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Scott Walker, Governor
Laura Gutiérrez, Secretary

MEDICAL EXAMINING BOARD
Room 121A, 1400 East Washington Avenue, Madison
Contact: Tom Ryan (608) 266-2112
June 20, 2018

The following agenda describes the issues that the Board plans to consider at the meeting. At the time of the meeting, items may be removed from the agenda. Please consult the meeting minutes for a record of the actions of the Board.

AGENDA

8:00 A.M.

OPEN SESSION – CALL TO ORDER – ROLL CALL

A. Adoption of Agenda (1-5)

B. Approval of Minutes of May 16, 2018 (6-11)

C. Introductions, Announcements and Recognition

D. Conflicts of Interest

E. Administrative Matters

1. Department and Staff Updates
2. Board Members – Term Expiration Dates
   a. Alaa Abd-Elsayed – 07/01/2020
   b. David Bryce – 07/01/2021
   c. Mary Jo Capodice – 07/01/2018
   d. Michael Carton – 07/01/2020
   e. Padmaja Doniparthi – 07/01/2021
   f. Rodney Erickson – 07/01/2019
   g. Bradley Kudick – 07/01/2020
   h. Lee Ann Lau – 07/01/2020
   i. David Roelke – 07/01/2021
   j. Kenneth Simons – 07/01/2018
   k. Timothy Westlake – 07/01/2020
   l. Robert Zoeller – 07/01/2019
   m. Robert Zondag – 07/01/2018
3. Wis. Stat. § 15.085 (3)(b) – Affiliated Credentialing Boards' Biannual Meeting with the Medical Examining Board to Consider Matters of Joint Interest

F. 8:00 AM APPEARANCE: Discuss Requests for Proof of Continuing Education (CE) Upon Complaint to the Division of Legal Services and Compliance - Nate Ristow (12)

G. Federation of State Medical Boards (FSMB) Matters

H. Update on Re-Entry to Practice – Lee Ann Lau and Tom Ryan

I. Legislation and Rule Matters – Discussion and Consideration (13-30)

1. Review of Draft Report on Opioid Abuse
2. Revisions to Med 8 – 2017 Wisconsin Act 227
3. Proposals for Med 13, Relating to Continuing Medical Education for Physicians
4. Proposals for Med 25, Relating to Sports Physician Licensure Exemption
5. Update on Legislation and Pending or Possible Rulemaking Projects

J. Correspondence Received from M. Victoria Marx, M.D., President, Society of Interventional Radiology and Federation of State Medical Boards (FSMB) Report on a Recommended Framework for a Minimal Physician Data Set (31-112)

K. Controlled Substances Board Report – Timothy Westlake

L. Wisconsin State Coalition for Prescription Drug Abuse Reduction Report – Timothy Westlake

M. Governor's Task Force on Opioid Abuse – Timothy Westlake

N. Interstate Medical Licensure Compact Commission (IMLCC) – Report from Wisconsin's Commissioners

O. Speaking Engagement(s), Travel, or Public Relation Request(s), and Report(s)

1. Travel Report – Attendance at the 2018 WAOPS Summer CME Meeting on June 9, 2018 in Wausau, WI (Capodice)

P. Newsletter Matters (113-114)

Q. Screening Panel Report

R. Informational Items

S. Items Added After Preparation of Agenda

1. Introductions, Announcements and Recognition
2. Administrative Updates
3. Elections, Appointments, Reappointments, Confirmations, and Committee, Panel and Liaison Appointments
4. Council Appointment Matters
5. Education and Examination Matters
6. Credentialing Matters
7. Practice Matters
8. Future Agenda Items
9. Legislation/Administrative Rule Matters
10. Liaison Report(s)
11. Newsletter Matters
12. Annual Report Matters
13. Informational Item(s)
14. Disciplinary Matters
15. Presentations of Petition(s) for Summary Suspension
16. Presentation of Proposed Stipulation(s), Final Decision(s) and Order(s)
17. Presentation of Proposed Decisions
18. Presentation of Interim Order(s)

19. Petitions for Re-Hearing
20. Petitions for Assessments
21. Petitions to Vacate Order(s)
22. Petitions for Designation of Hearing Examiner
23. Requests for Disciplinary Proceeding Presentations
24. Motions
25. Petitions
26. Appearances from Requests Received or Renewed
27. Speaking Engagement(s), Travel, or Public Relation Request(s), and Reports

T. Future Agenda Items

U. Public Comments

CONVENE TO CLOSED SESSION to deliberate on cases following hearing (§ 19.85 (1) (a), Stats.); to consider licensure or certification of individuals (§ 19.85 (1) (b), Stats.); to consider closing disciplinary investigations with administrative warnings (§ 19.85 (1) (b), Stats. and § 448.02 (8), Stats.); to consider individual histories or disciplinary data (§ 19.85 (1) (f), Stats.); and to confer with legal counsel (§ 19.85 (1) (g), Stats.).

V. Education and Examination Matters

1. Consideration of Waiver of 24 Months of ACGME/AOA Approved Post-Graduate Training

a. Jorge Saucedo, M.D. **(115-157)**

W. Deliberation on Division of Legal Services and Compliance (DLSC) Matters

1. Complaints

a. 16 MED 207 – J.C.L. **(158-160)**

2. Administrative Warnings

a. 17 MED 204 – H.R.N. **(161-162)**

3. Stipulations, Final Decisions and Orders

a. 16 MED 141 – Daniel S. Landdeck, M.D. **(163-170)**
b. 18 MED 009 – Kiarash Mirkia, M.D. **(171-176)**

4. Case Closings

a. 16 MED 401 – K.M. **(177-189)**
b. 16 MED 446 – K.S. **(190-196)**
c. 17 MED 050 – S.L. **(197-199)**
d. 17 MED 173 – D.P.W. **(200-208)**
e. 17 MED 264 – J.D.O. **(209-216)**
f. 17 MED 309 – T.F. **(217-221)**
g. 17 MED 321 – E.K. **(222-227)**
h. 17 MED 357 – S.E. **(228-234)**
i. 17 MED 380 – H.T.W. **(235-240)**
j. 17 MED 430 – J.N. **(241-253)**

5. **Request to Remove Language from Final Decision and Order #LS9802041MED – Brian J. Eggener, M.D. (254-270)**

X. Open Cases

Y. Consulting with Legal Counsel

Z. Deliberation of Items Added After Preparation of the Agenda
1. Education and Examination Matters
2. Credentialing Matters
3. Disciplinary Matters
4. Monitoring Matters
5. Professional Assistance Procedure (PAP) Matters
6. Petition(s) for Summary Suspensions
7. Proposed Stipulations, Final Decisions and Orders
8. Administrative Warnings
9. Proposed Decisions
10. Matters Relating to Costs
11. Complaints
12. Case Closings
13. Case Status Report
14. Petition(s) for Extension of Time
15. Proposed Interim Orders
16. Petitions for Assessments and Evaluations
17. Petitions to Vacate Orders
18. Remedial Education Cases
19. Motions
20. Petitions for Re-Hearing
21. Appearances from Requests Received or Renewed

AA. RECONVENE TO OPEN SESSION IMMEDIATELY FOLLOWING CLOSED SESSION

BB. Vote on Items Considered or Deliberated Upon in Closed Session, if Voting is Appropriate

CC. Open Session Items Noticed Above Not Completed in the Initial Open Session

DD. Delegation of Ratification of Examination Results and Ratification of Licenses and Certificates

ADJOURNMENT

ORAL EXAMINATION OF CANDIDATES FOR LICENSURE

ROOM 124D/E

10:00 A.M., OR IMMEDIATELY FOLLOWING THE FULL BOARD MEETING

CLOSED SESSION – Reviewing Applications and Conducting Oral Examination of Two (at time of agenda publication) Candidates for Licensure – Dr. Timothy W. Westlake and Dr. Alaa Abd-Elsayed

NEXT MEETING DATE: JULY 11, 2018

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MEETINGS AND HEARINGS ARE OPEN TO THE PUBLIC, AND MAY BE CANCELLED WITHOUT NOTICE.

Times listed for meeting items are approximate and depend on the length of discussion and voting. All meetings are held at 1400 East Washington Avenue, Madison, Wisconsin, unless otherwise noted. In order to confirm a meeting or to request a complete copy of the council's agenda, please call the listed contact person. The council may consider materials or items filed after the transmission of this notice. Interpreters for the hearing impaired provided upon request by contacting the Affirmative Action Officer, 608-266-2112

MEDICAL EXAMINING BOARD
MEETING MINUTES
MAY 16, 2018

PRESENT: Alaa Abd-Elsayed, M.D. *(via GoToMeeting),* David Bryce, M.D. *(via GoToMeeting and excused at 9:05 a.m.)*; Mary Jo Capodice, D.O.; Michael Carton *(via GoToMeeting);* Padmaja Doniparthi, M.D.; Rodney Erickson, M.D.; Bradley Kudick; Lee Ann Lau, M.D.; David Roelke, M.D. *(via GoToMeeting and excused at 9:05 a.m.)*; Kenneth Simons, M.D.; Timothy Westlake *(arrived at 8:07 a.m.),* M.D.; Robert Zoeller, M.D.; Robert Zondag *(arrived at 8:07 a.m.)*

STAFF: Tom Ryan, Executive Director; Kate Stolarzyk, Bureau Assistant, and other Department staff

CALL TO ORDER

Kenneth Simons, Chair, called the meeting to order at 8:01 a.m. A quorum of ten (10) members was confirmed.

ADOPTION OF AGENDA

MOTION: Lee Ann Lau moved, seconded by Mary Jo Capodice, to adopt the agenda as published. Motion carried unanimously.

MINUTES OF APRIL 18, 2018

MOTION: Bradley Kudick moved, seconded by Padmaja Doniparthi, to approve the minutes of April 18, 2018 as published. Motion carried unanimously.

Robert Zondag and Timothy Westlake arrived at 8:07 a.m.

LEGISLATION AND RULE MATTERS

2017 Wisconsin Act 341 – Sports Medicine Physicians Licensed Outside of Wisconsin

Scope Statement for Med 25, Relating to Sports Physician Licensure Exemption

MOTION: Timothy Westlake moved, seconded by Lee Ann Lau, to approve the Scope Statement creating Ch. Med 25, relating to the sports physician licensure exemption, for submission to the Department of Administration and Governor's Office and for publication. Additionally, the Board authorizes the Chair to approve the Scope Statement for implementation no less than 10 days after publication. Motion carried unanimously.

Reporting Requirement Under 2017 Wisconsin Act 262

MOTION: Lee Ann Lau moved, seconded by Padmaja Doniparthi, to designate Timothy Westlake to serve as liaison to DSPS staff for drafting the report required under 2017 Wisconsin Act 262. Motion carried unanimously.

NEWSLETTER MATTERS – BOARD REVIEW OF SPRING 2018 NEWSLETTER FOR APPROVAL

MOTION: Bradley Kudick moved, seconded by Robert Zondag, to approve the newsletter as drafted. Motion carried unanimously.

David Roelke and David Bryce were excused at 9:05 a.m.

CLOSED SESSION

MOTION: Timothy Westlake moved, seconded by Mary Jo Capodice, to convene to Closed Session to deliberate on cases following hearing (§ 19.85 (1) (a), Stats.); to consider licensure or certification of individuals (§ 19.85 (1) (b), Stats.); to consider closing disciplinary investigations with administrative warnings (§ 19.85 (1) (b), Stats. and § 448.02 (8), Stats.); to consider individual histories or disciplinary data (§ 19.85 (1) (f), Stats.); and to confer with legal counsel (§ 19.85 (1) (g), Stats.). Kenneth Simons, Chair, read the language of the motion aloud for the record. The vote of each member was ascertained by voice vote. Roll Call Vote: Alaa Abd-Elsayed-yes; Mary Jo Capodice-yes; Michael Carton-yes; Padmaja Doniparthi-yes; Rodney Erickson-yes; Bradley Kudick-yes; Lee Ann Lau-yes; Kenneth Simons-yes; Timothy Westlake-yes; Robert Zoeller-yes; and Robert Zondag-yes. Motion carried unanimously.

The Board convened into Closed Session at 9:13 a.m.

RECONVENE TO OPEN SESSION

MOTION: Bradley Kudick moved, seconded by Alaa Abd-Elsayed, to reconvene to Open Session. Motion carried unanimously.

The Board reconvened to Open Session at 11:18 a.m.

VOTE ON ITEMS CONSIDERED OR DELIBERATED UPON IN CLOSED SESSION

MOTION: Michael Carton moved, seconded by Robert Zondag, to affirm all motions made and votes taken in Closed Session. Motion carried unanimously.

(Be advised that any recusals or abstentions reflected in the closed session motions stand for the purposes of the affirmation vote.)

EDUCATION AND EXAMINATION MATTERS

Consideration of Waiver of 24 Months of ACGME/AOA Approved Post-Graduate Training

Sebahattin Cureoglu, M.D.

MOTION: Padmaja Doniparthi moved, seconded by Lee Ann Lau, to grant Sebahattin Cureoglu, M.D. a waiver of the 24 months of ACGME/AOA approved post-graduate training. Motion carried unanimously.

MOTION: Bradley Kudick moved, seconded by Alaa Abd-Elsayed, to grant the license to practice medicine and surgery to Sebahattin Cureoglu, M.D., once all requirements are met. Motion carried unanimously.

CREDENTIALING MATTERS

Full Board Oral Exam

Tasha Turzo, D.O.

MOTION: Robert Zoeller moved, seconded by Padmaja Doniparthi, to deny Tasha Turzo, D.O. a waiver of the 24 months of ACGME/AOA approved post-graduate training due to failure to demonstrate substantially equivalent education and training. Wis. Stat. § 448.05(2)(c) and Wis. Admin. Code § Med 1.02(3)(cm). Motion carried.

DELIBERATION ON DIVISION OF LEGAL SERVICES AND COMPLIANCE (DLSC) MATTERS

Complaints

16 MED 389 – A.H.L., M.D.

MOTION: Robert Zondag moved, seconded by Bradley Kudick, to find probable cause to believe that A.H.L., M.D., DLSC Case Number 16 MED 389, has committed unprofessional conduct, and therefore to issue the Complaint and hold a hearing on such conduct pursuant to Wis. Stat§ 448.02(3)(b). Motion carried.

(Kenneth Simons and Lee Ann Lau recused themselves and left the room for deliberation and voting in the matter concerning A.H.L., M.D., Respondent – DLSC Case Number 16 MED 389.)

16 MED 339 – T.M.S, P.A.; T.M.D, M.D.; & D.E.H., Jr., M.D.

MOTION: Timothy Westlake moved, seconded by Robert Zondag, to find probable cause to believe that T.M.S, P.A.; T.M.D, M.D.; & D.E.H., Jr., M.D., DLSC Case Number 16 MED 339, have committed unprofessional conduct, and therefore to issue the Complaint and hold a hearing on such conduct pursuant to Wis. Stat§ 448.02(3)(b). Motion carried.

(Rodney Erickson recused himself and left the room for deliberation and voting in the matter concerning T.M.S, P.A.; T.M.D, M.D.; & D.E.H., Jr., M.D., Respondent – DLSC Case Number 16 MED 339.)

