted unanimously** to support that FIMM as a supporter without financial commitment to the International Fascial Research Conference

17. Closing the General Assembly by the acting President at 3:50 PM

Respectfully submitted,

Michael L. Kuchera, DO, FAAO

Guidelines on basic training and safety

version 1.83a
31.12.2012

International Federation for Manual/Musculoskeletal Medicine
2012

1. Acknowledgements

The International Federation for Manual/Musculoskeletal Medicine (FIMM) greatly appreciates the financial and technical support provided by all the National Society members of FIMM for the development and publication of these guidelines.

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Thanks are due the German Society for Manual Medicine DGMM and the Turkish Society for Manual Medicine, which hosted the FIMM HPB for its meetings in 2010 and 2012.

FIMM acknowledges its indebtedness to the Members of the FIMM HPB and the invited participants, who wrote the draft guidelines and worked towards reviewing and finalizing them.

Special thanks are due to Boyd Buser, DO FACOFP and Michael Kuchera, DO FAAO who have participated at the meetings and have advised the FIMM HBP.

Thanks to Dr Stephan Bürgin who assisted the chairman of the FIMM HPB in 2009.

Invited participants:

Prof Lothar Beyer, Germany, HPB member
Dr Miki Ishizuka , Japan
Dr Carlo Mariconda, Italy, HPB member
Prof Sergei Nikonov, Russian Federation
Dr Peter Skew, UK, HPB Member
Dr Victoria Sotos Borras, Spain, HPB member
Dr Kazuyoshi Sumita, Japan, HPB member
Dr Bernard Terrier, Switzerland (Chairman of the HPB)
Dr James Watt, New Zealand, HPB member
Dr Wolfgang von Heymann, Germany, HPB member

Invited advisors:

Dr Craig E. Appleyard, Canada
Dr Maxim Bakhtadze, Russian Federation
Boyd Buser, DO FACOFP, USA
Dr Marc-Henri Gauchat, Switzerland
Dr Niels Jensen, Denmark
Michael Kuchera, DO FAAO, USA
Dr Kirill O. Kuzminov, Russian Federation

Staff member:

Dr Stephan Bürgin, Switzerland

2. Introduction

Manual Medicine

Manual Medicine is a branch of medicine, which addresses management issues relating primarily to the neuro-musculoskeletal (nervous and locomotor) system. Physicians[3] practice Manual Medicine worldwide and are regulated by law in some 40 countries.

It was developed as a specialty, subspecialty or capacity within the medical science and profession in those countries, where a need was identified for non-surgical treatment of disorders of the locomotor system.

In those countries where the legal regulations do not list the specialty of Musculoskeletal Medicine, Manual Medicine is a subspecialty or an additional qualification related to one of the historically established specialties dealing with the locomotor system including those such as Neurology, Orthopaedics/ Orthopaedic surgery, Physical Medicine and Rehabilitation, Rheumatology and Family Medicine/General Practice. In some countries Manual Medicine may also be an integrated component of the curriculum of those specialties [I] .

Musculoskeletal Medicine

Musculoskeletal Medicine deals with medical diagnosis and medical therapy referring to all functional disorders and structural lesions of the locomotor system. This medical specialty is established predominantly in those countries whose structures of their national health care systems do not otherwise imply non-surgical treatment of the locomotor system. Musculoskeletal Medicine is practised in various countries worldwide and regulated by law in some of those. In these countries Manual Medicine is defined as a component of the curriculum of Musculoskeletal Medicine [II] .

Neuromusculoskeletal Medicine

Neuromusculoskeletal Medicine is the equivalent medical specialty practised by the osteopathic medical profession in the USA. The training for the Doctor of Osteopathic Medicine degree uniquely includes more than 300 hours of Manual Medicine training at the predoctoral level; the specialty further requires three or more years of fulltime residency [III] [IV].

Manual Therapy

In Russia the equivalent medical specialty is called *Manual Therapy* and requires a complete medical training of Neurology or Orthopaedics/Traumatology, prior to the Manual Medicine Training [V] [VI].

Arthrokinemtics

The concept of arthrokinematics is an approach to teach and perform manual techniques, which are designed to influence the interrelation between the surfaces of the synovial joints in vertebral and peripheral joint dysfunctions. It has a scientific base [VII] [VIII] and is implemented predominantly in some Japanese schools of Manual Medicine.

MM medicine

The acronym *MM medicine* defines all scopes of Manual Medicine *and* the non-invasive part of Musculoskeletal Medicine as exemplified above (also including Neuromusculoskeletal Medicine, Manual Therapy and Arthrokinematics).

Thus, these guidelines cover both the *manual* as well as the non-invasive part of the *musculoskeletal* approach. They deal exclusively with the training and safety of these approaches practised either as a *capacity* or as a *component* (see *Fig. 1a* and *Fig. 1b* below).

[3] For the purpose of this document the term *physician* includes *surgeon* there where not mentioned.

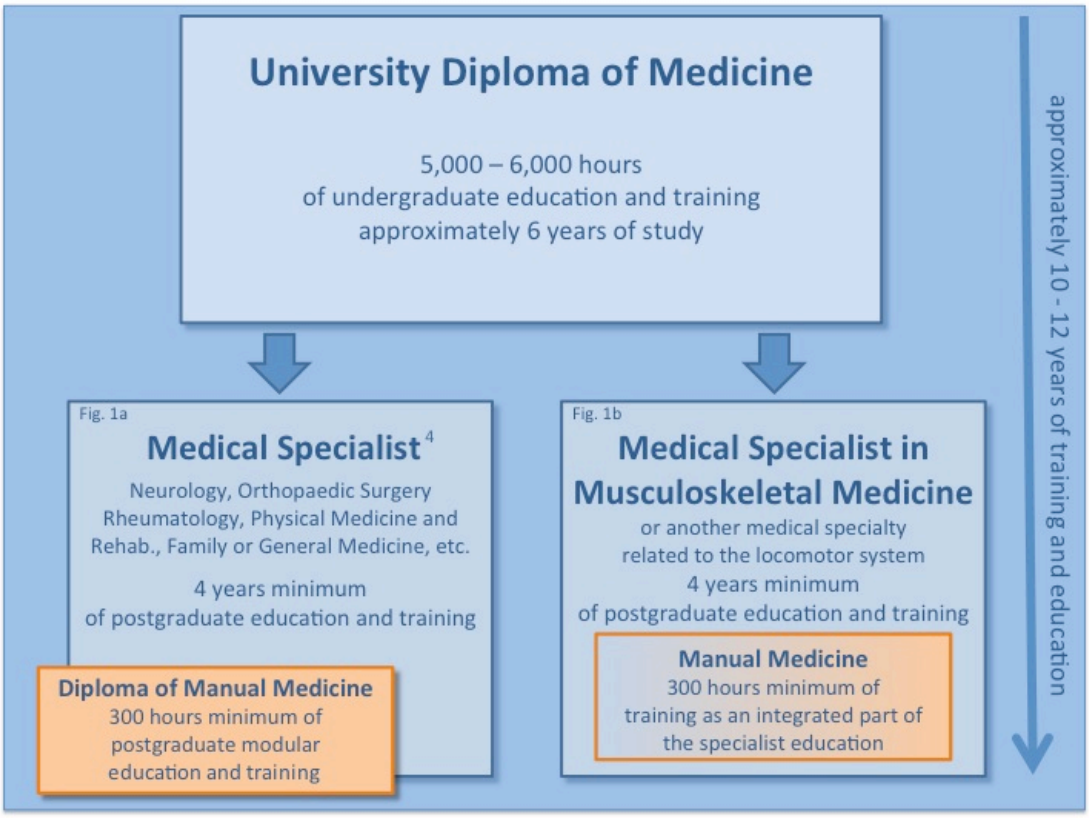

Fig. 1a: The *capacity model*. Manual Medicine is a subspecialty or capacity in relation to any medical/surgical specialty[4] dealing with clinical medicine.

Fig. 1b: The *component model*. Manual Medicine is an integrated component of the curriculum of the medical specialty of Musculoskeletal Medicine or another medical specialty related to the locomotor system.

In summary MM medicine is practised worldwide mainly in two different models:

- Manual Medicine as a subspecialty or capacity in relation with any medical specialty dealing with clinical medicine (*Fig. 1a:* capacity model).

- Manual Medicine is an integrated component of the curriculum of the medical specialty of Musculoskeletal Medicine or another medical specialty related to the locomotor system. The integrated training must be equivalent to the requirements of Category 3, Specialty Level (*Fig. 1b:* component model).

As a medical health care service, MM medicine offers a conservative management approach and rarely requires auxiliary staff although it requires appropriately trained and skilled physicians. Therefore, one of the benefits of MM medicine is that it offers the potential for cost-effective management of disorders of the locomotor system.

Diagnostics in MM medicine is based on physician's skills in biomechanics, anatomy, neurophysiology, and psychosocial analysis and is usually done in the ambulatory care setting. The history, examination findings, and investigations are all considered in order to generate a working diagnosis. The MM physician then discusses and decides with the patient the therapeutic regime, which includes pharmacological prescription and manual therapy as well as rehabilitation prescription and advice. The MM physician therefore represents an appropriately trained practitioner with a broad skill set otherwise only available through a multidisciplinary approach. The patient having a problem of the locomotor system normally needs no other or additional physician.

The number of patients presenting with problems related to MM medicine vary quite broadly from country to country. In countries that provide statistical data the lifetime prevalence of neck- and back-pain ranges from 70% to 75%. Only 5% of these patients have structural disorders [IX]. The total costs of back pain in The Netherlands in 1991 were more than 4 billion Euros, in the United Kingdom in 1992 more than 2.7 billion Euros, and in Sweden in 1995 more than 2 billion Euros [X]. In 1998, total U.S. health care expenditures for low back pain were estimated at 90 billion U.S. dollars [XI]. Average total health expenditures for patients with back and neck problems increased from 4'795 U.S. dollars per year in 1997 to

[4] The term Medical Specialist includes physicians and surgeons as defined according to the responsible national Health Regulations.

about 6'096 U.S. dollars per year in 2005, an inflation-adjusted increase of 65% [XII]. In Germany the costs for low back pain were 8.5 billion Euros in 2006. Approximately 90% of the total costs were indirect costs due to work absenteeism and disablement reflecting the fact that back pain typically affects the working population [XIII].

As dysfunction in the locomotor system most commonly includes pain, MM medicine is perfectly placed for early intervention, thus avoiding the long and sometimes endless path of chronic pain and invalidity. The International Federation for Manual/Musculoskeletal Medicine (FIMM) supports the medical societies in all countries to encourage their national health services to implement and maintain safe and effective training of physicians in diagnosis and therapy in MM medicine as delineated in this document.

Regulations for physicians who practice MM medicine vary considerably from country to country. In some countries, e.g. New Zealand, Russia and the United States of America MM medicine has specialty status as mentioned (component model). In some other countries MM medicine has been legally recognized with formal qualifications often as part of another specialty (capacity model). This may include examination, registration and licensing by the government, a university or a Chamber of physicians. In these countries the profession is regulated and the stipulated educational qualifications are generally consistent, satisfying the requirements of the respectively accrediting agencies. In some countries MM medicine is not recognised formally or practised.

However, many countries have not yet developed MM education or established laws to regulate qualified practice of MM medicine.

With the growth in demand for MM medicine services, other medical specialists may wish to gain additional qualifications in MM medicine. Special training programs have been developed to enable physicians with substantial basic medical training to acquire the additional necessary education and skills to become MM specialists, and these could be expanded further. Such programs should be flexible in order to take account of different educational backgrounds and previous medical training of the students.

In countries where no regulatory legislation currently exists there may be no educational, professional or legal framework governing the practice of MM medicine.

FIMM through its Health Policy Board has delineated what FIMM believes to be the minimum educational requirements physicians need to achieve in order to protect patients. FIMM recommends recognition and implementation of these minimum requirements by all countries.

In some countries with limited educational structures, lack of financial resources, or unsatisfactory integration of indigenous communities into mainstream society, non-medical primary health care workers specifically trained in some manual techniques may help to enhance such health care services. This may also help to introduce some principles of MM medicine into national health care systems which otherwise would be unavailable. Such programs are identified below.

3. Purpose of the guidelines

In order to facilitate qualified and safe practice of MM medicine as well as to protect the public and the patients, the purposes of these guidelines are:

- to provide different levels in the requirements for MM medicine education
- to serve as a reference for national authorities in establishing an examination and licensing system for the qualified practice of MM medicine
- to review contraindications in order to minimize the risk of accidents
- to advise on the management of complications occurring during treatment
- to promote the safe practice of MM medicine.

4. How to use this document

Part I of the guidelines covers basic requirements for different training programs, each one designed for trainees with various educational backgrounds, including all physicians wishing to use MM medicine as well as some non-medical primary health care workers.

This part provides a reference for the establishment of various training programs, particularly where no formal education degree has been established. If national health care authorities wish to evaluate the training program, they may consult the FIMM Education Board (http://fimm-online.com). This Board does not function as an accrediting agency, but promotes an understanding of the variations between recognized accrediting bodies through dialogue and communication.

A system of examination and licensing may be established or adapted on the basis of this training program to ensure the competence of the trainees and to avoid the practice of MM medicine by unqualified physicians. It is to be hoped that this

will deter commercial exploitation of MM medicine education and practice, which is a significant and growing problem in some countries.

Part II of the guidelines deals with the safety of spinal manipulative therapy and the contraindications to its use.

5. General considerations

5.1. Historical information

MM physicians have used techniques of diagnosis and therapy over thousands of years. The *Edwin-Smith-Papyrus* (3000 to 2500 B.C.) notes besides surgical diagnosis also some painful conditions of the neck, where the diagnostic manual procedure is quite similar to that used today. Physicians in India like the surgeon Susruta (1500 B.C.), estimated to be the founder of *Ayurveda Medicine*, used manual techniques. Although spinal manipulation dates back to Hippocrates (460 to 375 B.C.) and the ancient Greek physicians[XIV] as well as to Galen (130 to 200 A.C.), the traces of MM medicine get lost in the Middle Ages. Only the philosopher and physician Abu Ibn Sinna from Buchara called Avicenna (980 to 1037 A.C.) published within his *Canonis Medicinae* manual techniques that were taught for some hundred years at all European universities. In the middle of the 19th century the American physician Andrew Taylor Still (1828 to 1917 A.C.) – probably influenced by bonesetters from England – developed a system of manual techniques, which he called *osteopathy*, meaning "ill by the bones". This kind of manual therapy had great success not only in the USA, (leading to the development of its own discipline due to rejection by mainstream medicine – but later acceptance in the US only (Doctors of Osteopathy)) but also influenced quite broadly the MM-physicians still existing in Europe. In other countries like Japan MM techniques based on arthrokinematics were developed independently. With the foundation of the International Federation for Manual/ Musculoskeletal Medicine FIMM in 1962 in Nice (France) and its triennial International Conferences the process of international exchange, the merger of techniques and concepts was promoted intensely. Today FIMM is able to present a standard of MM medicine on different levels, as is documented below.