Administrative Warnings

Review of Administrative Warning (WARN00000727/DLSC Case Number 17 MED 112)

MOTION: Robert Zoeller moved, seconded by Alaa Abd-Elsayed, to affirm the Administrative Warning in the matter of WARN00000727/DLSC Case Number 17 MED 112. Motion carried unanimously.

17 MED 202 – A.K.

MOTION: Mary Jo Capodice moved, seconded by Robert Zoeller, to issue an Administrative Warning in the matter of DLSC Case Number 17 MED 202. Motion carried unanimously.

Stipulations, Final Decisions and Orders

16 MED 343 – Martin Cleary, M.D.

MOTION: Timothy Westlake moved, seconded by Lee Ann Lau, to adopt the Findings of Fact, Conclusions of Law and Order in the matter of disciplinary proceedings against Martin Cleary, M.D., DLSC Case Number 16 MED 343. Motion carried unanimously.

17 MED 111 – Steven J. Johnson, M.D.

MOTION: Lee Ann Lau moved, seconded by Robert Zoeller, to adopt the Findings of Fact, Conclusions of Law and Order in the matter of disciplinary proceedings against Steven J. Johnson, M.D., DLSC Case Number 17 MED 111. Motion carried unanimously.

17 MED 161 – Gretchen Zachel, P.A.

MOTION: Bradley Kudick moved, seconded by Timothy Westlake, to adopt the Findings of Fact, Conclusions of Law and Order in the matter of disciplinary proceedings against Gretchen Zachel, P.A., DLSC Case Number 17 MED 161. Motion carried unanimously.

17 MED 259 – Sean K. Conroy, P.A

MOTION: Bradley Kudick moved, seconded by Padmaja Doniparthi, to adopt the Findings of Fact, Conclusions of Law and Order in the matter of disciplinary proceedings against Sean K. Conroy, P.A., DLSC Case Number 17 MED 259. Motion carried unanimously.

17 MED 467 – Shakuntala P. Chhabria, M.D.

MOTION: Robert Zoeller moved, seconded by Lee Ann Lau, to adopt the Findings of Fact, Conclusions of Law and Order in the matter of disciplinary proceedings against Shakuntala P. Chhabria, M.D., DLSC Case Number 17 MED 467. Motion carried unanimously.

Case Closings

17 MED 098

MOTION: Lee Ann Lau moved, seconded by Alaa Abd-Elsayed, to close DLSC Case Number 17 MED 098, against K.P.P., M.D., for No Violation. Motion carried unanimously.

17 MED 131

MOTION: Timothy Westlake moved, seconded by Robert Zoeller, to close DLSC Case Number 17 MED 131, against R.D. & R.D., for Insufficient Evidence. Motion carried.

(Lee Ann Lau recused herself and left the room for deliberation and voting in the matter concerning DLSC Case Number 17 MED 131.)

17 MED 180

MOTION: Michael Carton moved, seconded by Timothy Westlake, to close DLSC Case Number 17 MED 180, against B.S., for No Violation. Motion carried unanimously.

17 MED 204

MOTION: Timothy Westlake moved, seconded by Bradley Kudick, to refer DLSC Case Number 17 MED 204, against H.N. back to DLSC for further investigation. Motion carried unanimously.

17 MED 310

MOTION: Mary Jo Capodice moved, seconded by Bradley Kudick, to close DLSC Case Number 17 MED 310, against R.D., for No Violation. Motion carried.

(Lee Ann Lau recused herself/himself and left the room for deliberation and voting in the matter concerning DLSC Case Number 17 MED 310.)

17 MED 318

MOTION: Robert Zondag moved, seconded by Lee Ann Lau, to close DLSC Case Number 17 MED 318, against S.M.S., for Insufficient Evidence. Motion carried unanimously.

17 MED 335

MOTION: Padmaja Doniparthi moved, seconded by Rodney Erickson, to close DLSC Case Number 17 MED 335, against W.M., for Insufficient Evidence. Motion carried unanimously.

17 MED 393

MOTION: Bradley Kudick moved, seconded by Robert Zoeller, to close DLSC Case Number 17 MED 393, against R.D., for No Violation. Motion carried.

(Lee Ann Lau recused herself/himself and left the room for deliberation and voting in the matter concerning DLSC Case Number 17 MED 393.)

17 MED 462

MOTION: Mary Jo Capodice moved, seconded by Robert Zondag, to table DLSC Case Number 17 MED 462, against P.F.F., for further investigation. Motion carried unanimously.

17 MED 504

MOTION: Lee Ann Lau moved, seconded by Bradley Kudick, to close DLSC Case Number 17 MED 504, against B.B., for No Violation. Motion carried unanimously.

PETITION FOR EXTENSION OF TIME

Unknown Respondent(s)

17 MED 145

MOTION: Lee Ann Lau moved, seconded by Robert Zondag, to grant the Petition and Request for an Extension of Time in the matter of DLSC Case Number 17 MED 145. Motion carried unanimously.

DELEGATION OF RATIFICATION OF EXAMINATION RESULTS AND RATIFICATION OF LICENSES AND CERTIFICATES

MOTION: Robert Zoeller moved, seconded by Mary Jo Capodice, to delegate ratification of examination results to DSPS staff and to ratify all licenses and certificates as issued. Motion carried unanimously.

ADJOURNMENT

MOTION: Lee Ann Lau moved, seconded by Bradley Kudick, to adjourn the meeting. Motion carried unanimously.

The meeting adjourned at 11:19 a.m.

State of Wisconsin
Department of Safety and Professional Services

AGENDA REQUEST FORM

Name and Title of Person Submitting the Request:	Date When Request Submitted:
Cori Altmann, Paralegal on behalf of Division Administrator Nate Ristow Division of Legal Services and Compliance	June 8, 2018 **Items will be considered late if submitted after 4:30 p.m. and less than:** ▪ 8 work days before the meeting for Medical Board ▪ 8 work days before meeting for all other boards

Name of Board, Committee, Council:

Medical Examining Board

Board Meeting Date:	Attachments:	How should the item be titled on the agenda page?
June 20, 2018	☐ Yes ☒ No	Discuss requests for proof of CE upon complaint to DLSC

Place Item in:	Is an appearance before the Board being scheduled? If yes, by whom?	Name of Case Advisor(s), if required:
☒ Open Session ☐ Closed Session ☐ Both	☒ Yes by Nate Ristow ☐ No	n/a

Describe the issue and action the Board should address:

Authorization:

Cori Altmann — 6/8/18

Signature of person making this request — **Date**

Supervisor signature (if required) — **Date**

Executive Director signature (indicates approval to add late items to agenda) — **Date**

Directions for including supporting documents:

1. This form should be attached to any documents submitted to the agenda.
2. Post Agenda Deadline items must be authorized by a Supervisor and the Board's Executive Director.
3. If necessary, Provide original documents needing Board Chairperson signature to the Bureau Assistant prior to the start of a meeting.

AGENDA REQUEST FORM

1) Name and Title of Person Submitting the Request:	2) Date When Request Submitted:
Dale Kleven **Administrative Rules Coordinator**	**6/8/18** Items will be considered late if submitted after 12:00 p.m. on the deadline date: ▪ 8 business days before the meeting

3) Name of Board, Committee, Council, Sections:

Medical Examining Board

4) Meeting Date:	5) Attachments:	6) How should the item be titled on the agenda page?
6/20/18	☒ Yes ☐ No	**Legislative/Administrative Rule Matters:** **1. Review of Draft Report on Opioid Abuse** **2. Revisions to Med 8 – 2017 Wisconsin Act 227** **3. Proposals for Med 13 Relating to Continuing Medical Education for Physicians** **4. Proposals for Med 25 Relating to Sports Physician Licensure Exemption** **5. Update on Other Legislation and Pending or Possible Rulemaking Projects**

7) Place Item in:	8) Is an appearance before the Board being scheduled?	9) Name of Case Advisor(s), if required:
☒ Open Session ☐ Closed Session ☐ Both	☐ Yes (Fill out Board Appearance Request) ☒ No	

10) Describe the issue and action that should be addressed:

11) Authorization

Dale Kleven — *June 8, 2018*

Signature of person making this request — **Date**

Supervisor (if required) — **Date**

Executive Director signature (indicates approval to add post agenda deadline item to agenda) **Date**

Directions for including supporting documents:
1. This form should be attached to any documents submitted to the agenda.
2. Post Agenda Deadline items must be authorized by a Supervisor and the Policy Development Executive Director.
3. If necessary, Provide original documents needing Board Chairperson signature to the Bureau Assistant prior to the start of a meeting.

Wisconsin Medical Examining Board Report on Opioid Abuse – October 2018

Scope and purpose of the report: 2017 Wisconsin Act 262 requires the Medical Examining Board to annually submit a report related to opioid abuse to the Legislature and Governor's Office. This preliminary report must include proactive efforts taken by the Board to address the issue of opioid abuse and goals for addressing the issue of opioid abuse as it relates to the practice of medicine and surgery in Wisconsin. Future reports must also include actions taken by the Board to achieve the goals identified in previous reports, and whether those goals have been achieved.

Proactive efforts taken by the Board to address the issue of opioid abuse:

Statewide Outreach

As vice chair of the Medical Examining Board and a member of the Controlled Substances Board and Governor's Task Force on Opioid Abuse, Dr. Timothy Westlake has worked with the Governor's Office, the Legislature, the Wisconsin Medical Society, the state's two medical schools, and hospital and clinic systems to ensure the Board is an effective partner in statewide efforts to enhance the physician workforce's knowledge concerning the appropriate use and best prescriptive practices with opioids.

Doctor Westlake also was instrumental in Wisconsin's passage of Act 60 this legislative session—the new law allows law enforcement to pursue cases involving a fentanyl analog not yet specifically included in the state's controlled substances act.

National Outreach and Leadership

In May 2018, Dr. Westlake highlighted in testimony before the U.S. House Judiciary Committee the extreme dangers of illegal fentanyl use and urged the federal government to use as an example a Wisconsin law that could help federal law enforcement better prosecute drug crimes involving fentanyl analogues.

Doctor Kenneth Simons, Chair of the Medical Examining Board, serves on the Board of Directors for the Federation of State Medical Boards (FSMB). During his term, the FSMB has undertaken several initiatives related to opioid abuse, including adoption of the Guidelines for the Chronic Use of Opioid Analgesics and publication of several articles in the Journal of Medical Regulation.

Opioid Prescribing Guideline

In July 2016, the Board issued its Opioid Prescribing Guideline. The Guideline, which encourages providers to implement best practices for responsible prescribing, was developed using the Centers for Disease Control and Prevention's Guideline for Prescribing Opioids for Chronic Pain and the Wisconsin Department of Workforce Development's Chronic Opioid Clinical Management Guidelines for Wisconsin Worker's Compensation Patient Care as primary resources. The Board has continually monitored and periodically updated the Guideline, most recently in April of 2018.

Continuing Education Related to Prescribing Controlled Substances

The Board revised its administrative rules to require both MD and DO physicians to take two of the required 30 hours of continuing medical education via an approved course on the Board's Opioid Prescribing Guideline. Physicians who do not hold a U.S. Drug Enforcement Administration number to prescribe controlled substances are exempted from the requirement. The requirement first applied to renewals in 2017 and 2018 and will sunset with the renewal on November 1, 2019.

Goals for addressing the issue of opioid abuse as it relates to the practice of medicine and surgery in Wisconsin:

Continuing Education Related to Prescribing Controlled Substances

As the current requirement for continuing medical education related to the Opioid Prescribing Guideline expires after the current biennium, the Board has started the process for a rule revision that would define future requirements for the completion of continuing medical education related to prescribing controlled substances. The Board's goal is to have the rules in place at the beginning of the 2019-2021 biennium.

Enforcement Action

Currently, if an investigation of a physician's prescriptive practices occurs, it is done in response to a complaint filed against the physician. The Board's goal is to, in partnership with the Controlled Substances Board, begin proactively investigating physicians whose prescriptive practices with controlled substances may be inconsistent with the standard of minimally competent medical practice. The Controlled Substances Board will use reports generated from the Prescription Drug Monitoring Program to refer physicians to the Board for possible investigation.

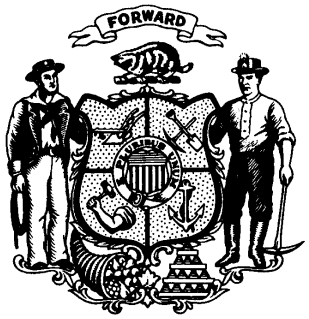
Opioid Prescribing Guideline

The Board will continue to monitor the Guideline and make updates as needed to keep it current and relevant to physicians and their patients.

Continued Outreach and Leadership

It is the Board's goal to continue its active participation in the statewide and national efforts to combat opioid abuse.

State of Wisconsin



Date of enactment: **April 3, 2018**
2017 Assembly Bill 582 Date of publication*: **April 4, 2018**

2017 WISCONSIN ACT 227

AN ACT ***to renumber*** 448.05 (5) (a) 1. and 2.; ***to renumber and amend*** 448.05 (5) (a) (intro.); ***to amend*** 441.16 (6), 448.01 (6), 448.20 (1), 448.21 (1) (d), 448.21 (2), 448.21 (3) and Med 8.01 (2); and ***to create*** 448.015 (1u), 448.015 (1w), 448.20 (3m), 448.21 (4), 448.62 (2m), 448.62 (7) and 448.695 (4) of the statutes; **relating to:** delegation of the practice of podiatry, practice of a physician assistant under the supervision of a podiatrist, modifying administrative rules of the Medical Examining Board relating to practice of physician assistants, and providing an exemption from emergency rule procedures.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

SECTION 1. 441.16 (6) of the statutes is amended to read:

441.16 **(6)** Nothing in this section prohibits a nurse from issuing a prescription order as an act delegated by a physician, and nothing in this section prohibits an advanced practice nurse certified under this section from issuing a prescription order as an act delegated by a podiatrist.

SECTION 2. 448.01 (6) of the statutes is amended to read:

448.01 **(6)** "Physician assistant" means an individual licensed by the medical examining board to provide medical care with physician supervision and direction or to practice podiatry with podiatrist supervision and direction.

SECTION 3. 448.015 (1u) of the statutes is created to read:

448.015 **(1u)** "Podiatrist" has the meaning given in s. 448.60 (3).

SECTION 4. 448.015 (1w) of the statutes is created to read:

448.015 **(1w)** "Podiatry" has the meaning given in s. 448.60 (4).

SECTION 5. 448.05 (5) (a) (intro.) of the statutes is renumbered 448.05 (5) (a) and amended to read:

448.05 **(5)** (a) ~~The~~ Except as provided in s. 448.695 (4), the board shall promulgate rules establishing licensing standards and practice standards for physician assistants and shall license persons under those rules.

(b) The board may not grant a license as a physician assistant to an applicant unless the applicant submits evidence satisfactory to the board of all of the following:

SECTION 6. 448.05 (5) (a) 1. and 2. of the statutes are renumbered 448.05 (5) (b) 1. and 2.

SECTION 7. 448.20 (1) of the statutes is amended to read:

448.20 **(1)** RECOMMEND LICENSING AND PRACTICE STANDARDS. The council on physician assistants shall develop and recommend to the examining board licensing and practice standards for physician assistants practicing under physicians and shall develop and recommend to the podiatry affiliated credentialing board practice standards for physician assistants practicing under podiatrists. In developing the standards, the coun-

* Section 991.11, WISCONSIN STATUTES: Effective date of acts. "Every act and every portion of an act enacted by the legislature over the governor's partial veto which does not expressly prescribe the time when it takes effect shall take effect on the day after its date of publication."

cil shall consider the following factors: an individual's training, wherever given; experience, however acquired, including experience obtained in a hospital, a physician's or podiatrist's office, the armed services or the federal health service of the United States, or their equivalent as found by the examining board; and education, including that offered by a medical school and the technical college system board.

SECTION 8. 448.20 (3m) of the statutes is created to read:

448.20 **(3m)** ADVISE PODIATRY AFFILIATED CREDENTIALING BOARD. The council shall advise the podiatry affiliated credentialing board on revising practice standards for physician assistants practicing podiatry.

SECTION 9. 448.21 (1) (d) of the statutes is amended to read:

448.21 **(1)** (d) The practice of podiatry ~~within the meaning of s. 448.60 (4),~~ except when the physician assistant is acting under the supervision and direction of a podiatrist, subject to sub. (4) and the rules promulgated under s. 448.695 (4).

SECTION 10. 448.21 (2) of the statutes is amended to read:

448.21 **(2)** EMPLOYEE STATUS. No physician assistant may be self−employed. The employer of a physician assistant shall assume legal responsibility for any medical care, including the practice of podiatry, provided by the physician assistant during the employment. The employer of a physician assistant, if other than a licensed physician or podiatrist, shall provide for and not interfere with supervision of the physician assistant by a licensed physician or podiatrist.

SECTION 11. 448.21 (3) of the statutes is amended to read:

448.21 **(3)** PRESCRIPTIVE AUTHORITY. A physician assistant may issue a prescription order for a drug or device in accordance with guidelines established by a supervising physician or podiatrist and the physician assistant and with rules promulgated by the board. If any conflict exists between the guidelines and the rules, the rules shall control.

SECTION 12. 448.21 (4) of the statutes is created to read:

448.21 **(4)** PRACTICE OF PODIATRY. A physician assistant who is acting under the supervision and direction of a podiatrist shall be limited to providing nonsurgical patient services.

SECTION 13. 448.62 (2m) of the statutes is created to read:

448.62 **(2m)** An advanced practice nurse who is certified to issue prescription orders under s. 441.16 and who is providing nonsurgical patient services as directed, supervised, and inspected by a podiatrist who has the power to direct, decide, and oversee the implementation of the patient services rendered.

SECTION 14. 448.62 (7) of the statutes is created to read:

448.62 **(7)** A physician assistant who is acting under the supervision and direction of a podiatrist, subject to s. 448.21 (4).

SECTION 15. 448.695 (4) of the statutes is created to read:

448.695 **(4)** The affiliated credentialing board shall promulgate rules establishing all of the following:

(a) Practice standards for a physician assistant practicing podiatry as provided in s. 448.21 (4).

(b) Requirements for a podiatrist who is supervising a physician assistant as provided in s. 448.21 (4).

SECTION 16. Med 8.01 (2) of the statutes is amended to read:

Med 8.01 (2) Physician assistants provide health care services as part of physician−led or podiatrist−led teams, the objectives of which include safe, efficient, and economical health care. The realities of the modern practice of medicine and surgery require supervising physicians and podiatrists and physician assistants to use discretion in delivering health care services, typically at the level of general supervision. The constant physical presence of a supervising physician or podiatrist is often unnecessary. The supervising physician or podiatrist and the physician assistant are jointly responsible for employing more intensive supervision when circumstances require direct observation or hands−on assistance from the supervising physician.

SECTION 17. Med 8.02 (5x) of the administrative code is created to read:

Med 8.02 **(5x)** "Podiatrist" has the meaning given in s. 448.60 (3), Stats.

SECTION 18. Med 8.05 (4) of the administrative code is amended to read:

Med 8.05 **(4)** LICENSURE; RENEWAL. At the time of licensure and each biennial registration of licensure thereafter, a physician assistant shall list with the board the name and address of the supervising physician or podiatrist and shall notify the board within 20 days of any change of a supervising physician or podiatrist.

SECTION 19. Med 8.07 (1), (2) (i) and (3) of the administrative code are amended to read:

Med 8.07 **(1)** SCOPE AND LIMITATIONS. In providing medical care, the entire practice of any physician assistant shall be under the supervision of one or more licensed physicians ~~or,~~ physicians exempt from licensure requirements pursuant to s. 448.03 (2) (b), Stats., or licensed podiatrists. The scope of practice is limited to providing medical care as specified in sub. (2). A physician assistant's practice may not exceed his or her educational training or experience and may not exceed the scope of practice of the physician or podiatrist providing supervision. A medical care task assigned by the supervising

physician or podiatrist to a physician assistant may not be delegated by the physician assistant to another person.

(2) (i) Issuing written prescription orders for drugs provided the physician assistant has had an initial and at least annual thereafter, review of the physician assistant's prescriptive practices by a physician or podiatrist providing supervision. Such reviews shall be documented in writing, signed by the reviewing physician or podiatrist and by the physician assistant, and made available to the Board for inspection upon reasonable request.

(3) IDENTIFYING SUPERVISING PHYSICIAN OR PODIATRIST. The physician or podiatrist providing supervision must be readily identifiable by the physician assistant through procedures commonly employed in the physician assistant's practice.

SECTION 20. Med 8.09 of the administrative code is amended to read:

Med 8.09 Employee status. No physician assistant may be self−employed. If the employer of a physician assistant is other than a licensed physician or podiatrist, the employer shall provide for, and may not interfere with, the supervisory responsibilities of the physician or podiatrist, as defined in s. Med 8.02 (6) and required in ss. Med 8.07 (1) and 8.10.

SECTION 21. Med 8.10 of the administrative code is amended to read:

Med 8.10 Physician or podiatrist to physician assistant ratio. (1) No physician or podiatrist may supervise more than 4 on−duty physician assistants at any time unless a written plan to do so has been submitted to and approved by the board. Nothing herein shall limit the number of physician assistants for whom a physician or podiatrist may provide supervision over time. A physician assistant may be supervised by more than one physician or podiatrist while on duty.

(2) A supervising physician or podiatrist shall be available to the physician assistant at all times for consultation either in person or within 15 minutes of contact by telecommunication or other means.

SECTION 22. Nonstatutory provisions.

(1) EMERGENCY RULES. Using the procedure under section 227.24 of the statutes, the podiatry affiliated credentialing board may promulgate emergency rules under section 448.695 (4) of the statutes. Notwithstanding section 227.24 (1) (a), (2) (b), and (3) of the statutes, the board is not required to provide evidence that promulgating rules under this subsection as emergency rules is necessary for the preservation of the public peace, health, safety, or welfare and is not required to provide a finding of emergency for rules promulgated under this subsection.

SECTION 23. Effective dates. This act takes effect on the day after publication, except as follows:

(1) The modifications of administrative rules take effect as provided in section 227.265 of the statutes.

Chapter Med 8
PHYSICIAN ASSISTANTS

Med 8.01 Authority and purpose.

(1) The rules in this chapter are adopted by the medical examining board pursuant to authority in ss. 15.08 (5), 227.11, 448.04 (1) (f) and 448.40, Stats., and govern the licensure and regulation of physician assistants.

(2) Physician assistants provide health care services as part of physician-led or podiatrist-led teams, the objectives of which include safe, efficient, and economical health care. The realities of the modern practice of medicine and surgery require supervising physicians and podiatrists and physician assistants to use discretion in delivering health care services, typically at the level of general supervision. The constant physical presence of a supervising physician or podiatrist is often unnecessary. The supervising physician or podiatrist and the physician assistant are jointly responsible for employing more intensive supervision when circumstances require direct observation or hands-on assistance from the supervising physician.

Med 8.02 Definitions.

(1) " Board" means the medical examining board.

(2) "Council" means the council on physician assistants.

(3m) "DEA" means the United States drug enforcement administration.

(4) "Educational program" means a program for educating and preparing physician assistants which is approved by the board.

(5) "Individual" means a natural person, and does not include the terms firm, corporation, association, partnership, institution, public body, joint stock association, or any other group of individuals.

(5m) "License" means documentary evidence issued by the board to applicants for licensure as a physician assistant who meet all of the requirements of the board.

(5x) "Podiatrist" has the meaning given in s. 448.60 (3), Stats.

(6) "Supervision" means to coordinate, direct, and inspect the accomplishments of another, or to oversee with powers of direction and decision the implementation of one's own or another's intentions.

Med 8.03 Council. As specified in s. 15.407 (2), Stats., the council shall advise the board on the formulation of rules on the education, examination, licensure and practice of a physician assistant.

Med 8.04 Educational program approval. The board shall approve only educational programs accredited and approved by the committee on allied health education and accreditation of the American medical association, the commission for accreditation of allied health education programs, or its successor agency.

Med 8.05 Panel review of applications; examinations required. The board may use a written examination prepared, administered and scored by the national commission on certification of physician assistants or its successor agency, or a written examination from other professional testing services as approved by the board.

(1) APPLICATION. An applicant for examination for licensure as a physician assistant shall submit to the board:

(a) An application on a form prescribed by the board.

Note: An application form may be obtained upon request to the Department of Safety and Professional Services office located at 1400 East Washington Avenue, P.O. Box 8935, Madison, Wisconsin 53708.

(b) After July 1, 1993, proof of successful completion of an educational program, as defined in ss. Med 8.02 (4) and 8.04.

(c) Proof of successful completion of the national certifying examination.

(cm) Proof that the applicant is currently certified by the national commission on certification of physician assistants or its successor agency.

(d) The fee specified in s. 440.05 (1), Stats.

(e) An unmounted photograph, approximately 8 by 12 cm., of the applicant taken no more than 60 days prior to the date of application which has on the reverse side a statement of a notary public that the photograph is a true likeness of the applicant.

(2) EXAMINATIONS, PANEL REVIEW OF APPLICATIONS.

(a) All applicants shall complete the written examination under this section, and an open book examination on statutes and rules governing the practice of physician assistants in Wisconsin.

(b) An applicant may be required to complete an oral examination if the applicant:

1. Has a medical condition which in any way impairs or limits the applicant's ability to practice as a physician assistant with reasonable skill and safety.

2. Uses chemical substances so as to impair in any way the applicant's ability to practice as a physician assistant with reasonable skill and safety.

3. Has been disciplined or had certification denied by a licensing or regulatory authority in Wisconsin or another jurisdiction.

4. Has been convicted of a crime, the circumstances of which substantially relate to the practice of physician assistants.

5. Has not practiced as a physician assistant for a period of 3 years prior to application, unless the applicant has been graduated from an approved educational program for physician assistants within that period.

6. Has been found to have been negligent in the practice as a physician assistant or has been a party in a lawsuit in which it was alleged that the applicant has been negligent in the practice of medicine.

7. Has been diagnosed with any condition that may create a risk of harm to a patient or the public.

8. Has within the past 2 years engaged in the illegal use of controlled substances.

9. Has been subject to adverse formal action during the course of physician assistant education, postgraduate training, hospital practice, or other physician assistant employment.

(c) An application filed under this chapter shall be reviewed by an application review panel of at least 2 council members designated by the chairperson of the board to determine whether an applicant is required to complete an oral examination or a personal appearance or both under par. (b). If the application review panel is not able to reach unanimous agreement on whether an applicant is eligible for licensure without completing an oral examination or a personal appearance or both, the application shall be referred to the board for a final determination.

(d) Where both written and oral examinations are required they shall be scored separately and the applicant shall achieve a passing grade on both examinations to qualify for a license.

(e) The board may require an applicant to complete a personal appearance for purposes of interview or review of credentials or both. An applicant's performance at a personal appearance is satisfactory if the applicant establishes to the board's satisfaction that the applicant has met requirements for licensure and is minimally competent to practice as a physician assistant.

(3) EXAMINATION FAILURE. An applicant who fails to receive a passing score on an examination may reapply by payment of the fee specified in sub. (1) (d). An applicant may reapply twice at not less than 4-month intervals. If an applicant fails the examination 3 times, he or she may not be admitted to an examination unless the applicant submits proof of having completed further professional training or education as the board may prescribe.

Note: There is no provision for waiver of examination nor reciprocity under rules in s. Med 8.05.

(4) LICENSURE; RENEWAL. At the time of licensure and each biennial registration of licensure thereafter, a physician assistant shall list with the board the name and address of the supervising physician or podiatrist and shall notify the board within 20 days of any change of a supervising physician or podiatrist.

Med 8.053 Examination review by applicant.

(1) An applicant who fails the oral or statutes and rules examination may request a review of that examination by filing a written request and required fee with the board within 30 days of the date on which examination results were mailed.

(2) Examination reviews are by appointment only.

(3) An applicant may review the statutes and rules examination for not more than one hour.

(4) An applicant may review the oral examination for not more than 2 hours.

(5) The applicant may not be accompanied during the review by any person other than the proctor.

(6) At the beginning of the review, the applicant shall be provided with a copy of the questions, a copy of the applicant's answer sheer or oral tape and a copy of the master answer sheet.

(7) The applicant may review the examination in the presence of a proctor. The applicant shall be provided with a form on which to write comments, questions or claims of error regarding any items in the examination. Bound reference books shall be permitted. Applicants shall not remove any notes from the area. Notes shall be retained by the proctor and made available to the applicant for use at a hearing, if desired. The proctor shall not defend the examination nor attempt to refute claims of error during the review.

(8) An applicant may not review the examination more than once.

Med 8.056 Board review of examination error claim.

(1) An applicant claiming examination error shall file a written request for board review in the board office within 30 days of the date the examination was reviewed. The request shall include all of the following:

(a) The applicant's name and address.

(b) The type of license for which the applicant applied.

(c) A description of the mistakes the applicant believes were made in the examination content, procedures, or scoring, including the specific questions or procedures claimed to be in error.

(d) The facts which the applicant intends to prove, including reference text citations or other supporting evidence for the applicant's claim.

(2) The board shall review the claim, make a determination of the validity of the objections and notify the applicant in writing of the board's decision and any resulting grade changes.

(3) If the decision does not result in the applicant passing the examination, a notice of denial of license shall be issued. If the board issues a notice of denial following its review, the applicant may request a hearing under s. SPS 1.05.

Note: The board office is located at 1400 East Washington Avenue, P.O. Box 8935, Madison, Wisconsin 53708.

Med 8.06 Temporary license.

(1) An applicant for licensure may apply to the board for a temporary license to practice as a physician assistant if the applicant:

(a) Remits the fee specified in s. 440.05 (6), Stats.

(b) Is a graduate of an approved school and is scheduled to take the examination for physician assistants required by s. Med 8.05 (1) or has taken the examination and is awaiting the results; or

(c) Submits proof of successful completion of the examination required by s. Med 8.05 (1) and applies for a temporary license no later than 30 days prior to the date scheduled for the next oral examination.