5.2. Principles of MM medicine

- MM medicine is the medical discipline of enhanced knowledge and skills in the diagnosis, therapy and prevention of (often painful but reversible) disorders of functions of the locomotor system.
- Disorders of the locomotor system constitute a large proportion of medical consultations at the primary care level. Normal function, biomechanics, diagnosis and management of disorders of the locomotor system are poorly represented in most undergraduate teaching programs. MM medicine completes and complements the syllabus of both undergraduate and postgraduate education and training of physicians.
- Diagnostic skills build on conventional medical techniques using manual assessment of individual tissues and functional assessment of the entire locomotor system based on scientific anatomy as well as biomechanical and neurophysiologic principles.
- Therapeutic skills add manual and manipulative techniques to conventional treatments for the reduction of pain or other therapeutic outcome.
- Patients' understanding and involvement in the therapeutic activity help prevent recurrence.
- There is no special "philosophy" of MM medicine. Generally, MM medicine rests upon the following principles of today's mainstream medicine:

  - The holistic view of man as a unit of body, mind, and spirit is very common.
  - It is also the common view of mainstream medicine that up to a certain degree the human body has the ability to compensate for disorders by self-regulation. Self-regulation may be influenced by many biological, social and psychological factors.
  - The current concept of MM medicine is based on the clinically proved observation of nocireactive and painful dysfunction of segmentally related tissues. MM specialists describe these findings as segmental or somatic dysfunction (defined by UK "read code") or as painful minor intervertebral dysfunction.

6. Glossary

The terms used in these guidelines are defined in the FIMM-Glossary v7.2, published on the website in three languages (http://fimm-online.com).

The English version of the terms is given hereby.

Only terms used in this document are given.

arthrokinematics Arthrokinemtics is the field of kinematics that is a study of the interrelation between the surfaces of synovial joint.

articular neurology The branch of neurology that involves the study of the anatomical, physiological, and clinical features of the nerve supply of the joint systems in various parts of the body.[XV]

capacity-model The term capacity is part of nomenclature of the Bologna process, which is a series of ministerial meetings and agreements between European countries designed to ensure comparability in the standards and quality of higher education qualifications. The capacity-model describes Manual Medicine as a subspecialty or a capacity in relation with any medical specialty dealing with clinical medicine. It means a postgraduate level of training, including an exam based on specialty level.

component-model The component-model describes Manual Medicine as an integrated component of the curriculum of the medical specialty of Musculoskeletal Medicine or another medical specialty related to the locomotor system.

diagnosis in Manual Medicine Diagnostic skills in manual medicine build upon conventional medical techniques with manual assessment of individual tissues and functional assessment of the whole locomotor system based upon scientific biomechanical and neurophysiologic principles.

HVLA thrust High velocity, low amplitude thrust.

hypermobility Increase in mobility resulting from congenital, constitutional, structural or functional changes of the joints or soft tissue. It may occur locally, regionally, or generalised.

locomotor system The locomotor (or musculoskeletal) system includes in the context of Manual Medicine the muscles, aponeuroses, bones and joints of the axial and appendicular skeleton, ligaments, and those parts of the nervous system or the visceral system associated with their function.

manipulation Technique of treating joints with a high velocity, low amplitude (HVLA) thrust in order to improve function and/or decrease pain. (In the USA and some countries, the term is used generally to describe all therapeutic applications of manual force.)

Manual Medicine Manual Medicine is the medical discipline of enhanced knowledge and skills in the diagnosis, therapy and prevention of functional reversible disorders of the locomotor system. (The members of FIMM adopted this definition in the year 2005. According to the country and the different linguistic customs the terms "Musculoskeletal Medicine", "Myoskeletal Medicine", "Neuromusculoskeletal Medicine", "Orthopaedic Medicine", "Manual Therapy" [e.g. Russian Federation] and others are used interchangeably with "Manual Medicine".)

mechanotransduction The process by which cells convert mechanical stimuli into a chemical response. It can occur in both cells specialized for sensing mechanical cues such as mechanoreceptors, and in parenchymal cells whose primary function is not mechanosensory.

mechanoreceptor Encapsulated nerve endings (receptor endings classified by the method of Freeman and Wyke meeting the following three criteria: [1] encapsulation, [2] identifiable morphometry, and [3] consistent morphometry on serial sections) are believed to be primarily mechanosensitive and may provide proprioceptive and protective information to the central nervous system regarding joint function and position [XVI].

MM medicine The term defines all scopes of Manual Medicine *and* the non-invasive part of Musculoskeletal Medicine (including Neuromusculoskeletal Medicine and Manual Therapy).

MM physician Physician who performs Manual Medicine either as a capacity or as a component.

MM techniques Methods, procedures, or manoeuvres taught in a recognized school of manual medicine or employed by a MM physician for therapeutic purposes.

mobilization Passive, slow, and usually repeated motion of axial traction and/or rotation and/or translatory gliding with increasing amplitude in order to improve restricted articular mobility.

Musculoskeletal Medicine Musculoskeletal medicine embodies all medical disciplines that deal with the diagnosis of acute and chronic conditions affecting the musculoskeletal system in adults and children, including the psychosocial impact of these conditions [XVII].

Musculoskeletal Medicine is a branch of medicine that deals with acute or chronic musculoskeletal injury, disease or dysfunction. Its aim is to address the somatic dysfunction, which is an impaired or altered function of the components of the somatic (body framework) system. The somatic system includes the skeletal, arthrodial and myofascial structures with their related vascular, lymphatic and neural elements [XVIII].

neuromuscular techniques (NMT) A group of manual techniques that incorporate mobilization by using the contraction force of the agonists (NMT 1), mobilization after postisometric relaxation of the antagonists (NMT 2), or mobilization using reciprocal inhibition of the antagonists (NMT 3).

NMT See: neuromuscular techniques (NMT).

pain provocation test A test which stresses the body part(s) being tested with functional or physical force in order to elicit diagnostic pain.

prevention in MM medicine Patient involvement in the therapeutic activity, resulting from the detailed diagnosis, helps in the prevention of recurrence of somatic dysfunction.

range of motion Range of motion refers to the distance and direction a joint can move between the flexed position and the extended position.

reversible dysfunction A peripheral articular or segmental dysfunction is responsive to MM techniques in the sense.

segmental celluloperiosteal myalgic syndrome Painful minor intervertebral Dysfunction causes reflex reactions within the same metamer leading to spinal somatic dysfunction ("syndrome cellulo-périosto-myalgique segmentaire").

self-mobilization Self-stretching techniques that specifically use joint traction or glides that direct the stretch force to the joint capsule or the muscles involved.

segmental dysfunction Segmental dysfunction is an alteration of the normal or physiological vertebral segmental function in the sense of hypo- or hypermobility. Such dysfunction may be reversible or not.

soft tissue treating techniques Inhibition technique using digital compression for one minute of a tender point. - Deep transverse friction: strong friction of a structure thought to be malfunctioning (e.g. muscle, tendon). - Stretching in a direction perpendicular to the muscle fibres without tightening the skin.

somatic dysfunction Impaired or altered function of related components of the somatic system (skeletal, arthrodial, myofascial) and related neural, vascular and lymphatic elements. Somatic dysfunction is a reversible dysfunction.

stabilizing techniques Stabilizing techniques in terms of Manual Medicine consider sensory and motor components related to the locomotor system for optimal stabilization of the core, the spine, or a joint.

strengthening techniques Strengthening techniques involve exercises increasing muscle strength by putting more strain on a muscle than it is accustomed to receive. This increased load stimulates the growth of proteins inside each muscle cell that allow the muscle as a whole to contract.

tensegrity An architectural principle in which compression and tension are used to give a structure its form.

PART 1: BASIC TRAINING IN MM MEDICINE

1. Use of MM medicine

MM medicine is used for diagnostic procedures relating to all painful disorders of somatic function of the human body, especially the locomotor system. It is also used for the therapy of all functional disorders, as well as for all painful structural diseases, where at least a part of the function can be restored.

The MM physician starts his diagnostic approach with an extensive precise history followed by functional investigation predominantly executed by his hands. Only in cases where an important structural lesion is suspected additional diagnostic approaches like X-ray, CT- or MRI-scans or biochemical investigations are used.