(2)

(a) Except as specified in par. (b), a temporary license expires on the date the board grants or denies an applicant permanent licensure. Permanent licensure to practice as a physician assistant is deemed denied by the board on the date the applicant is sent notice from the board that he or she has failed the examination required by s. Med 8.05 (1) (c).

(b) A temporary license expires on the first day of the next regularly scheduled oral examination for permanent licensure if the applicant is required to take, but failed to apply for, the examination.

(3) A temporary license may not be renewed.

(4) An applicant holding a temporary license may apply for one transfer of supervising physician and location during the term of the temporary license.

Med 8.07 Practice.

(1) SCOPE AND LIMITATIONS. In providing medical care, the entire practice of any physician assistant shall be under the supervision of one or more licensed physicians, physicians exempt from licensure requirements pursuant to s. 448.03 (2) (b), Stats., or licensed podiatrists. The scope of practice is limited to providing medical care as specified in sub. (2). A physician assistant's practice may not exceed his or her educational training or experience and may not exceed the scope of practice of the physician or podiatrist providing supervision. A medical care task assigned by the supervising physician or podiatrist to a physician assistant may not be delegated by the physician assistant to another person.

(2) MEDICAL CARE. Medical care a physician assistant may provide include:

(a) Attending initially a patient of any age in any setting to obtain a personal medical history, perform an appropriate physical examination, and record and present pertinent data concerning the patient.

(b) Performing, or assisting in performing, routine diagnostic studies as appropriate for a specific practice setting.

(c) Performing routine therapeutic procedures, including, but not limited to, injections, immunizations, and the suturing and care of wounds.

(d) Instructing and counseling a patient on physical and mental health, including diet, disease, treatment, and normal growth and development.

(e) Assisting the supervising physician in a hospital or facility, as defined in s. 50.01 (1m), Stats., by assisting in surgery, making patient rounds, recording patient progress notes, compiling and recording detailed narrative case summaries, and accurately writing or executing orders.

(f) Assisting in the delivery of medical care to a patient by reviewing and monitoring treatment and therapy plans.

(g) Performing independently evaluative and treatment procedures necessary to provide an appropriate response to life-threatening emergency situations.

(h) Facilitating referral of patients to other appropriate community health-care facilities, agencies and resources.

(i) Issuing written prescription orders for drugs provided the physician assistant has had an initial and at least annual thereafter, review of the physician assistant's prescriptive practices by a physician or podiatrist providing supervision. Such reviews shall be documented in writing, signed by the reviewing physician or podiatrist and by the physician assistant, and made available to the Board for inspection upon reasonable request.

(3) IDENTIFYING SUPERVISING PHYSICIAN OR PODIATRIST. The physician or podiatrist providing supervision must be readily identifiable by the physician assistant through procedures commonly employed in the physician assistant's practice.

Med 8.09 Employee status. No physician assistant may be self-employed. If the employer of a physician assistant is other than a licensed physician or podiatrist, the employer shall provide for, and may not interfere with, the supervisory responsibilities of the physician or podiatrist, as defined in s. Med 8.02 (6) and required in ss. Med 8.07 (1) and 8.10.

Med 8.10 Physician or podiatrist to physician assistant ratio.

(1) No physician or podiatrist may supervise more than 4 on-duty physician assistants at any time unless a written plan to do so has been submitted to and approved by the board. Nothing herein shall limit the number of physician assistants for whom a physician or podiatrist may provide supervision over time. A physician assistant may be supervised by more than one physician or podiatrist while on duty.

(2) A supervising physician or podiatrist shall be available to the physician assistant at all times for consultation either in person or within 15 minutes of contact by telecommunication or other means.

Chapter Med 8

PHYSICIAN ASSISTANTS

Note: Chapter Med 8 as it existed on October 31, 1976 was repealed and a new chapter Med 8 was created effective November 1, 1976. Sections Med 8.03 to 8.10 as they existed on July 31, 1984 were repealed and recreated effective August 1, 1984.

Med 8.01 Authority and purpose. (1) The rules in this chapter are adopted by the medical examining board pursuant to authority in ss. 15.08 (5), 227.11, 448.04 (1) (f) and 448.40, Stats., and govern the licensure and regulation of physician assistants.

(2) Physician assistants provide health care services as part of physician−led or podiatrist−led teams, the objectives of which include safe, efficient, and economical health care. The realities of the modern practice of medicine and surgery require supervising physicians and podiatrists and physician assistants to use discretion in delivering health care services, typically at the level of general supervision. The constant physical presence of a supervising physician or podiatrist is often unnecessary. The supervising physician or podiatrist and the physician assistant are jointly responsible for employing more intensive supervision when circumstances require direct observation or hands−on assistance from the supervising physician.

History: Cr. Register, October, 1976, No. 250, eff. 11−1−76; am. Register, April, 1981, No. 304, eff. 5−1−81; am. Register, July, 1984, No. 343, eff. 8−1−84; correction made under s. 13.93 (2m) (b) 7., Stats., Register, May, 1989, No. 401**;** am. Register, October, 1996, No. 490, eff. 11−1−96; am. Register, December, 1999, No. 528, eff. 1−1−00; CR 12−005: renum. to (1), cr. (2) Register February 2014 No. 698, eff. 3−1−14; **2017 Wis. Act 227: am. (2) Register April 2018 No. 748, eff. 5−1−18.**

Med 8.02 Definitions. (1) "Board" means the medical examining board.

(2) "Council" means the council on physician assistants.

(3m) "DEA" means the United States drug enforcement administration.

(4) "Educational program" means a program for educating and preparing physician assistants which is approved by the board.

(5) "Individual" means a natural person, and does not include the terms firm, corporation, association, partnership, institution, public body, joint stock association, or any other group of individuals.

(5m) "License" means documentary evidence issued by the board to applicants for licensure as a physician assistant who meet all of the requirements of the board.

(5x) "Podiatrist" has the meaning given in s. 448.60 (3), Stats.

(6) "Supervision" means to coordinate, direct, and inspect the accomplishments of another, or to oversee with powers of direction and decision the implementation of one's own or another's intentions.

History: Cr. Register, October, 1976, No. 250, eff. 11−1−76; am. (6) and (7) (b) to (e), Register, June, 1980, No. 294, eff. 7−1−80; r. (7), Register, July, 1984, No. 343, eff. 8−1−84**;** am. (2), (3) and (4) and cr. (3m), Register, October, 1996, No. 490, eff. 11−1−96; renum. (3) to be (5m) and am., am. (6), Register, December, 1999, No. 528, eff. 1−1−00; **2017 Wis. Act 227: cr. (5x) Register April 2018 No. 748, eff. 5−1−18.**

Med 8.03 Council. As specified in s. 15.407 (2), Stats., the council shall advise the board on the formulation of rules on the education, examination, licensure and practice of a physician assistant.

History: Cr. Register, July, 1984, No. 343, eff. 8−1−84; am. Register, October, 1996, No. 490, eff. 11−1−96; am. Register, December, 1999, No. 528, eff. 1−1−00; correction made under s. 13.92 (4) (b) 7., Stats., Register August 2009 No. 644.

Med 8.04 Educational program approval. The board shall approve only educational programs accredited and approved by the committee on allied health education and accreditation of the American medical association, the commission for accreditation of allied health education programs, or its successor agency.

History: Cr. Register, July, 1984, No. 343, eff. 8−1−84; am. Register, October, 1994, No. 466, eff. 11−1−94; am. Register, December, 1999, No. 528, eff. 1−1−00.

Med 8.05 Panel review of applications; examinations required. The board may use a written examination prepared, administered and scored by the national commission on certification of physician assistants or its successor agency, or a written examination from other professional testing services as approved by the board.

(1) APPLICATION. An applicant for examination for licensure as a physician assistant shall submit to the board:

(a) An application on a form prescribed by the board.

Note: An application form may be obtained upon request to the Department of Safety and Professional Services office located at 1400 East Washington Avenue, P.O. Box 8935, Madison, Wisconsin 53708.

(b) After July 1, 1993, proof of successful completion of an educational program, as defined in ss. Med 8.02 (4) and 8.04.

(c) Proof of successful completion of the national certifying examination.

(cm) Proof that the applicant is currently certified by the national commission on certification of physician assistants or its successor agency.

(d) The fee specified in s. 440.05 (1), Stats.

(e) An unmounted photograph, approximately 8 by 12 cm., of the applicant taken no more than 60 days prior to the date of application which has on the reverse side a statement of a notary public that the photograph is a true likeness of the applicant.

(2) EXAMINATIONS, PANEL REVIEW OF APPLICATIONS. (a) All applicants shall complete the written examination under this section, and an open book examination on statutes and rules governing the practice of physician assistants in Wisconsin.

(b) An applicant may be required to complete an oral examination if the applicant:

1. Has a medical condition which in any way impairs or limits the applicant's ability to practice as a physician assistant with reasonable skill and safety.

2. Uses chemical substances so as to impair in any way the applicant's ability to practice as a physician assistant with reasonable skill and safety.

3. Has been disciplined or had certification denied by a licensing or regulatory authority in Wisconsin or another jurisdiction.

4. Has been convicted of a crime, the circumstances of which substantially relate to the practice of physician assistants.

5. Has not practiced as a physician assistant for a period of 3 years prior to application, unless the applicant has been graduated from an approved educational program for physician assistants within that period.

6. Has been found to have been negligent in the practice as a physician assistant or has been a party in a lawsuit in which it was alleged that the applicant has been negligent in the practice of medicine.

7. Has been diagnosed with any condition that may create a risk of harm to a patient or the public.

8. Has within the past 2 years engaged in the illegal use of controlled substances.

9. Has been subject to adverse formal action during the course of physician assistant education, postgraduate training, hospital practice, or other physician assistant employment.

(c) An application filed under this chapter shall be reviewed by an application review panel of at least 2 council members designated by the chairperson of the board to determine whether an applicant is required to complete an oral examination or a personal appearance or both under par. (b). If the application review panel is not able to reach unanimous agreement on whether an applicant is eligible for licensure without completing an oral examination or a personal appearance or both, the application shall be referred to the board for a final determination.

(d) Where both written and oral examinations are required they shall be scored separately and the applicant shall achieve a passing grade on both examinations to qualify for a license.

(e) The board may require an applicant to complete a personal appearance for purposes of interview or review of credentials or both. An applicant's performance at a personal appearance is satisfactory if the applicant establishes to the board's satisfaction that the applicant has met requirements for licensure and is minimally competent to practice as a physician assistant.

(3) EXAMINATION FAILURE. An applicant who fails to receive a passing score on an examination may reapply by payment of the fee specified in sub. (1) (d). An applicant may reapply twice at not less than 4−month intervals. If an applicant fails the examination 3 times, he or she may not be admitted to an examination unless the applicant submits proof of having completed further professional training or education as the board may prescribe.

Note: There is no provision for waiver of examination nor reciprocity under rules in s. Med 8.05.

(4) LICENSURE; RENEWAL. At the time of licensure and each biennial registration of licensure thereafter, a physician assistant shall list with the board the name and address of the supervising physician or podiatrist and shall notify the board within 20 days of any change of a supervising physician or podiatrist.

History: Cr. Register, July, 1984, No. 343, eff. 8−1−84; am. (intro.), r. and recr. (2), Register, October, 1989, No. 406, eff. 11−1−89; am. (1) (b), cr. (1) (cm), Register, July, 1993, No. 451, eff. 8−1−93; am. (intro.), (1) (intro), (cm), (2) (b) 4., 5., 6., (c) and (4), Register, October, 1996, No. 490, eff. 11−1−96; am. (2) (a), (b) (intro.) and 3. to 5., r. and recr. (2) (b) 1. and 2., cr. (2) (b) 7. to 11., Register, February, 1997, No. 494, eff. 3−1−97; am. (intro.), (1) (intro.) and (cm), (2) (b) 5., (c), (d) and (4), r. (2) (b) 10. and 11., Register, December, 1999, No. 528, eff. 1−1−00; CR 12−005: am. (2) (b) 7., (c), cr. (2) (e) Register February 2014 No. 698, eff. 3−1−14; **2017 Wis. Act 227: am. (4) Register April 2018 No. 748, eff. 5−1−18.**

Med 8.053 Examination review by applicant. (1) An applicant who fails the oral or statutes and rules examination may request a review of that examination by filing a written request and required fee with the board within 30 days of the date on which examination results were mailed.

(2) Examination reviews are by appointment only.

(3) An applicant may review the statutes and rules examination for not more than one hour.

(4) An applicant may review the oral examination for not more than 2 hours.

(5) The applicant may not be accompanied during the review by any person other than the proctor.

(6) At the beginning of the review, the applicant shall be provided with a copy of the questions, a copy of the applicant's answer sheer or oral tape and a copy of the master answer sheet.

(7) The applicant may review the examination in the presence of a proctor. The applicant shall be provided with a form on which to write comments, questions or claims of error regarding any items in the examination. Bound reference books shall be permitted. Applicants shall not remove any notes from the area. Notes shall be retained by the proctor and made available to the applicant for use at a hearing, if desired. The proctor shall not defend the examination nor attempt to refute claims of error during the review.

(8) An applicant may not review the examination more than once.

History: Cr. Register, February, 1997, No. 494, eff. 3−1−97.

Med 8.056 Board review of examination error claim. (1) An applicant claiming examination error shall file a written request for board review in the board office within 30 days of the date the examination was reviewed. The request shall include all of the following:

(a) The applicant's name and address.

(b) The type of license for which the applicant applied.

(c) A description of the mistakes the applicant believes were made in the examination content, procedures, or scoring, including the specific questions or procedures claimed to be in error.

(d) The facts which the applicant intends to prove, including reference text citations or other supporting evidence for the applicant's claim.

(2) The board shall review the claim, make a determination of the validity of the objections and notify the applicant in writing of the board's decision and any resulting grade changes.

(3) If the decision does not result in the applicant passing the examination, a notice of denial of license shall be issued. If the board issues a notice of denial following its review, the applicant may request a hearing under s. SPS 1.05.

Note: The board office is located at 1400 East Washington Avenue, P.O. Box 8935, Madison, Wisconsin 53708.

History: Cr. Register, February, 1997, No. 494, eff. 3−1−97; correction in (3) made under s. 13.92 (4) (b) 7., Stats., Register November 2011 No. 671.

Med 8.06 Temporary license. (1) An applicant for licensure may apply to the board for a temporary license to practice as a physician assistant if the applicant:

(a) Remits the fee specified in s. 440.05 (6), Stats.

(b) Is a graduate of an approved school and is scheduled to take the examination for physician assistants required by s. Med 8.05 (1) or has taken the examination and is awaiting the results; or

(c) Submits proof of successful completion of the examination required by s. Med 8.05 (1) and applies for a temporary license no later than 30 days prior to the date scheduled for the next oral examination.

(2) (a) Except as specified in par. (b), a temporary license expires on the date the board grants or denies an applicant permanent licensure. Permanent licensure to practice as a physician assistant is deemed denied by the board on the date the applicant is sent notice from the board that he or she has failed the examination required by s. Med 8.05 (1) (c).

(b) A temporary license expires on the first day of the next regularly scheduled oral examination for permanent licensure if the applicant is required to take, but failed to apply for, the examination.

(3) A temporary license may not be renewed.