The following therapeutic approach emphasizes the provision of manual treatment with intent to avoid unnecessary medication. But if this approach is not indicated or effective, all medical means, of non-surgical/non-invasive pain therapy, will also be provided. Especially in chronic pain MM techniques will be combined with other therapies in an interdisciplinary multimodal bio-psycho-social approach.

1.1. Administrative and academic considerations

The training of physicians in MM involves certain administrative and academic considerations, for example:

- who could be trained?
- what would be the physicians role and responsibilities?
- what education would be required?
- where would such education be provided, and by whom?
- would suitable programs have to be developed from scratch, or could existing substandard courses be strengthened or modified appropriately?
- are suitably qualified educators in MM medicine available, or would they have to be trained?
- what would be the mechanisms for official recognition of physicians, educators, institutions and programs?

1.2. Scope of practice

The scope of practice for the specially trained physician with the full skill set necessary would include the diagnosis and differential diagnosis, therapy with MM techniques including prevention and a rehabilitation advice. It is presumed that this physician – specialist or subspecialist – will treat according the scientific principles and the published peer reviewed literature.

After establishing the diagnosis it is nevertheless possible to involve specially trained non-medical personnel (e.g. physiotherapists) in the application of manual techniques or the education of the patient.

1.3. Examination and Licensing / Registration

For those countries without an established curriculum for training in MM medicine different levels of training and skills are set out in sections 5 to 8 of this document. This provides training for MM medicine at a number of different levels.

All education and training in MM medicine should be completed by an exam, which includes, preferably, both a written and a practical test. This examination needs to be recognized by a licensing body or another authority of the national health care system.

1.4. Supervision, monitoring, accreditation and evaluation

Safe introduction of MM medicine requires training introduced at the undergraduate level with stepwise progression to the level of expertise required and with assessment at each step by examination as described above.

Most countries that regulate the medical profession use national, regional, state or provincial examinations. Alternatively, health authorities may delegate to the chambers of physicians the right to regulate themselves and to ensure the competence of individuals.

As has been the case in a number of countries or regions in the past, prior to the legislative recognition of MM medicine, a government may wish to evaluate both the positive and negative consequences of including it within the health care service.

2. Common competencies shared by MM physicians

All physicians offering MM medicine share common competencies:

- They are trained and experienced in functional testing and analysis of normal and pathological movements of joints and function of muscles.
- They are trained and experienced in manual palpation of all tissues (skin, fascia, muscle, bone and joint capsule).
- They are capable to utilise manual, reliable and reproducible pain provocation tests.
- They are trained and experienced on different levels to provide various manual techniques or other treatments of the locomotor system. These different levels of specialisation are described below.

3. Categories of education in MM medicine

3.1. Category 1, Undergraduate Level

Undergraduate (or predoctoral) training in MM medicine must include an understanding of musculoskeletal movements. Biomechanical knowledge is imperative to develop a diagnosis and a management plan in disturbances of the locomotor system. The suggested way of achieving this is by including time for this training in the basic clinical curriculum of every medical student.

This category does not provide any specific diploma or certificate. It involves basic training in biomechanics and functional anatomy.

The basic diagnostic skill set includes inspection, palpation and testing range of motion.

The basic treatment skill set includes knowledge in self-mobilization, strengthening and stabilizing techniques. Some undergraduate programs include training to Facility Level.

This topic should be included specifically in the appropriate undergraduate module (e.g. musculoskeletal, orthopaedic, rheumatology, neurology).

3.2. Category 2, Facility Level

This category is designed to achieve facility at primary care level in prevention, management and functional treatment or rehabilitation of dysfunctional conditions of the locomotor system, which constitute a large proportion of consultations. This is achieved by either intensive courses or a number of short courses sufficient to provide such competence.

This category corresponds in the Bologna concept to a CAS (Certificate of Advanced Studies), which allocates 10 to 15 ECTS (European Credit Transfer System [XIX] [XX]).

The skill set includes clinical expertise relating to axial and appendicular structures, pelvis and the associated soft tissues. This consists of adequate knowledge of anatomy, biomechanics, and physiology of the locomotor system to provide a basic skill set of safe and effective manual techniques to accomplish clinical goals.

This category is usually taught at postgraduate level.

3.3. Category 3, Specialty Level

This category is intended for medical or surgical practitioners with a special interest in MM medicine to practice independently and includes the ability to make a specific diagnosis and design and implement a full management and treatment plan including complete functional rehabilitation.

This category corresponds to a specialty related competency for MM medicine used in the broad base of clinical conditions related to that physician's or surgeon's specialty practice. This corresponds within the Bologna concept to a DAS (Diploma of Advanced Studies), which allocates 30 ECTS.

The skill set includes profound clinical expertise relating to axial and appendicular structures and the associated soft tissues. This consists of clinical reasoning and thorough knowledge of the disorders and treatment techniques, incorporating a complete set of manual techniques related to the physician's or surgeon's specialty.

This category is taught at postgraduate level.

3.4. Category 4, Master or Doctorate Level

Category 4 specialists are fully trained and experienced in diagnosis and management including recognized methods of functional rehabilitation or treatment. This incorporates elements of research and teaching.

These levels correspond in the Bologna concept to a MAS (Master of Advanced Studies), which allocates 60 ECTS.

The skill set includes profound clinical expertise relating to axial and appendicular structures and the associated soft tissues, applying clinical reasoning and thorough knowledge of a wide range of treatment techniques capable of improving the function of the locomotor system and diminishing pain. This also incorporates an extensive knowledge of interpreting musculoskeletal function, a complete set of manual techniques and an understanding of their use in the broad base of musculoskeletal conditions beyond.

These qualifications require the involvement of a university department or hospital offering a suitable training program. The Master or Doctorate Level is based on the category 3 curriculum and add academic knowledge and a masters or doctoral thesis. They require an internship with an appointed supervisor.

Those physicians or surgeons completing training at this level primarily specialise in MM medicine.

The curriculum of Category 4 is for example equivalent to the curriculum of the medical specialty of Musculoskeletal Medicine as far as the non-invasive elements are concerned.

4. Education and Training Category 1 – Undergraduate Level

4.1. Objective

Musculoskeletal conditions account for up to 20% of health costs in many communities. It has been established in a USA survey that graduates are undertrained in musculoskeletal conditions, diagnosis and treatment[XXI]. The aim of this level of training is to provide a fundamental understanding of the scope and opportunities offered by musculoskeletal concepts, examination and treatment.

4.2. Duration of training

Training should be incorporated in all years of the undergraduate schedule and integrated where possible with relevant specialties including clinical opportunities to experience the practical application of theoretical knowledge and techniques relevant to the locomotor system.

4.3. Core topics and Syllabus

See chapter 8, Core topics and Syllabus.

4.4. Practical supervised clinical experience

Where possible and appropriate exposure to clinical environments where MM medicine is practiced would be expected, with some form of devolved responsibility for the student, to allow basic skills to develop in clinical history taking and examination.

4.5. Examination

As part of the course work and final examination of all students reference questions relating to MM medicine should be included in the relevant papers.

4.6. Continuing professional development

The responsibility always remains with the qualified physician or surgeon to maintain a good working knowledge of all aspects of medicine relevant to their practice. MM medicine makes no exception.

5. Education and Training Category 2 – Facility Level

This refers to the training program for physicians and surgeons undergoing medical professional education in a relevant specialty (General Practice, Orthopaedics, Rheumatology, Neurology, Paediatrics, Rehabilitation Medicine, Accident and Emergency, General Medicine, General Surgery, ENT or Gynaecology for instance), who recognise the need for MM medicine skills within their scope of practice.

5.1. Objective

The aim at this level of education and experience is to engender a fundamental understanding of the scope and opportunities offered by concepts, examination and treatment techniques of MM medicine to create a competent practitioner able to provide service safely and effectively with the minimum of supervision.