(4) An applicant holding a temporary license may apply for one transfer of supervising physician and location during the term of the temporary license.

History: Cr. Register, July, 1984, No. 343, eff. 8−1−84; am. (1) (b) and (c), Register, October, 1989, No. 406, eff. 11−1−89; am. (2) (a), Register, January, 1994, No. 457, eff. 2−1−94; am. (1) (intro.) and (2) (a), Register, October, 1996, No. 490, eff.

11−1−96; am. (1) (intro.) and (b) to (3), cr. (4), Register, December, 1999, No. 528, eff. 1−1−00.

Med 8.07 Practice. (1) SCOPE AND LIMITATIONS. In providing medical care, the entire practice of any physician assistant shall be under the supervision of one or more licensed physicians, physicians exempt from licensure requirements pursuant to s. 448.03 (2) (b), Stats., or licensed podiatrists. The scope of practice is limited to providing medical care as specified in sub. (2). A physician assistant's practice may not exceed his or her educational training or experience and may not exceed the scope of practice of the physician or podiatrist providing supervision. A medical care task assigned by the supervising physician or podiatrist to a physician assistant may not be delegated by the physician assistant to another person.

(2) MEDICAL CARE. Medical care a physician assistant may provide include:

(a) Attending initially a patient of any age in any setting to obtain a personal medical history, perform an appropriate physical examination, and record and present pertinent data concerning the patient.

(b) Performing, or assisting in performing, routine diagnostic studies as appropriate for a specific practice setting.

(c) Performing routine therapeutic procedures, including, but not limited to, injections, immunizations, and the suturing and care of wounds.

(d) Instructing and counseling a patient on physical and mental health, including diet, disease, treatment, and normal growth and development.

(e) Assisting the supervising physician in a hospital or facility, as defined in s. 50.01 (1m), Stats., by assisting in surgery, making patient rounds, recording patient progress notes, compiling and recording detailed narrative case summaries, and accurately writing or executing orders.

(f) Assisting in the delivery of medical care to a patient by reviewing and monitoring treatment and therapy plans.

(g) Performing independently evaluative and treatment procedures necessary to provide an appropriate response to life−threatening emergency situations.

(h) Facilitating referral of patients to other appropriate community health−care facilities, agencies and resources.

(i) Issuing written prescription orders for drugs provided the physician assistant has had an initial and at least annual thereafter, review of the physician assistant's prescriptive practices by a physician or podiatrist providing supervision. Such reviews shall be documented in writing, signed by the reviewing physician or podiatrist and by the physician assistant, and made available to the Board for inspection upon reasonable request.

(3) IDENTIFYING SUPERVISING PHYSICIAN OR PODIATRIST. The physician or podiatrist providing supervision must be readily identifiable by the physician assistant through procedures commonly employed in the physician assistant's practice.

History: Cr. Register, July, 1984, No. 343, eff. 8−1−84; am. (2) (i), Register, July, 1994, No. 463, eff. 8−1−94; am. (1) and (2) (intro.), Register, October, 1996, No. 490, eff. 11−1−96; am. (1), (2) (intro.), (c), (e), (f) and (i), Register, December, 1999, No. 528, eff. 1−1−00; CR 12−005: am. (1), (2) (a), (e), (i), cr. (3) Register February 2014 No. 698, eff. 3−1−14; **2017 Wis. Act 227: am. (1), (2) (i), (3) Register April 2018 No. 748, eff. 5−1−18.**

Med 8.09 Employee status. No physician assistant may be self−employed. If the employer of a physician assistant is other than a licensed physician or podiatrist, the employer shall provide for, and may not interfere with, the supervisory responsibilities of the physician or podiatrist, as defined in s. Med 8.02 (6) and required in ss. Med 8.07 (1) and 8.10.

History: Cr. Register, July, 1984, No. 343, eff. 8−1−84; am. Register, October, 1996, No. 490, eff. 11−1−96; **2017 Wis. Act 227: am. Register April 2018 No. 748, eff. 5−1−18.**

Med 8.10 Physician or podiatrist to physician assistant ratio. (1) No physician or podiatrist may supervise more than 4 on−duty physician assistants at any time unless a written plan to do so has been submitted to and approved by the board. Nothing herein shall limit the number of physician assistants for whom a physician or podiatrist may provide supervision over time. A physician assistant may be supervised by more than one physician or podiatrist while on duty.

(2) A supervising physician or podiatrist shall be available to the physician assistant at all times for consultation either in person or within 15 minutes of contact by telecommunication or other means.

History: Cr. Register, July, 1984, No. 343, eff. 8−1−84; am. (1), Register, December, 1999, No. 528, eff. 1−1−00; CR 09−006: am. (3) Register August 2009 No. 644, eff. 9−1−09; CR 12−005: r. and recr. Register February 2014 No. 698, eff. 3−1−14; **2017 Wis. Act 227: am. Register April 2018 No. 748, eff. 5−1−18.**

Chapter Med 13

CONTINUING MEDICAL EDUCATION FOR PHYSICIANS

Med 13.01 Authority and purpose. The rules in this chapter are adopted by the medical examining board pursuant to the authority delegated by ss. 15.08 (5) (b), 227.11 (2) and 448.13, Stats., and govern the biennial training requirements for physicians as provided under s. 448.13, Stats.

History: Cr. Register, February, 1977, No. 254, eff. 3−1−77; am. Register, March, 1979, No. 279, eff. 4−1−79; correction made under s. 13.93 (2m) (b) 7., Stats., Register, May, 1989, No. 401; am. Register, May, 1997, No. 497, eff. 6−1−97; am. Register, December, 1999, No. 528, eff. 1−1−00.

Med 13.02 Continuing medical education required; waiver. (1) Each physician required to complete the biennial training requirements provided under s. 448.13, Stats., shall, in each second year at the time of making application for a certificate of registration as required under s. 448.07, Stats., sign a statement on the application for registration certifying that the physician has completed at least 30 hours of acceptable continuing medical educational programs within the biennial registration period.

(1g) (a) Except as provided in par. (b), for a renewal date occurring in 2017 or 2018, a minimum of 2 of the 30 hours of continuing medical education required under sub. (1) shall be an educational course or program related to the guidelines issued by the board under s. 440.035 (2m), Stats., that is approved under s. Med 13.03 (3) at the time of the physician's attendance.

(b) This subsection does not apply to a physician who, at the time of making application for a certificate of registration, does not hold a U.S. Drug Enforcement Administration number to prescribe controlled substances.

(1r) (a) Except as provided in par. (b), for a renewal date occurring in 2019 or 2020, a minimum of 2 of the 30 hours of continuing medical education required under sub. (1) shall be an educational course or program related to the guidelines issued by the board under s. 440.035 (2m), Stats., that is approved under s. Med 13.03 (3) at the time of the physician's attendance.

(b) This subsection does not apply to a physician who, at the time of making application for a certificate of registration, does not hold a U.S. Drug Enforcement Administration number to prescribe controlled substances.

(2) A physician may apply to the board for waiver of the requirements of this chapter on grounds of prolonged illness or disability or other similar circumstances, and each case will be considered individually on its merits by the board.

History: Cr. Register, February, 1977, No. 254, eff. 3−1−77; am. (1), Register, March, 1979, No. 279, eff. 4−1−79; am. (1), February, 1981, No. 302, eff. 3−1−81; am. Register, May, 1997, No. 497, eff. 6−1−97; am. Register, December, 1999, No. 528, eff. 1−1−00; **EmR1631: emerg. am. (1), cr. (1g), (1r), eff. 11−10−16; CR 16−070: am. (1), cr. (1g), (1r) Register May 2017 No. 737, eff. 6−1−17**.

Med 13.03 Acceptable continuing medical educational programs. The board shall accept the following in satisfaction of the biennial training requirement provided under s. 448.13, Stats.:

(1) (a) *Program approval.* Educational courses and programs approved in advance by the board may be used for credit, except that the board may approve for credit completed programs and courses conducted in other countries.

(b) *Physicians.* The board recognizes only those educational programs recognized as approved at the time of the physician's attendance by the council on medical education of the American medical association, or the American osteopathic association, or the accreditation council for continuing medical education or may recognize program providers outside the United States unless any of the foregoing have been previously disapproved by the board. The board will accept attendance at and completion of programs accredited as the American medical association's or the American osteopathic association's "Category I" or an equivalent as fulfilling the requirements of this chapter for continuing medical education. One clock hour of attendance shall be deemed to equal one hour of acceptable continuing medical education.

(2) (a) The board shall accept for continuing medical education credit, voluntary, uncompensated services provided by physicians specializing in psychiatry in assisting the department of health services in the evaluation of community outpatient mental health programs, as defined in s. 51.01 (3n), Stats., and approved by the department of health services according to rules promulgated under s. 51.42 (7) (b), Stats. Four hours of assistance, including hours expended in necessary training by the department of health services, shall be deemed to equal one hour of acceptable continuing medical education for the purposes of this chapter.

(b) Physicians wishing to apply for continuing medical education credit under this subsection shall register in advance with the board and shall notify the board on forms provided by the board of the dates and the total number of hours in any biennium for which the applicant will be available to provide assistance. Referrals shall be made to the department of health services in the order received pursuant to requests for assistance received from that department by the medical examining board and by the psychology examining board.

Note: Forms to apply for continuing medical education credit are available upon request to the board office located at 1400 East Washington Avenue, P.O. Box 8935, Madison, Wisconsin 53708 or by email at dsps@wisconsin.gov.

(3) (a) Only educational courses and programs approved by the board may be used to satisfy the requirement under s. Med 13.02 (1g) (a) and (1r) (a). To apply for approval of a continuing education course or program, a provider shall submit to the board an application on forms provided by the department. The application shall include all of the following concerning the course or program:

1. The title.
2. A general description and a detailed outline of the content.
3. The dates and locations.
4. The name and qualifications of the instructor.
5. The sponsor.

Note: An application for continuing education course or program approval may be obtained from the board at the Department of Safety and Professional Services, Office of Education and Examinations, P.O. Box 8366, Madison, Wisconsin, 53708, or from the department's website at http://dsps.wi.gov.

(b) A continuing education course or program must meet all of the following criteria to be approved:

1. The course or program is accepted by the board under sub. (1) (b).
2. The subject matter of the course pertains to the guidelines issued by the board under s. 440.035 (2m), Stats.

3. The provider agrees to monitor the attendance and furnish a certificate of attendance to each participant. The certificate of attendance shall certify successful completion of the course or program.

4. The provider is approved by the board.

5. The course or program content and instructional methodologies are approved by the board.

(c) A separate application shall be submitted for each continuing education course or program approval request.

(d) A course or program sponsor may repeat a previously approved course or program without application, if the subject matter and instructor has not changed.

History: Cr. Register, February, 1977, No. 254, eff. 3−1−77; am. Register, February, 1981, No. 302, eff. 3−1−81; renum. Med 13.03 to be 13.03 (1) and am., cr. (intro.), (2), Register, November, 1995, No. 479, eff. 12−1−95; r. and recr. (1), Register, May, 1997, No. 497, eff. 6−1−97; r. (1) (c), Register, December, 1999, No. 528, eff. 1−1−00; correction in (2) made under s. 13.92 (4) (b) 6., Stats., Register November 2011 No. 671; **EmR1631: emerg. cr. (3), eff. 11−10−16; CR 16−070: cr. (3) Register May 2017 No. 737, eff. 6−1−17**.

Med 13.04 Physician postgraduate training program; length of service. The board will accept postgraduate training in a program approved by the board under the provisions of s. Med 1.02 (3), as fulfilling the requirements of this chapter for continuing medical education for physicians. Three consecutive months of such postgraduate training shall be deemed to equal 30 hours of acceptable continuing medical education for the purposes of this chapter.

History: Cr. Register, February, 1977, No. 254, eff. 3−1−77; am. Register, March, 1979, No. 279, eff. 4−1−79; am. Register, May, 1997, No. 497, eff. 6−1−97.

Med 13.05 Evidence of compliance. (1) PHYSICIANS. The board will accept as evidence of compliance by physicians with the requirements of this chapter, as original documents or verified copies thereof, any or all or any combination of the following:

(a) Certification by either the providing institution or organization or the American medical association or the American osteopathic association, or components thereof, of attendance at and completion of continuing medical education programs approved under the provisions of s. Med 13.03 (1) (a).

(b) A "Physician's Recognition Award" of the American medical association or a certificate of continuing medical education from the American academy of family physicians awarded not more than 12 months prior to the beginning of the calendar year for which application for registration is being made.

(c) Certification by a chief of service or head of department or director of medical education of the providing facility of appointment to and satisfactory participation in a postgraduate training program approved under the provisions of s. Med 13.04.

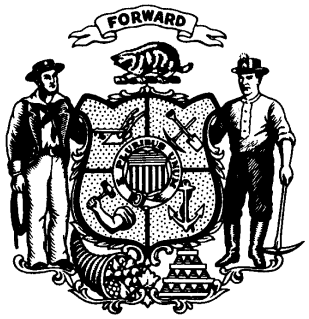
(2) RETENTION REQUIREMENT. Evidence of compliance shall be retained by each physician through the biennium for which 30 hours of credit are required for registration.

History: Cr. Register, February, 1977, No. 254, eff. 3−1−77; am. (1) (intro.) and r. and recr. (2), Register, February, 1981, No. 302, eff. 3−1−81; am. (1) (intro.), (a) and (2), cr. (1m), Register, May, 1997, No. 497, eff. 6−1−97; r. (1m), am. (2), Register, December, 1999, No. 528, eff. 1−1−00.

Med 13.06 Audit. The board shall conduct a random audit of licensees on a biennial basis for compliance with the continuing education requirement stated in s. Med 13.02 (1). The board may require any physician to submit evidence of compliance with the continuing education requirement to the board during the biennium for which 30 hours of credit are required for registration to audit compliance.

History: Cr. Register, February, 1981, No. 302, eff. 3−1−81; am. Register, May, 1997, No. 497, eff. 6−1−97; am. Register, December, 1999, No. 528, eff. 1−1−00; CR 14−033: am. Register May 2015 No. 713, eff. 6−1−15.

State of Wisconsin



Date of enactment: **April 16, 2018**
2017 Assembly Bill 766 Date of publication*: **April 17, 2018**

2017 WISCONSIN ACT 341

AN ACT ***to create*** 448.03 (2) (r), 448.03 (2m), 448.52 (1m) (am), 448.62 (1m) and 448.952 (1m) of the statutes; **relating to:** a licensure exemption for sports medicine physicians licensed outside this state; extending the time limit for emergency rule procedures; providing an exemption from emergency rule procedures; and granting rule−making authority.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

SECTION 1. 448.03 (2) (r) of the statutes is created to read:

448.03 **(2)** (r) An individual who is exempt from licensure under sub. (2m).

SECTION 2. 448.03 (2m) of the statutes is created to read:

448.03 **(2m)** SPORTS PHYSICIAN LICENSURE EXEMPTION. (a) 1. An individual who is licensed in good standing to practice medicine and surgery in another state may, subject to pars. (b) and (c), practice medicine and surgery without a license granted by the board if the individual has a written agreement with a sports team to provide care to team members and coaching staff traveling with the team for a specific sporting event to take place in this state.