5.2. Duration of training

After post registration training is completed, a program of 100 hrs. of organised tuition, self learning and supervised practice, as well as 12 months of experience in relevant related medical specialties (Orthopaedics, Accident and Emergency, Rheumatology, Neurology, Paediatrics, General Practice, Pain management or Rehabilitation Medicine) will be required before certificate examination can be undertaken.

5.3. Core topics and Syllabus

See chapter 8, Core topics and Syllabus.

5.4. Practical supervised clinical experience

Exposure to clinical environments where MM medicine is practiced at specialty level would be expected, with significant opportunities for devolved responsibility for the trainee, to allow skills to be developed in clinical history taking, examination and treatment techniques. It is anticipated that this training would take no less than 12 months.

5.5. Examination

As part of the Certification course work and final examination of trainees all aspects of MM medicine need to be addressed. The examining body (University or Academy) must satisfy itself that the written papers are of sufficient standard. Direct assessment of clinical skills will require clinical examinations of test patients and oral assessment of examination, diagnostic and treatment planning skills.

5.6. Post-degree training

These Certificate examinations are regarded as post-degree training and require proof of continuing clinical and skills development using all the national criteria relevant at the time.

5.7. Continuing professional development

The responsibility always remains with the qualified physician or surgeon to maintain a good working knowledge of all aspects of medicine relevant to their practice. MM medicine makes no exception.

6. Education and Training Category 3 – Specialty Level

This refers to the training program for physicians or surgeons undergoing further professional education in MM medicine as a specialty related competency wishing to provide unsupervised medical services to patients.

6.1. Objective

The aim at this level is to provide education and experience to create a detailed knowledge and understanding of concepts, examination, treatment and management techniques of MM medicine, to develop a competent practitioner capable of providing extensive MM services safely and effectively in a specialty without supervision.

6.2. Duration of training

After post registration training is completed, a program of 300 hrs. of organised tuition, self-learning and supervised practice will be required before a Diploma exam can be undertaken. A fully completed training of a medical specialty including a Certificate is required (e.g. Orthopaedics, Accident and Emergency, Rheumatology, Neurology, Paediatrics, General Practice, Pain management or Rehabilitation Medicine) is required.

6.3. Core topics and Syllabus

See chapter 8, Core topics and Syllabus.

6.4. Practical supervised clinical experience

Exposure to clinical environments where MM medicine is practiced at specialty level would be expected, with significant opportunities for devolved responsibility for the trainee, to allow skills to be developed in clinical history taking, examination and treatment techniques. It is anticipated that this training would take no less than 24 months.

6.5. Examination

A portfolio of experience and signed off procedures together with a suitable written dissertation or research project will be submitted at the time of the final examination papers and clinical examinations.

As part of the Diploma course work and final examination of trainees all aspects of MM medicine need to be addressed. The examining body (University or Academy) must satisfy itself that the written papers are of sufficient standard. Direct assessment of clinical skills will require clinical examinations of test patients and oral assessment of examination, diagnostic and treatment planning skills.

6.6 Post-degree training

These Diploma examinations are regarded as post-degree training and require proof of continuing clinical and skills development using all the national criteria relevant at the time.

6.7. Continuing professional development

The responsibility always remains with the qualified physician to maintain a good working knowledge of all aspects of medicine relevant to his or her practice. MM medicine makes no exception.

7. Education and Training Category 4 – Master or Doctorate Level

This refers to the training program for persons who have undertaken further medical professional education in MM medicine to specialty related level and wish to develop further skills and expertise to undertake tertiary referrals to provide services usually associated with a MM medicine hospital department. This equates to specialty training at a masters or doctoral level of postgraduate training.

7.1. Objective

The aim at this level is to provide education and experience of a detailed knowledge and understanding concepts, examination and treatment techniques of MM medicine beyond those commonly associated with provision of basic services, to create a competent practitioner capable of providing special services and undertaking research and teaching at the very highest level.

7.2. Duration of training

After basic specialty related (Specialty level) training is completed, 24 months of experience in MM medicine will be required together with evidence of higher skill training in a range of techniques.

7.3. Core topics an Syllabus

The interests of the developing doctor will determine the core topics and Syllabus. See also chapter 8, Core topics and Syllabus.

7.4. Practical supervised clinical experience

During the prescribed 24 month program evidence will be collected to demonstrate exposure and ability to perform recognised techniques used in MM medicine. A peer reviewed research project will be undertaken in the same time frame.

7.5. Examination

A portfolio of experience and signed off procedures together with a suitable written dissertation or research project will form the basis of the masters or doctoral submission, defined by the awarding institution.

6.6 Post-degree training

These criteria are regarded as post-degree training and require proof of continuing clinical and skills development using all the national criteria relevant at the time.

7.7. Continuing professional development

The responsibility always remains with the qualified physician or surgeon to maintain a good working knowledge of all aspects of medicine relevant to their practice. MM medicine makes no exception.

8. Core topics and Syllabus[5]

See original document.

[5] Partially developed from the following: FIMM Core Curriculum for Manual Medicine 2005, European core curriculum „Manual Medicine" ESSOMM 2006, LOCES II final draft 2006, Osteopathic core competences for medical students 2012.

Part 2: GUIDELINES ON SAFETY OF MM Medicine

1. Introduction

In general MM procedures are safe and effective. Safety is the prime concern of all medical practice. *Primum non nocere* – First do no harm.

Harm includes both physical and psychological aspects. It is equally important to support and repair psychological damage as it is to help heal physical damage. This is done by affirming wellness and independence rather than encouraging the concept of disease and creating dependence.

In order to help the patient heal, it is necessary to make a diagnosis or create a working hypothesis (model understandable to the patient) that allows safe application of MM medicine treatment modalities, be they pharmacological, physical or interventional. This requires taking an appropriate history and undertaking adequate examination and investigation.

The focus of this document is in relation to MM medicine and will confine itself to this area.

2. Contraindications

2.1. Direct techniques

For the purposes of this document the term *manipulation* means applying a controlled impulse of sufficient amplitude to a structure in an endeavour to attain normal movement and restore normal function in that structure. This most commonly involves a movement of high velocity but low amplitude (HVLA).

For the purposes of this document the term *mobilization* means applying a controlled movement of sufficient magnitude and duration to attain movement in the joint.

All MM medicine treatment procedures have to follow an assessment of the risk-benefit ratio for the patient and their existing condition.

Contraindications to site-specific manipulation may include local malignancy, spinal or joint infection, severe rheumatoid arthritis, connective tissue disease, and fracture [22]. Anticoagulant therapy, psychotic conditions and severe pain on the other hand, are conditions for special precautions.

Special precautions have to be considered in situations, in which it is recognised that there is some increased risk of harm but where once fully informed, the patient together with the physician decides to proceed with the manipulation.

2.1.1. Contraindications

- lack of consent
- lack of adequate training of the operator
- vertebral fracture
- vertebral dislocation
- vertebral sepsis, including discitis, osteomyelitis, meningitis
- spinal malignancy – both primary and secondary
- carotid and vertebro-basilar insufficiency
- spinal cord compression or irritation (positive Kernig's and Lhermitte's sign)
- myelopathy
- cauda equina syndrome
- neurological diseases causing potential cord compromise e.g. syringomyelia

2.1.2. Precautions

- spondylolysis with spondylolisthesis
- severe instability and marked hypermobility
- aneurysm
- cervico-occipital junction malformation
- spinal stenosis
- osteoporosis
- inflammatory arthritis, rheumatic and connective tissue diseases
- other neurological diseases: spina bifida
- internal fixation/stabilization devices
- pain on positioning prior to manipulation, painful movement in direction of intended manipulation
- patient afraid and fearful to manipulation
- insufficiently skilled operator
- lack of appropriate environment (e.g. therapy bed, privacy, patient support, chaperone, language)

2.2. Indirect and reflex based techniques

Soft tissue, muscle energy, indirect, and myofascial release techniques have few contraindications. Precautions imply the need for extra consideration care, and provision of information to and the chance for discussion with the patient.