2. An individual who is licensed in good standing to practice medicine and surgery in another state may, subject to pars. (b) and (c), practice medicine and surgery without a license granted by the board if all of the following apply:

a. The individual has been invited by a national sport governing body to provide services to team members and coaching staff at a national sport training center in this state or to provide services to athletes and coaching staff at an event or competition in this state that is sanctioned by the national sport governing body.

b. The individual's practice is limited to that required by the national sport governing body.

c. The services to be provided by the individual are within his or her training and expertise.

(b) An individual who is exempt from licensure under par. (a) 1. or 2. may not do any of the following while practicing under the exemption:

1. Provide care or consultation to any person residing in this state, other than a person specified in par. (a) 1. or 2.

2. Practice at a health care facility, as defined in s. 146.997 (1) (c), or at a clinic, as defined in s. 146.903 (1) (b).

3. Prescribe drugs.

(c) 1. a. Subject to subd. 1. b., an exemption under par. (a) 1. shall be valid only while the individual is traveling with the sports team, subject to a limit of 10 days per sporting event.

b. Upon prior request to the board, the board may grant an individual an extension of 20 additional days per sporting event beyond the limitation specified in subd. 1. a., except that no individual may be exempted by the

* Section 991.11, WISCONSIN STATUTES: Effective date of acts. "Every act and every portion of an act enacted by the legislature over the governor's partial veto which does not expressly prescribe the time when it takes effect shall take effect on the day after its date of publication."

board under this subd. 1. b. for more than a total of 30 additional days in a given calendar year.

2. An exemption under par. (a) 2. shall be valid during the time certified by the national sport governing body, subject to a limit of 30 days per exemption.

(d) The board may enter into agreements with medical or osteopathic licensing boards of other states to implement this subsection. Agreements under this paragraph may include procedures for reporting potential medical license violations.

(e) The board shall promulgate rules to implement this subsection.

Section 3. 448.52 (1m) (am) of the statutes is created to read:

448.52 **(1m)** (am) An individual who is exempt from licensure as a physician under s. 448.02 (2m).

Section 4. 448.62 (1m) of the statutes is created to read:

448.62 **(1m)** An individual who is exempt from licensure as a physician under s. 448.02 (2m).

Section 5. 448.952 (1m) of the statutes is created to read:

448.952 **(1m)** An individual who is exempt from licensure as a physician under s. 448.02 (2m).

Section 5g. Nonstatutory provisions.

(1) The medical examining board may promulgate emergency rules under section 227.24 of the statutes necessary to implement this act. Notwithstanding section 227.24 (1) (c) and (2) of the statutes, emergency rules promulgated under this subsection remain in effect until May 1, 2019, or the date on which permanent rules take effect, whichever is sooner. Notwithstanding section 227.24 (1) (a) and (3) of the statutes, the examining board is not required to provide evidence that promulgating a rule under this subsection as an emergency rule is necessary for the preservation of the public peace, health, safety, or welfare and is not required to provide a finding of emergency for a rule promulgated under this subsection.

Section 5r. Effective dates. This act takes effect on the first day of the 7th month beginning after publication, except as follows:

(1) Section 5g (1) of this act takes effect on the day after publication.

State of Wisconsin
Department of Safety & Professional Services

AGENDA REQUEST FORM

1) Name and Title of Person Submitting the Request:	2) Date When Request Submitted: 5/31/2018 Items will be considered late if submitted after 4:30 p.m. and less than: ▪ 10 work days before the meeting for Medical Board ▪ 14 work days before the meeting for all others

3) Name of Board, Committee, Council, Sections:

Medical Examining Board

4) Meeting Date:	5) Attachments:	6) How should the item be titled on the agenda page?
6/20/2018	x Yes ☐ No	Correspondence Received from M. Victoria Marx, MD, President, Society of Interventional Radiology and Federation of State Medical Boards (FSMB) Report on a Recommended Framework for a Minimal Physician Data Set

7) Place Item in:	8) Is an appearance before the Board being scheduled? If yes, who is appearing?	9) Name of Case Advisor(s), if required:
x Open Session ☐ Closed Session ☐ Both	No	

10) Describe the issue and action that should be addressed:

Board Review and Discussion.

Background Materials:

1) FSMB Report: 2012 Workgroup to Define a Minimal Data Set

http://www.fsmb.org/globalassets/advocacy/policies/framework-for-a-minimal-physician-data-set.pdf

2) Office of Economic Advisors and Wisconsin Area Health Education Center System Wisconsin Physician Workforce Report, 2012 (document included with agenda materials)

11)	Authorization	
Signature of person making this request		Date
Supervisor (if required)		Date
Bureau Director signature (indicates approval to add post agenda deadline item to agenda)		Date

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Society of
Interventional
Radiology
The vision to heal

Tom H. Ryan, JD, MPA, Executive Director
Wisconsin Medical Examining Board
1400 E. Washington Avenue
Room 178
Madison, WI 53703-3041

Dear Mr. Ryan,

The Society of Interventional Radiology (SIR) is the national physician specialty organization with over 7,000 members representing Interventional Radiologists in the US. Interventional Radiology (IR) is an innovative specialty that uses imaging guidance to perform minimally invasive procedures on almost every organ system and has developed techniques to treat diseases ranging from liver cancer to uterine fibroids. Interventional radiologists are clinical physicians who serve a critical role in caring for the sickest patients.

In 2012, the American Board of Medical Specialties (ABMS) recognized Interventional Radiology as an independent specialty requiring "competence in imaging, image-guided minimally invasive procedures and peri-procedural patient care to diagnose and treat benign and malignant conditions of the thorax, abdomen, pelvis, and extremities." Prior to this, vascular and interventional radiology (VIR) was considered a subspecialty of diagnostic radiology.

Today, the primary specialty of Interventional Radiology has a unique GME residency program accredited by the Accreditation Council for Graduate Medical Education (ACGME), as well as a unique and independent board certification (the Interventional Radiology/Diagnostic Radiology (IR/DR) certificate) from the American Board of Radiology. The IR/DR certificate is one of four primary certificates offered by the ABR and is separate and distinct from a primary certificate in Diagnostic Radiology (DR). Newly certified IRs, as well as those previously holding both a DR primary certificate and an IR Certificate of Added Qualifications, began receiving IR/DR certification on October 15, 2017.

SIR members have let us know many states have not updated their list of specialties and physicians are unable to select Interventional Radiology as their primary practice area.

In researching your licensing policies, it is unclear to us whether this is the case in Wisconsin. If you have not already done so, we respectfully ask you to update the Wisconsin medical board licensing options to allow licensees to designate Interventional Radiology as their primary practice area.

This is particularly important given the highly clinical and procedural nature of the specialty, which is as different from diagnostic radiology as it is from other primary specialties. IRs are being denied admission to insurance networks simply because the state licensing database has

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not been updated to show IRs as a primary specialty. Unless an IR can designate him or herself correctly, networks may believe they have a satisfactory complement of physicians when they are actually limiting patient access to interventional radiologists.

Furthermore, patients who seek IR care are confused when their physician is listed incorrectly as a diagnostic radiologist, yet the patient is scheduled for an invasive procedure or clinical evaluation.

Thank you for the opportunity to provide this input to your Board. If SIR can provide additional information please do not hesitate to contact Susan Sedory, SIR's Executive Director, at (703) 691-1805, or ssedory@sirweb.org.

Sincerely,

M. Victoria Marx, MD, FSIR
President

Wisconsin Physician Workforce Report

October 2012

Nancy A. Sugden
Victoria Udalova
Thomas Walsh

FOR INFORMATION CONTACT:

Nancy A. Sugden

Assistant Dean – Academic Affairs,
UW School of Medicine and Public Health

Director, Wisconsin AHEC Program

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750 Highland Ave; Madison, WI 53705
608-263-4927
nasugden@wisc.edu

This study and the 2011/12 Physician Workforce Survey on which it is based were funded through a State Health Care Workforce Development (SHCWD) planning grant from the National Center for Health Workforce Analysis, Bureau of Health Professions, Health Resources and Services Administration (HRSA), CFDA 93.509, and support from the Wisconsin Area Health Education Center (AHEC) program at the University of Wisconsin School of Medicine and Public Health (UWSMPH). Assistance from staff at the Wisconsin Department of Workforce Development (DWD) and the Department of Safety and Professional Services (DSPS) was essential for successful completion of the project. Conclusions and interpretations set forth in this report are those of the authors and do not necessarily reflect the interpretation or opinion of the Department of Workforce Development, the Office of Economic Advisors, or the Department of Safety and Professional Services.

Members of the Wisconsin Health Workforce Data Collaborative (WHWDC) served in an advisory capacity for this project. The WHWDC is an independent organization whose mission is to collect and analyze health workforce supply, demand, and distribution data to serve the information and planning needs of its various partner organizations, state agencies and the public. The conclusions set forth in this document do not necessarily represent the opinions of individual members of the Collaborative or the agencies and organizations they represent.

CONTENTS

EXHIBITS

Wisconsin Physician Workforce Report

Executive Summary

The purpose of this study is to provide comprehensive data on the current physician workforce in the state, including information on demographic characteristics, education, specialty choice, geographic distribution, hours of work, current shortages, and short-term projection of physician supply. This information will assist educational institutions and health care provider organizations in developing the workforce necessary to meet the healthcare needs of the people of Wisconsin. The study provides baseline workforce data for the development of long-term projections and assessment of the potential impact of various policy scenarios.

The study is based on analysis of data for all physicians licensed in Wisconsin provided by the Wisconsin Department of Safety and Professional Services and a survey of physicians conducted in conjunction with the license renewal cycle for MD physicians in September-October 2011 and DO physicians in January-February 2012. This is the first licensure survey of physicians since 2000 and was made possible by a State Health Care Workforce Development planning grant from the federal Center for Health Workforce Analysis (Bureau of Health Professions/HRSA/DHHS) to the University of Wisconsin School of Medicine and Public Health, in partnership with the Wisconsin Health Workforce Data Collaborative and the Wisconsin Department of Workforce Development. Nancy Sugden, Assistant Dean, Academic Affairs and Director of the Area Health Education Centers program at the UWSMPH was Principal Investigator for the project. She was assisted by Thomas Walsh in the Office of Economic Advisors at the Department of Workforce Development and Victoria Udalova, graduate student in the Department of Economics at the UW-Madison, other members of the Wisconsin Health Workforce Data Collaborative and the Wisconsin Council on Medical Education and Workforce.

Number of physicians

At the beginning of 2012, there were 14,722 physicians based in Wisconsin, not including those still in training (medical residents and fellows). This represents 68% of the physicians holding active licenses issued by Wisconsin and provides a rate of 258.4 physicians per 100,000 population. A total of 13,670 physicians provide patient care in the state, including those based in neighboring states and providing care on a regular basis in Wisconsin, for a rate of 240.4 patient care physicians per 100,000.

Of the 14,722 Wisconsin-based physicians,

- 94.4% have an MD degree and 5.6% have a DO degree
- 68.0% are male and 28.5% are female
- the average age is 50.9

The number of female physicians has increased steadily over the last 30 years, with the proportion of women in the 30-35 age group at nearly 50 percent.

Where they trained

Approximately 30% of the physicians currently in practice in Wisconsin today are graduates of UWSMPH or MCW. This proportion of Wisconsin medical school graduates is fairly consistent across all age groups. About 24% of Wisconsin physicians graduated from medical schools in neighboring states, and 26% from other US and Canadian medical schools. The remaining 18% are international medical graduates (IMGs).

The proportion of international medical graduates in Wisconsin is modest relative to other states, but has increased in recent years. U.S. foreign medical graduates (USFMGs) of "offshore" schools in the Caribbean make up less than 10% of the total number of IMGs.

About 38% of Wisconsin-based physicians completed their residency training in the state, 46% started practice in Wisconsin within 10 years of completion of residency training in another state. About 16% started practice in Wisconsin more than 10 years after completion of residency training.

Of the 4567 UWSMPH and MCW graduates practicing in the state, 66% completed their residency training in the state, 31% returned within 10 years of completing a residency in another state and 3% returned to the state more than 10 years after residency.

Specialty

Information from the survey about the time each respondent spends in various patient care settings (office-based primary care, office-based specialty care, hospital inpatient, emergency room, etc.) provides the basis for a more accurate identification of primary care physicians than is possible for studies based on physician specialty designation alone. Of the 14,722 Wisconsin-based physicians,

- 5599 (38%) are primary care physicians (family medicine, general internal medicine, pediatrics, geriatrics)
- 1980 (13%) are subspecialists in medicine or pediatrics
- 2939 (20%) are in surgery and surgical subspecialties (including Ophthalmology and OB/GYN)
- 2785 (19%) are in facility-based specialties such as radiology, pathology, anesthesiology and emergency medicine
- 1419 (10%) are in other specialties (including psychiatry, neurology, physical medicine & rehabilitation)

Proportionally more DO physicians are in primary care (51.5% of DOs, 37.2% of MDs) and emergency medicine (10.4% of DOs and 4.6% of MDs) and fewer in surgical specialties (8.7 % of DOs, 15.6% of MDs), but otherwise the distribution of specialties is similar for MDs and DOs.

Although certain fields attract more female physicians, the increasing number of women in medicine is evident in all specialties, including specialties like obstetrics and gynecology and other surgical specialties characterized by high average hours.

Patient Care

Of the 13,670 physicians providing patient care in Wisconsin, 88% provide patient care full-time (32 hours per week or more). For all physicians providing patient care in Wisconsin, both full-time and part-time, the statewide average is 2090 hours of patient care annually, or 46.6 hours per week of work. Including other professional responsibilities (teaching, research, administration) for these patient care physicians brings the average annual hours to 2369, or 53.1 hours per week of work. Patient care physicians age 50-54 have the highest average hours of work, with 48.3 hours per week in patient care and 7.1 hours per week in other professional activities.

While women physicians work fewer hours per week than men, on average, the difference in Wisconsin is smaller than frequently cited for national studies, particularly for younger age groups where there are more women in specialties with higher average hours. Because the specialty mix for women in younger age groups is rapidly changing, basing FTE physician projections on historical data about work patterns for women physicians risks underestimating the average hours for women.

Primary Care

Of the 5599 Wisconsin-based physicians for whom only a primary care specialty is reported in the licensure record, there are

128 in general practice
2587 in family medicine
1892 in general Internal medicine
992 in general pediatrics or medicine-pediatrics

Analysis of our survey data on patient care hours provides an estimate of 5184 physicians in primary care specialties who are currently providing patient care in Wisconsin. These patient care primary care physicians reported working an average of 2314 hours annually, or 44 hours per week in patient care and other professional activities. Primary care physicians in urban settings report slightly more time in other professional activities (primarily teaching and research) than physicians in rural settings. In general, however there is little difference in the hours of work reported by primary care physicians in urban settings and those in rural settings (although rural physicians may spend more time on call.)

Of the 5184 physicians in primary care specialties who provide patient care,

3769 (73%) spend the majority of their time in office-based patient care practice. This group averages 82.6% of their time in the office setting.
951 (18%) are hospitalists, generalist physicians who do not maintain an office practice, but are employed by hospitals exclusively to supervise the care of hospitalized patients.
329 (6%) listed only a primary care discipline as a specialty, but report more than half their time in office-based subspecialty practice rather than primary care practice
64 (1%) spend the majority of their time in nursing homes or other residential care facilities
58 (1%) spend the majority of their time in correctional facilities
13 (<1%) did not provide information on hours

The 3769 primary care physicians providing care available to the general public (a rate of 66.3 per 100,000) are supplemented by physicians in other office-based specialties who report providing a significant amount of primary care. These specialties include OB/GYN (26% of patient care time providing primary care), occupational medicine (38% of time in primary care) and other specialties such as addiction medicine, pain medicine, sleep medicine and sports medicine (25% primary care). Subspecialists in medicine and pediatrics, as well as psychiatrists and other specialties also report some primary care hours, but generally no more than 10%. Overall, counting the office-based patient care hours of primary care physicians and the primary care hours reported by subspecialty physicians, we estimate about 3800 FTE physicians providing primary care to the general public, or a statewide ratio about 1:1500.

Distribution and Current Shortages

Over 40% of all physicians in the state are located in greater Milwaukee and the Madison area, reflecting the location of the state's medical schools, medical research and concentration of tertiary and quaternary care facilities. The rest of the state's physicians are distributed relatively evenly on a regional basis, except for northwestern Wisconsin where there are fewer cities of moderate size with hospital facilities. Comparing access to primary care in rural and urban areas within regions, however, yields a very different picture.

Community size	Population to primary care physician ratio
Population < 2500	3432:1
Population 2500-9999	1165:1
Population 10,000-49,999	862:1
Population 50,000 to 1 million	974:1
Metropolitan area surrounding Milwaukee	915:1
Milwaukee county	906:1

In addition, primary care physician shortages in inner-city urban areas of Milwaukee, Beloit, Kenosha and several other cities are well documented through the Health Professions Shortage Area designation process. As of July 2012, the Health Resources and Services Administration (HRSA) estimated that Wisconsin needs at least 228 additional primary care physicians to reach the target population to provider ratio of 2000:1 in rural and urban areas where shortages have been documented. For mental health shortage areas, an additional 145 psychiatrists are needed in shortage areas to achieve the target ratio of 10,000:1 for psychiatrists. Shortages in other specialties are less well documented, but the survey did include a question asking respondents to indicate up to three specialties for which they or their patients had difficulty scheduling referral appointments. Overall, 25% of physicians indicated difficulty in scheduling referrals, with a higher percentage in rural areas (up to 38%) and lower in suburban Milwaukee (15%). The specialties most frequently cited were psychiatry, psychology and mental health services, dermatology, neurology, rheumatology, primary care, pediatric subspecialties, gastroenterology and orthopedics.

Comparison to Other States and National Estimates of Current Physician Requirements
Comparison to other studies is difficult due to variation in the basis for determination of physician FTE and rates per 100,000, but several key studies do provide an opportunity for overall assessment of Wisconsin's current physician supply.

The *2011 State Physician Workforce Data Book*, prepared by the Association of American Medical Colleges based on AAMC data and information from the AMA Physician Masterfile has estimates for Wisconsin quite similar to those in this study, so provides a basis for comparison to other states. Wisconsin generally ranks right around the median for all states in measures of overall physician supply. For patient care physicians, however, it ranks 19th, and for patient care primary care physicians the rank rises to 14th among states. To reach the median of the top quartile of states in the proportion of physicians to population, Wisconsin would need 2582 additional physicians overall, including 478 in primary care.

The December 2008 HRSA study, *The Physician Workforce: Projections and Research into Current Issues Affecting Supply and Demand*, provides another means of assessing current shortages in Wisconsin. That study was based on the assumption that health care is delivered today and into the future as it was in the base year 2000, and that physician supply and demand were in balance in that year. Overall, for the base year the study estimated that approximately 253 physicians per 100,000 were engaged primarily in patient care, with 95 per 100,000 in primary care and 33 per 100,000 in medical specialties, 55 per 100,000 in surgical specialties and 70 per 100,000 in other specialties. These ratios were used to project physician needs through 2020 based on changing population demographics. Comparing the projection for 2010 in the HRSA study with our 2012 Wisconsin data suggests an overall shortage of 1173 physicians, 276 in primary care and 897 in non-primary care specialties. There are several problems with this approach, however, including

1) The organization of health care delivery nationwide in 2000 is not necessarily an appropriate baseline for Wisconsin and could overestimate physician requirements. With multi-specialty clinics, the predominance of a limited number of provider organizations serving the majority of the population, and strong primary care programs, the organization and utilization of healthcare in Wisconsin in 2000 differed in very significant ways from healthcare in other regions.

2) The HRSA study used AMA Masterfile data. While the reliability of that database, and the skill of researchers in using it, has improved in recent years, it is still likely that studies using the AMA data over count the number of active physicians. If physicians were over counted in the base year when

determining physician requirements, that could result in exaggerated estimates of shortages when those measures are used with more accurate data for subsequent years.

One other recent study, *Primary Care Physician Workforce and Medicare Beneficiaries' Health Outcomes* by Chiang-Hua Chang, et al (JAMA, May 2011) takes a completely different approach, using physician RVUs. (An RVU, or *relative value unit*, is a measure of the resources used in providing health care services that is the basis for Medicare reimbursement and other physician compensation formulas). Chang and colleagues documented that a higher local workforce of primary care physicians is associated with favorable patient outcomes. All regions of Wisconsin except the Milwaukee and Madison areas come up well short of the highest quintile (median rate of 103.2 primary care physicians per 100,000) identified in this study. Wisconsin's rate ranges from 29.1 primary care physicians per 100,000 in communities of less than 2500 to 110.4 per 100,000 in Milwaukee County and 130.5 per 100,000 in the Madison area.

Short Term Projections of Physician Supply

Primary care physicians who will be completing residency and entering practice in 2019 have already been selected and will begin medical school in the fall of 2012. For other specialties, the timeline is even longer. What can we predict from the numbers currently in the medical education pipeline?

According to information maintained by the Association of American Medicine Colleges, Wisconsin retains 37.8% of the graduates of its two medical schools (43.3% of UWSMPH graduates, 33.3% of MCW graduates). For graduate medical education programs, the retention rate is 47.2%. For undergraduate medical education (the MD programs) and graduate medical education (residency training) combined, the retention rate is 70.2%. While the proportion of Wisconsin medical graduates who remain or return to practice in Wisconsin has been very steady through the years, Wisconsin's medical schools produce more graduates today than they did forty years ago and have further increased their entering class size in the last several years. For the next eight years (until 2020), assuming that the same proportion of UW and MCW graduates is retained, and that Wisconsin continues to recruit USMGs and IMGs at the same rate as at present, the number of physicians beginning practice in Wisconsin will exceed the number retiring. However, a projected annual population growth rate of slightly less than 1% over that period will mean a decline in the rate per 100,000 of physicians under age 75 from 249 today to 239 in 2020.

Assuming that Wisconsin will be able to maintain the status quo in terms of recruitment of physicians from outside the state is a risky proposition, however. As noted in the November 2011 Wisconsin Hospital Association report, *100 New Physicians a Year: An Imperative for Wisconsin*,

> Reform is expected to increase the number of people with insurance by 32 million, or 10.3 percent of the U.S. population; those individuals with coverage, on average, use twice as many health care services as those who do not. Wisconsin already has a high percentage of its citizens covered by insurance or government programs. The increased number of covered individuals is expected to be only 120,000, or two percent of the Wisconsin population. Therefore it is likely that there will be a much greater NEW demand for health services outside of Wisconsin than within the state, meaning that there will be increased efforts at recruiting away Wisconsin physicians by organizations outside the state; likewise is will be more difficult for Wisconsin to maintain its current level of in-migration of new physicians. This means that Wisconsin must compete at a higher level to retain its workforce.

Our detailed information on physician age can help us predict the number of retirements each year, but we still lack good information on annual turnover and net losses to other states. Our projection is relatively optimistic with respect to retention, assuming an annual loss of 2% to other states, but less

optimistic with respect to the number of Wisconsin graduates who stay in the state and recruitment from other states. We do not make any adjustment for changing lifestyle expectations of younger physicians. Our short term projection of physician supply shows an increase of about 670 physicians by 2020 for a total of 14,848 physicians under age 75, then a decline as retirements begin to outpace the production of new physicians. If carried out to 2030, our projection would show about 13,618 physicians in 2030. Our projection does not take into account the recently announced major expansion of MCW class size and continued modest growth at UWSMPH, which will not have an impact until after 2020.

Projections of Demand

The ideal physician to population ratio in the various individual specialties is difficult to determine based on currently available measures. Predictions of a growing national shortage of physicians in primary care and certain other specialties apply to Wisconsin as well, but the scale of the problem for Wisconsin remains unclear. The Wisconsin physician workforce is younger than the national average, but the population is older, so there will be a different balance of supply and demand pressures. Most estimates of the number of physicians needed are based on utilization rates in the year 2000 and on national, not state-specific, data. Many changes in the organization of healthcare delivery are anticipated in the next few years, making estimates of demand based on past utilization patterns very unreliable.

While we struggle to determine physician requirements for 2030 in order to design programs to address potential shortages, it is a certainty that shortages in rural and underserved areas will persist without programs specifically designed to recruit, train and retain students who are likely to practice in these areas. This distribution problem will become much worse if there is greater overall pressure on supply because we have failed to strategically expand training programs or are otherwise unable to recruit enough physicians to meet the need. For the short term, the most important area for expansion is in primary care residency positions overall, and rural residency programs in particular. Without that expansion, Wisconsin faces increasing difficulty in attracting and retaining new graduates.

Future Research

The next few years will bring additional research, particularly on the impact of various changes in the organization of health care delivery, that will enable us to develop a much more accurate model of physician supply and demand under alternate scenarios. In order to apply that knowledge to Wisconsin, we will need to maintain a regular program of data collection and analysis to keep our baseline information up to date, understand what attracts physicians to practice in Wisconsin, monitor new developments and better inform policy development and the planning process at our academic programs and health care organizations. Requiring a survey in conjunction with physician license renewal that includes at least a minimum data set is a necessary first step. We will also need similar studies of physician assistants, advanced practice nurses and other health professionals to understand the interplay of changes in the organization of health care delivery and demand for physicians.

Wisconsin Physician Workforce Report

Overview

This report provides information on physicians licensed by the State of Wisconsin who are professionally active in the state, based on data provided by the Department of Safety and Professional Services (DSPS) and a survey of physicians conducted in conjunction with the biennial MD and DO license renewal cycle that occurred in late 2011 and early 2012.[1] All physicians with who were licensed in Wisconsin as of 9/1/11, and who renewed that license by 3/15/12 are included in this report. Physicians who were first licensed after 9/1/11 are not included.

At any given point in time, there are well over 22,000 physicians with an active license in Wisconsin. Of these, about 68% have a Wisconsin mailing address on file with DSPS. This report refers to physicians with a Wisconsin mailing address as "Wisconsin-based". Of the Wisconsin-based physicians, depending upon the time in the two-year renewal cycle, from 900 to 2000 could be trainees in Wisconsin medical residency and fellowship programs. Medical school graduates must complete one year of post-graduate training in order to be eligible for the license, so most new graduates completing their training in Wisconsin receive their license sometime during the second post-graduate year (PGY2), usually after the first of September.

By drawing our data at the conclusion of the license renewal period, and restricting the study population to those who were licensed prior to 9/1/11, we minimize the number of PGY2 trainees in the study population and assure that any physicians who have left the state since the previous license renewal have updated their address with DSPS. In addition, based on date of medical school graduation and specialty, we determined those individuals who were likely still trainees at the PGY3 level and above at the time of the study. Trainees were excluded from the "active physician" population for purposes of this study and will be reported on separately.

Our final study population includes

14,722 physicians with a DSPS address in Wisconsin
6,882 physicians with a DSPS address outside the state
21,604 physicians with an active Wisconsin license

Trainees excluded from the "active physician" population for purposes of this study

993 medical residents and fellows with a DSPS address in Wisconsin (365 completed surveys)
169 medical residents and fellows with an address in another state (67 completed surveys)
1,162 medical residents and fellows with an active Wisconsin license

DSPS data on all physicians includes degree type, date of first Wisconsin license, age, gender, medical school, medical school graduation date, medical specialty, and mailing address (city, state and zipcode). A survey conducted during the most recent license renewal period provides additional demographic information, information on residency training and specialty, current practice location, practice characteristics and future practice plans. The survey itself was not required, but each individual renewing the license was directed to the survey. For details on development and administration of the survey, see Appendix A.

[1] The license renewal period for MDs was September-October 2011 and for DOs, January-February 2012.

The overall response rate for the survey was 28.9% (after exclusion of trainees), including 6378 MD and 419 DO physicians. In order to assess the quality of the survey sample, we used information from a variety of other sources, including the Association of American Medical Colleges (AAMC), the American Medical Association (AMA), and information provided by the Wisconsin Medical Society from its member database. Data on all licensed physicians received directly from DSPS allowed us to do a direct comparison on the key variables of age, gender, specialty, medical school and current location.

Responses were determined to be broadly representative of the Wisconsin physician population as a whole, with a few exceptions. Compared to the total Wisconsin physician population, the response rate was slightly higher for women physicians, primary care physicians and DO graduates; the response rate for surgeons, international medical graduates and physicians age 40-59 was slightly lower; and survey participation was slightly lower in the Western and West Central regions. The proportion of Wisconsin medical school graduates (both UW and MCW) was about the same in the survey sample as in the physician population as a whole. To correct for potential over- or under-sampling of physicians with certain characteristics, we weighted the survey results for age, gender, specialty and location. For details on the weighting procedure, see *Technical Notes for the 2012 Wisconsin Physician Workforce Report*, available at www.ahec.wisc.edu/workforce. For further information on the analysis of the survey sample, see *2011/12 Wisconsin Physician Survey: Preliminary Report* (March 15, 2012), also available at www.ahec.wisc.edu/workforce.

Survey responses indicate that about 63% of the 21,604 non-trainee physicians with an active Wisconsin license provide patient care in Wisconsin. This includes an estimated 12,936 with a DSPS address in Wisconsin and 734 with a DSPS address outside Wisconsin. Most of these 734 physicians are practicing in southeast Wisconsin (Kenosha and Walworth counties), western Wisconsin (the La Crosse area and Pierce and St. Croix counties), Douglas County, and in communities bordering on Michigan's Upper Peninsula. These physicians have been included in the "providing patient care in Wisconsin" group for purposes of our analysis.

Licensure data:
21,604 physicians licensed in Wisconsin as of 9-1-11 (excluding trainees)
14,722 Wisconsin-based physicians (68% of licensed physicians, excluding trainees)
Estimate of total patient care physicians, based on weighted survey responses:
12,936 Wisconsin-based physicians providing patient care
734 physicians in neighboring states providing patient care in Wisconsin
13,670 physicians providing patient care in Wisconsin
(63% of Wisconsin-licensed physicians, excluding trainees)

In addition, an estimated 300 physicians who reside out-of-state provide care to Wisconsin residents via telemedicine. Another 260 maintain a Wisconsin license because they provide care in Wisconsin on an occasional basis as a locum tenens or camp physician. These individuals who practice occasionally in Wisconsin, or only via telemedicine, are not included in our estimate of patient care physicians in Wisconsin. In addition, there are approximately 352 who are active as physicians in Wisconsin but do not provide patient care, 294 who have an address in Wisconsin but provide patient care only outside the state, and 1141 who maintain their Wisconsin license and a Wisconsin address, but are not professionally active.