It must still be borne in mind, that any untoward event that occurs in relation to the application of a treatment is likely to be blamed on the treatment.

3. Complications and side effects

For the purpose of this document complication and side effect mean any adverse effect occurring during or immediately after application of manual diagnostic or treatment procedures either related to unknown or undetectable inherent conditions of a patient or due to the application itself.

These include dire, serious and those of less consequence.

They are extremely unlikely but do occasionally occur. The incidence is estimated to be less than one serious incident in every 6 million manipulations. Complications are often supposed to be associated with high velocity thrust techniques. Appropriate Training is mandatory before embarking on spinal manipulation particularly in the cervical spine.

Estimates of serious neurovascular accidents range from 1 in 50,000 to 1 in 5 million cervical spinal manipulations [23 24]. One hundred eighty-five specific major complications following manipulation were identified in a literature review of articles published between 1925 and 1993 on the safety of manipulation. Approximately 66% involved cerebrovascular accidents, 12% disk herniation, 8 % pathologic fracture or dislocations, and 3% generalized increased in pain [25].

3.1. Dire

These include:

- **death** – This can result from brain stem injury as could occur when HVT (high velocity [low amplitude] thrust) treatment is applied to a patient with unrecognized high cervical fracture. It also has been reported as a result of vascular injury, particularly to the vertebro-basilar vascular system again by utilizing HVT treatment in patients with unrecognized vascular injury or disease.
- **spinal injury** – Depending on the level at which the cord is affected, this can range from:
  - quadriplegia in high cervical injury
  - incontinence and sexual impairment in lumbo-sacral injury
  - lower limb injury in lumbar injury.
- **cerebrovascular accident**
  - brainstem level injury – may cause death, lateral medullary syndrome.
  - cerebellum – incoordination.
  - brain substance – stroke.

3.2. Serious

These include:

- fracture
- dislocation
- dissemination of infection
- dissemination of neoplasm
- aggravation of pain
- aggravation of disability

3.3. Complications and side effects of less consequence

These include:

- local discomfort
- numbness
- tingling in upper limbs
- dizziness
- fainting
- light-headedness
- headache

4. Safety

For the purpose of this paper all reports from literature referring to any kind of manual techniques were revised, also reports concerning the chiropractic profession techniques. Although especially direct HVLA thrust techniques used by the chiropractic profession sometimes differ considerably from indirect HVLA techniques taught in most MM medicine schools, these chiropractic observations needed to be mentioned and discussed as well. Thus the report on complications comprises all the manual techniques used for the treatment of dysfunctional neck pain, including chiropractic HVLA thrust techniques.

As with all interventions, there are risks associated with spinal manual therapy. Infrequent, but potentially serious side effects, include: vertebrobasilar accidents, strokes, death, spinal disc herniation, vertebral and rib fractures, and cauda equina syndrome [26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61].

4.1. Risks of cervical spine manipulation therapy

4.1.1. General considerations from the literature

The degree of serious risks associated with manipulation of the cervical spine is uncertain, with widely differing results being published[62].

A 1996 Danish chiropractic study confirmed the risk of stroke to be low, and determined that the greatest risk is with manipulation of the first two vertebra of the cervical spine, particularly passive rotation of the neck, known as the "master cervical" or "rotary break"[63].

Serious complications after manipulation of the cervical spine are estimated to be 1 in 4 million manipulations or fewer[64]. A RAND Corporation extensive review estimated "one in a million"[65]. Dvořák, in a survey of 203 practitioners of manual medicine in Switzerland, found a rate of one serious complication per 400,000 cervical manipulations, without any reported deaths, among an estimated 1.5 million cervical manipulations[66].

Jaskoviak reported approximately 5 million cervical manipulations from 1965 to 1980 at The National College of Chiropractic Clinic in Chicago, without a single case of vertebral artery stroke or serious injury[67]. Henderson and Cassidy performed a survey at the Canadian Memorial Chiropractic College outpatient clinic where more than a half-million treatments were given over a nine-year period, again without serious incident[68]. Eder offered a report of 168,000 cervical manipulations over a 28-year period, again without a single significant complication[69]. After an extensive literature review performed to formulate practice guidelines, the authors concurred, "the risk of serious neurological complications (from cervical manual technique) is extremely low, and is approximately one or two per million cervical manipulations"[70].

Understandably, vascular accidents are responsible for the major criticism of spinal manipulative therapy. However, it has been pointed out "critics of manipulative therapy emphasize the possibility of serious injury, especially at the brain stem, due to arterial trauma after cervical manipulation. It has required only the very rare reporting of these accidents to malign a therapeutic procedure that, in experienced hands, gives beneficial results with few adverse side effects"[71]. In very rare instances, the manipulative adjustment to the cervical spine of a vulnerable patient becomes the final intrusive act, which results in a very serious consequence[72 73 74 75].

According to an expert opinion HVLA-manipulation of the cervical spine is estimated to have no effectiveness and to be dangerous[76] while this has not been confirmed by others. As it has been revealed this expert opinion does not fulfil the criteria of evidence level III[77].

In a 2007 follow-up report in the Journal of the Royal Society of Medicine, Ernst concluded: "Spinal manipulation, particularly when performed on the upper spine, is frequently associated with mild to moderate adverse effects. It can also result in serious complications such as vertebral artery dissection followed by stroke. Currently, the incidence of such events is not known. In the interest of patient safety we should reconsider our policy towards the routine use of spinal manipulation"[78].

In 2007 the French Medical Society for Manual Medicine and Osteopathy SOFMMOO recommended in a scientific article based on a literature search that for the cervical spine, despite a lack of data in the literature, prudence and medico-legal issues justify the performance of systematic radiography prior to cervical spine manipulation therapy and generally in case of back or neck pain in patients of less than 25 years of age[79].

A paper by Michell et. al. published in 2004 reported on an investigation on the effects of cervical spine rotation on vertebral artery blood flow[80]. The question was whether cervical spine rotation, as used in the standard vertebrobasilar insufficiency test, is associated with a measureable change in intracranial vertebral artery blood flow. Transcranial Doppler sonography was used to measure intracranial vertebral artery blood flow in 30 young, healthy, female subjects, with the cervical spine in the neutral position and with sustained, end-of-range rotation. Statistically significant decreases in blood flow were demonstrated with contralateral rotation particularly, in the left and right vertebral arteries. Despite this change in blood flow, signs and symptoms of vertebrobasilar insufficiency were not demonstrated in these subjects. The author concluded that the use of the vertebrobasilar insufficiency test, in the absence of a more specific, sensitive and valid test, should be recommended to assess the adequacy of hindbrain blood supply to identify those patients who may be at risk of serious complications post-manipulation.

On the other hand in 1997 a Canadian research group was unable to demonstrate that the extension-rotation test is a valid clinical screening procedure to detect decreased blood flow in the vertebral artery[81]. They concluded that the value of this test for screening patients at risk of stroke after cervical manipulation is questionable. They tested twelve subjects with dizziness reproduced by the extension-rotation test and 30 healthy control subjects using Doppler ultrasonography examination of their vertebral arteries with the neck extended and rotated.

Yet maximal rotation of the cervical spine may significantly affect vertebral artery blood flow, particularly when used in the treatment of patients with underlying vascular pathology. Mitchell[82] investigated in 2003 intracranial vertebral artery blood flow in normal male subjects and female subjects, aged 20 to 30 years, in neutral and maximally rotated cervical spinal positions using transcranial Doppler sonography. The sample consisted of 60 male subjects and 60 female subjects (240 vertebral arteries). He found a significant decrease (P =.001) in intracranial vertebral artery blood flow following cervical spine rotation, irrespective of side but greater on the contralateral side, in the total sample and in male subjects. Female subjects had a significantly higher blood flow than male subjects.

In 1998 Licht et. al. presented a randomized, controlled and observer-blinded study comparing flow velocity in the vertebral artery before and after spinal manipulative therapy using Doppler ultrasound technology[83]. Twenty Danish university students with a "biomechanical dysfunction" in the cervical spine were investigated. The research groupe found no significant changes in these subjects. They concluded that major changes in peak flow velocity might in theory explain the pathophysiology of cerebrovascular accidents after spinal manipulative therapy. However, in uncomplicated spinal manipulative therapy, this potential risk factor was not prevalent.

4.1.2. Vertebrobasilar accidents and cervical spine manipulation therapy

Haldeman and collaborators reported in 2002 in an extensive paper on vertebrobasilar accidents in relation to cervical spine manual therapy[23 84]. According to them stroke represents an infrequent adverse reaction associated with cervical spine manual therapy. Attempts to identify the patient at risk and the type of manual technique most likely to result in these complications of manual therapy have not been successful. A retrospective review of 64 medical legal cases of stroke temporally associated with cervical manual therapy of the spine was performed to evaluate characteristics of the treatment rendered and the presenting complaints in patients reporting these complications. These files included records from the practitioner who administered the manual therapy, post stroke testing and treatment records usually by a neurologist, and depositions of the patient and the practitioner of manual techniques as well as expert and treating physicians. A retrospective review of the files was carried out by three (2 in 11 cases) researchers, using the same data abstraction instrument, to independently assess each case. These independent reviews were followed by a consensus review, in which all reviewers reached agreement on file content. 92% of cases presented with a history of head and/or neck pain and 16 (25 %) cases presented with sudden onset of new and unusual headache and neck pain often associated with other neurological symptoms that may represent a dissection in progress. The strokes occurred at any point during the course of treatment. Certain patients reporting onset of symptoms immediately after first treatment while in others the dissection occurred after multiple manual treatments. There was no apparent dose-response relationship to these complications. These strokes were noted following any form of standard cervical manipulation technique including rotation, extension, lateral flexion and non-force and manual techniques in neutral position. The results of this study suggest that stroke, particularly vertebrobasilar dissection, should be considered a random and unpredictable complication of any neck movement including cervical manipulation. They may occur at any point in the course of treatment with virtually any method of cervical manual technique. The sudden onset of acute and unusual neck and/or head pain may represent a dissection in progress and be the reason a patient seeks manual therapy that then serves as the final insult to the vessel leading to ischemia.

Finally the authors conclude that the literature does not assist in the identification of the offending mechanical trauma, neck movement, or type of manual therapy precipitating vertebrobasilar artery dissection or the identification of the patient at risk. Thus, given the current status of the literature, it is impossible to advise patients or physicians about how to avoid vertebrobasilar artery dissection when considering cervical manual therapy or about specific sports or exercises that result in neck movement or trauma.

In another paper Haldeman et al. stated – after analysing 64 cases of cerebrovascular ischemia after manual therapy – that cerebrovascular accidents after such therapy appear to be unpredictable and should be considered an inherent, idiosyncratic, and rare complication of this treatment approach. It seems to be not possible to identify factors from the clinical history and physical examination of the patient that would assist a physician attempting to isolate the patient at risk of cerebral ischemia after cervical manual therapy[85].

Again Haldeman and collaborators studied in 2003 clinical perceptions of the risk of vertebral artery dissection after manual therapy of the cervical spine[86]. The purpose of the study was to assess the effect of referral bias on the differences in perceived incidence of vertebral artery dissection after manual cervical therapy between neurologists and chiropractors in Canada. In a retrospective review, cases where neurological symptoms consistent with cerebrovascular ischaemia were reported by chiropractors in Canada for the 10-year period 1988 to 1997, there were 23 cases of vertebral artery dissection after cervical manipulation reported. Based on the survey, an estimated 134,466,765 manual treatments of the cervical spine were performed during this 10-year period. This gave a calculated rate of vertebral artery dissection after manual treatment of the cervical spine of 1:5,846,381 manual cervical spine treatments. Based on the number of practicing chiropractors and neurologists during the period of this

study, 1 of every 48 chiropractors and one of every two neurologists would have been made aware of a vascular complication from manual treatment of the cervical spine that was reported during their practice lifetime.

In 2004 the Cochrane Collaboration stated that mobilization and/or manipulation when used with exercise are beneficial for persistent mechanical neck disorders with or without headache. Done alone, manipulation and/or mobilization were not beneficial; when compared to one another, neither was superior[87].

The quite extensive 2005 guidelines of the Canadian Chiropractic profession stated on the basis of a broad analysis for the current evidence that none of the predisposing factors hypothesized in the literature definitively predict a dissection-related "cerebrovascular ischemic event" and, therefore, none is a contraindication to manipulation[88].

Also in 2005 Haneline and Lewkovich analysed the aetiology of cervical artery dissections in the years from 1994 to 2003[89]. They conducted a literature search of the MEDLINE® database for English-language articles published using the search terms cervical artery dissection (CAD), vertebral artery dissection, and internal carotid artery dissection. Articles were selected for inclusion only if they incorporated a minimum of 5 case reports of CAD and contained sufficient information to ascertain a plausible etiology. 1014 citations were identified; 20 met the selection criteria. There were 606 CAD cases reported in these studies; 321 (54%) were internal carotid artery dissection and 253 (46%) were vertebral artery dissection, not including cases with both. 371 (61%) were classified as spontaneous, 178 (30%) were associated with trauma/trivial trauma, and 53 (9%) were associated with cervical spinal manipulation. If one apparently biased study was dropped from the data pool, the percentage of CADs related to cervical spinal manipulation droped to approximately 6%. The authors concluded that this etiologic breakdown of CAD did not differ significantly from what has been portrayed by most other authors.

In a paper presented in 2007 Smith and collaborators demonstrated that cervical spinal manipulation therapy is an independent risk factor for vertebral artery dissection[90]. The data was previously presented in 2003[91]. They concluded that according their case-controlled study of the influence of cervical spine manipulation therapy and cervical arterial dissection shows that this therapy is independently associated with vertebral arterial dissection, even after controlling for neck pain. Patients undergoing cervical spine manipulation therapy should be consented for risk of stroke or vascular injury from the procedure. A significant increase in neck pain following cervical spine manipulation therapy warrants immediate medical evaluation.

Cassidy et al. investigated in 2008 a 10-years period with 818 stroke cases due to vertebrobasilar artery lesion, hospitalized in a population of more than 100 million person-years. 75% were treated by chiropractors, 25% by general practitioners. They concluded: stroke due to vertebrobasilar artery is a very rare event in the population. The increased risks of vertebrobasilar artery stroke associated with chiropractic and general practitioners visits is likely due to patients with headache and neck pain from vertebrobasilar artery dissection seeking care before their stroke. There is no evidence of excess risk of vertebrobasilar artery stroke associated with chiropractic care compared to primary care[92].

Dittrich and collaborators compared in 2009 47 consecutive patients with cervical artery dissection with 47 consecutive patients of similar age with ischaemic stroke due to aetiologies other than cervical artery dissection[93]. They found no association between any single one of the above risk factors and cervical artery dissection. Recent infections were more frequent in the cervical artery dissection group but failed to reach significance. However, the cumulative analysis of all mechanical trigger factors revealed a significant association of mechanical risk factors as a whole in cervical artery dissection. They concluded that mild mechanical stress, including manual treatment of the cervical spine, plays a role as possible trigger factor in the pathogenesis of cervical artery dissection. Cervical spine manipulation therapy and recent infections alone yet failed to reach significance during the present investigation.

Marx and collaborators evaluated in 2009 all cases with the diagnosis of cervical artery dissection submitted between 1996 and 2005 to the *Schlichtungsstelle für Arzthaftpflichtfragen der Norddeutschen Ärztekammer* for assessment of the accusations brought against the therapists who conducted the cervical spine manipulation therapy[94]. Neither in the 7 carotid nor in the 9 vertebral artery cases could a causal link be made between the dissection and the manipulation. However, in 5 of the 7 carotid and 7 of the 9 vertebral artery dissections there was clear evidence or high probability that the dissection was present prior to the manual therapy, and had caused neck pain, segmental dysfunction and, in some cases, even neurological symptoms. In no case high velocity thrust techniques were the unique cause of such a treatment. Stroke after manual therapy of the cervical spine was mostly due to embolization of thrombotic material from the dissected artery. As both cervical arterial dissection and cervical spine disorder usually cause similar signs and symptoms physicians must differentiate between these two entities prior to any manual treatment of the spine.

In 2010 the relationship between vertebrobasilar dissection stroke (VADS) and cervical manipulative therapy (CMT) was checked from all actual data available. According to actual data the relationship between vertebrobasilar artery dissection stroke and manipulation of the cervical spine is not causal, but patients with VADS often have initial symptoms which cause them to seek care from a chiropractic physician and have a stroke some time after, independent of the chiropractic visit. This new understanding has shifted the focus for the chiropractic physician from one of attempting to "screen" for "risk of complication to manipulation" to one of recognizing the patient who may be having VADS so that early diagnosis and intervention can be pursued[95].

Finally a prospective national survey in the U.K. to estimate the risk of serious and relatively minor adverse events following cervical spine manipulation therapy conducted by Haymo and collaborators[96] in 2007 dealt with data obtained from 28,807 treatment consultations and 50,276 cervical spine manipulations. There were no reports of

serious adverse events. This translates to an estimated risk of a serious adverse event of, at worse, approximately 1 per 10,000 treatment consultations immediately after cervical spine manipulation therapy, approximately 2 per 10,000 treatment consultations up to 7 days after treatment and approximately 6 per 100,000 cervical spine manipulations. Minor side effects with a possible neurologic involvement were more common. The highest risk immediately after treatment was fainting/dizziness/light-headedness in, at worse approximately 16 per 1000 treatment consultations. Up to 7 days after treatment, these risks were headache, in at worse approximately 4 per 100, numbness/tingling in upper limbs, in at worse approximately 15 per 1000 and fainting/dizziness/light-headedness, in at worse approximately 13 per 1'000 treatment consultations. The study group concluded consistent with an Italian group[97] that although minor side effects following cervical spine manipulation treatment were relatively common, the risk of a serious adverse event, immediately or up to 7 days after treatment, was low to very low.

By conclusion and in agreement with *Bone and Joint Decade 2000–2010 Task Force on Neck Pain and Its Associated Disorders* the best available evidence suggests initial assessment for neck pain should focus on triage and those with common neck pain might be offered primarily non-invasive treatments if short-term relief is desired before the evaluation of cervical spine manipulation therapy[98].

The effectiveness of thrust-manipulation for neck pain has been examined in many high quality systematic reviews as well as in evidence based clinical guidelines and health technology assessment reports. When combined with recent randomized trial results, this evidence supports including manipulation as a treatment option for neck pain, along with other interventions such as advice to stay active and exercises. However, when risk, benefit, and patient preference are considered, there is currently no preferred first line therapy, and no evidence that mobilization is safer or more effective than manipulation[99].

4.2. Risks of lumbar spine manipulation therapy

In a 1993 study J.D. Cassidy and co-workers concluded that the treatment of lumbar intervertebral disk herniation by side posture manipulation is "both safe and effective"[100].

Oliphant in 2004 graded prospective and retrospective studies and review papers according to quality, and results and conclusions were tabulated[101]. From the data published, an estimate of the risk of lumbar spine manipulation therapy causing a clinically worsened disk herniation or cauda equina syndrome in patients presenting with lumbar disk herniation was calculated. This was compared with estimates of the safety of nonsteroidal anti-inflammatory drugs and surgery in the treatment of lumbar disk herniation. As a result an estimate of the risk of lumbar spine manipulation therapy causing a clinically worsened disk herniation or cauda equina syndrome in a patient presenting with lumbar disk herniation is calculated from published data to be less than 1 in 3.7 million. The author concluded the apparent safety of spinal manipulation, especially when compared with other medically accepted treatments for lumbar disk herniation, should stimulate its use in the conservative treatment plan of lumbar disk herniation.

In 2005 Oppenheim and collaborators reviewed medical records and radiographic studies of appropriate subjects to better clarify the spectrum of nonvascular complications following lumbar spine manipulation therapy, and to help define the risks of lumbar spine manipulation therapy. Eighteen patients were identified who had received lumbar spine manipulation therapy and whose neurological condition immediately worsened. Injuries were sustained to the cervical, thoracic, and lumbar spine and resulted, variously, in myelopathy, paraparesis, cauda equina syndrome, and radiculopathy. 89% required surgery. Outcome was excellent in 50% and good in 37.5%. Three patients died from unrecognized malignancies. The authors concluded that spinal manipulation can be associated with significant complications, often requiring surgical intervention. Pre-treatment scanning may help identify patients with significant risk factors, such as substantial disc herniations or occult malignancies. Prompt evaluation and intervention is necessary when symptoms worsen or neurological deficits develop[102].

Dvořák and collaborators in 1999 published a survey among the Swiss Medical Association for Manual Medicine. Based upon this survey among the members of the Swiss Medical Association for Manual Medicine, the low back pain problems are approached by the means of manual therapy on average 805 times per year and physician. On average each case with low back pain is treated 1,4 times by a general practitioner with experience in manual medicine, while specialists who are dealing with more complex cases on average 4 to 5 times. Based upon the survey side effects and complications, due to lumbar spine manipulation therapy, are extremely rare[103].

In 1993 Dvořák's research group published from the same survey undertaken 1989. Informative data were given by 425 respondents on the frequency of complications of spine manipulation therapy. The number of thoraco-lumbar manipulations during 1989 was 805 for each respondent, and the number manipulations of the cervical spine 354. Thus, the total number of thoraco-lumbar manipulations was 342,125, and the total number of cervical manipulations was 150,450. The overall incidence of side effects of transient complications due to cervical spine manipulation such as disturbance of consciousness or radicular signs was 1:16,716. Seventeen patients (ratio 1:20,125) showed after lumbar spine manipulation therapy, in addition to increased pain, a transient sensorimotor deficit with precise radicular distribution. Nine of the 17 patients (ratio 1:38,013) developed a progressive radicular syndrome with sensorimotor deficit and radiologically verified disc herniation and had to be referred for surgery. Side effects and complications of cervical and lumbar spine manipulation are rare. Taking in to account the yearly number of manipulations performed by a single physician in Switzerland and the rate of complications, it can be calculated that a

physician practicing manual medicine will encounter one complication due to manipulation of the cervical spine in 47 years and one complication due to lumbar spine manipulation in 38 years of practice[104].

By conclusion the evidence of today suggests that consistent with a randomized placebo-controlled double-blinded trial[105], after an initial assessment excluding patients with contraindications, lumbar spine manipulation therapy is safe compared to other non-invasive treatment modalities.

4.3. Risks of thoracic spine and rib manipulation therapy

There is no literature available on specific risks of thoracic spine or rib manipulation therapy. The data from the literature available in terms of lumbar spine manipulation therapy suggests the assumption that, after an initial assessment excluding patients with contraindications, thoracic spine or rib manipulation therapy is safe compared to other non-invasive treatment modalities.

4.4. Risks of manipulation therapy of the pelvic ring (sacroiliac joints)

There is no literature available on specific risks of manipulation therapy of the pelvic ring or the sacroiliac joints. The data from the literature available in terms of lumbar spine manipulation therapy suggests the assumption that, after an initial assessment excluding patients with contraindications, manipulation therapy of the pelvic ring or the sacroiliac joints is safe compared to other non-invasive treatment modalities.

Annexes

See original document.

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