Of course, many of the estimated 13,670 physicians providing patient care may be semi-retired or in academic practice and providing patient care only on a part-time basis. The actual hours of patient care

and a discussion of patient care FTE are included in the sections on hours of patient care, geographic distribution and population to physician ratios.

The two sources of physician data used in this report, the DSPS licensed physician database and the 2011/12 Wisconsin Physician Survey, provide alternate approaches to establishing a baseline for the number of physicians in Wisconsin. The DSPS database allows us to count Wisconsin-based physicians by specialty and break that information into age groups. Using it requires a system for identifying primary physician specialty from the several specialty areas a physician may have listed in the licensure record, and a system for eliminating from the count those individuals still in residency or fellowship positions. Also it is important to note that having an "active" license does not indicate whether or not a physician is actually fully or semi-retired from patient care. For this reason, we sometimes use a count of physicians under age 65 or physicians under age 75 as a proxy measure for professionally active physicians when using the DSPS data. For purposes of comparison to national and state-level estimates of physician supply based on information from the AMA Masterfile or licensed physician databases, the totals from the Wisconsin DSPS database are most appropriate.

The 2011/12 Wisconsin Physician Survey allows us to more accurately estimate the number of active physicians, and physicians providing patient care, based on specific questions in the survey, including hours of patient care. Using this information to arrive at more accurate estimates of active patient care physicians in each specialty requires weighting the survey responses by age, gender, specialty and location, as described above and in the *Technical Notes*. In combination with information on age, these estimates based on the survey will allow us to make more accurate predictions of changes in the supply of patient care physicians due to retirement or gradual reduction of patient care hours. These more detailed estimates should be used with caution in conjunction with estimated physician requirements based on older baseline data from sources like the AMA Masterfile. Using our estimates to project future supply based on outdated physician requirement estimates may result in an overestimate of potential physician shortages.

Section 1 (Demographics) draws exclusively on information from the DSPS licensure data for all physicians to provide information on degree, gender, age, medical school location, date of first Wisconsin license, likely residency program graduates practicing in Wisconsin and practice specialty. Sections 2-5 (Patient Care, Work Settings, Hours of Work, and Geographic Distribution) and Appendices A and B use information from the Physician Survey to provide additional information on physicians providing patient care in Wisconsin. (County-level information based on DSPS data only may be found in Appendices C and D.) Sections 6 and 7 (Physician Rates and Ratios, and Shortage Areas) use both DSPS and survey data to calculate physicians per 100,000 and population to physician ratios for the state as a whole, for rural and urban areas and for the eleven Workforce Development Areas. Information on federally designated Health Professions Shortage Areas for primary care and mental health is included in Appendix E. Additional information on rates and potential shortages in individual specialties is included in Appendix F. Section 8 explores several different benchmarks of physician supply as well as estimates of the number of physicians required to meet population needs, and then compares those estimates to the current Wisconsin data. Section 9 and Appendix G provide a short-term projection of physician supply based on information on current medical school and residency program enrollment, and historical information on recruitment and retention. Section 10 briefly reviews the issues involved in estimating future demand. A long-term projection will require additional research in Wisconsin and better estimates of future demand than are currently available. The information in this study is a necessary first step, providing a deeper understanding of the current physician workforce that will assist in developing policies and programs, solid groundwork for developing long-term projections, and a benchmark against which to measure change over the next ten years.

Exhibit 1.0 **Overview: Estimating the Number of Professionally Active Physicians in Wisconsin**

	Estimates based on DSPS data: Wisconsin-based Physicians			Estimates Based on Survey Data: Physicians Working in Wisconsin			
Specialty	All licensed physicians based in WI	Physicians under 75	Physicians under 65	WI-based physicians providing patient care in Wisconsin	All physicians providing patient care in Wisconsin*	Physicians providing patient care in Wisconsin* < age 75	Physicians providing patient care in Wisconsin* < age 65
PRIMARY CARE	**5599**	**5423**	**5058**	**5007**	**5184**	**5125**	**4923**
General Practice	128	88	58	75	75	68	61
Family Medicine	2587	2547	2416	2384	2436	2405	2321
General Internal Medicine	1892	1797	1691	1686	1765	1748	1663
General Pediatrics & Med-Peds	992	991	893	861	907	904	877
MEDICINE & PEDS SUBSPECIALTIES	**1980**	**1912**	**1688**	**1793**	**1956**	**1933**	**1784**
Allergy & Immunology	104	97	79	99	99	97	81
Dermatology	209	201	177	183	195	195	182
Cardiology specialties	393	371	326	359	382	371	335
Other subspecialty Internal Med	1037	1008	897	934	1046	1037	967
Subspecialty Pediatrics	237	235	209	217	233	233	220
SURGICAL SPECIALTIES	**2939**	**2783**	**2411**	**2467**	**2539**	**2520**	**2373**
General Surgery	526	494	428	443	446	446	416
Orthopedic Surgery	547	526	447	395	410	409	385
Other surgical subspecialties	387	363	321	346	360	360	330
Otolaryngology	207	197	166	195	204	199	189
Urology	195	179	157	164	177	171	160
Ophthalmology	384	362	292	309	311	311	297
Obstetrics & Gynecology	693	662	600	614	632	625	596
FACILITY-BASED SPECIALTIES	**2785**	**2719**	**2483**	**2479**	**2746**	**2723**	**2598**
Anesthesiology	861	835	768	789	836	828	796
Emergency Medicine	723	722	681	650	788	787	762
Radiology & Nuclear Medicine	765	746	671	664	694	684	649
Radiation Oncology	88	87	76	88	107	107	97
Pathology	348	329	287	288	321	317	293
OTHER SPECIALTIES	**1419**	**1336**	**1162**	**1207**	**1261**	**1235**	**1118**
Psychiatry	731	695	582	668	682	661	577
Neurology	270	267	241	244	263	261	245
Physical Med & Rehabilitation	220	215	205	190	198	197	193
Other patient care specialties	114	108	89	105	89	107	94
Non patient care specialties	32	26	21				
No information/ retired	52	25	24				
	14722	**14173**	**12802**				
ALL PATIENT CARE IN WI				**12936**	**13670**	**13536**	**12796**

Totals may differ from sum of items in each column due to rounding.

*Includes physicians in neighboring states who provide patient care in Wisconsin on a regular basis. These individuals are identifiable only in the survey data. Therefore, the DSPS totals for all WI-based physicians are sometimes lower than the corresponding estimates for patient care physicians working in Wisconsin. This is frequently the case with the totals for physicians under 65.

OTHER Wisconsin-based	**All**	**< age 75**	**< age 65**
WI-based, active, but no patient care	352	314	226
WI-based, not active	1141	921	480
WI-based, but providing patient care only in out-of-state location	294	278	228

ALL OTHER: Licensed in WI but not residing or providing patient care regularly in the state	**All**	**< age 75**	**< age 65**
Providing patient care in person in WI occasionally (locum tenens, etc)	260	252	216
Providing patient care only outside the state (includes telemedicine to WI)	5578	5481	4983
Not providing patient care	309	250	144

Section1.

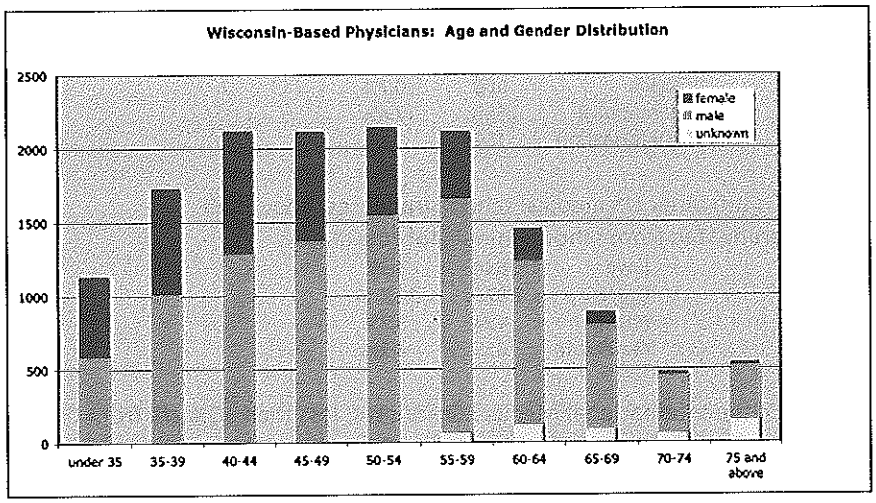
ALL WISCONSIN-BASED PHYSICIANS: DEMOGRAPHICS

Data Source: DSPS data for 14,722 Wisconsin-based physicians. Trainees (medical residents and fellows) are not included.

N=14,722

Degree	
MD	94.4%
DO	5.6%
Gender	
Female	28.5%
Male	68.0%
Undisclosed	3.5%
Age	
Average age	50.9
75 and over	3.7%
65-74	9.4%
55-64	24.4%
45-54	29.1%
35-44	25.9%
under 35*	7.6%

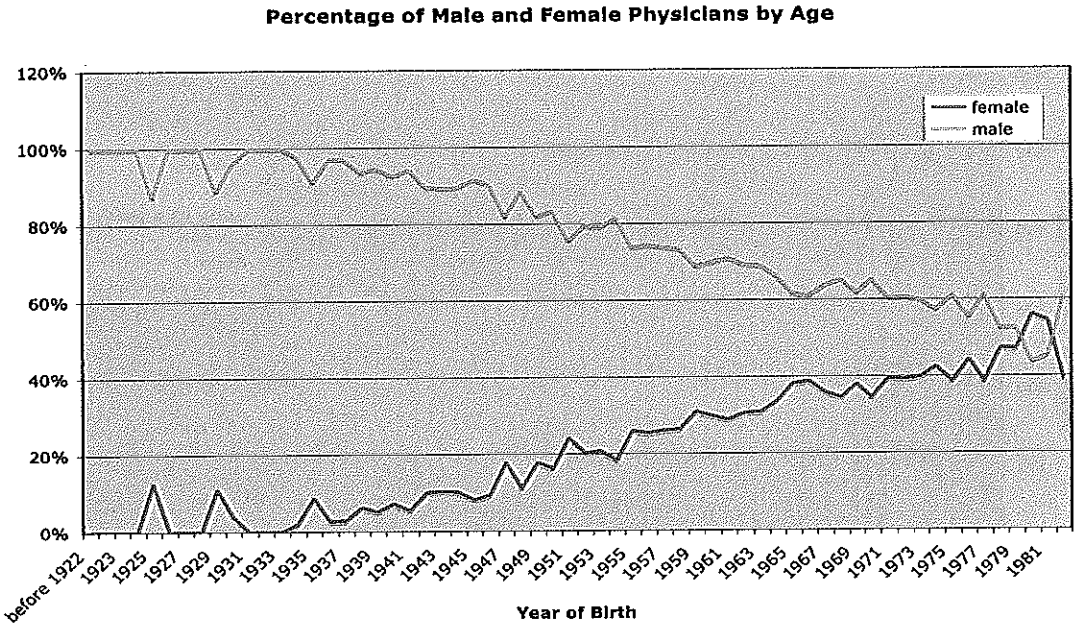
Exhibit 1.1



Please note that the under 35 group does not represent a full cohort. Many individuals age 25-34 are still completing their medical residency training.

The number of women physicians has been increasing for some time. Younger age cohorts now entering practice include 40-45% women physicians, compared to 13% of physicians aged 60-69. The composition of medical school classes varies from year to year, but is now approximately 50% female.

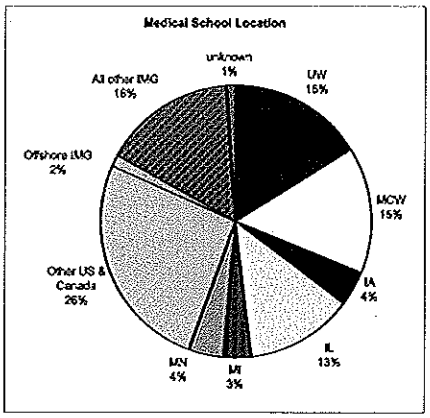
Exhibit 1.2



Wisconsin's two medical schools have trained approximately 30% of the physicians currently in practice in Wisconsin, and this proportion is quite consistent across all age groups. About 52% of physicians graduated from other US and Canadian medical schools, balancing the number of Wisconsin graduates now practicing outside the state. The remaining 18% are international medical school graduates (IMGs).

Exhibit 1.3

Medical School		
UW	2380	16.2 %
MCW	2187	14.9 %
Other US	7331	49.8 %
Canada	109	0.7%
International	2556	17.4%
No information	159	1.1%



Of the other US medical school graduates, about half graduated from schools in neighboring states:

Iowa	634	4.3%
Illinois	1,876	12.7 %
Michigan	484	3.3%
Minnesota	615	4.2%

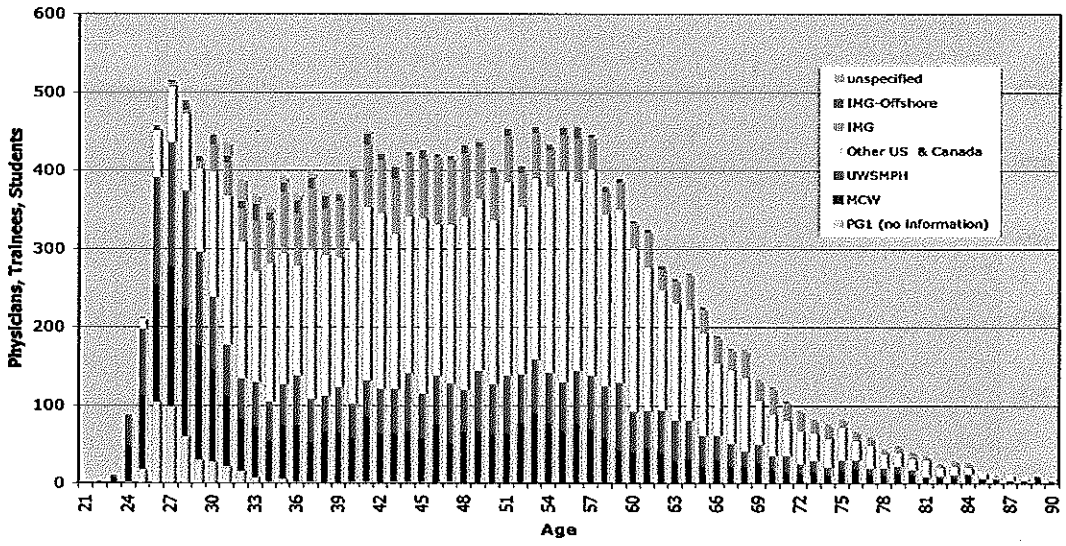
Of the International Medical Graduates, less than 10% are from Caribbean medical schools that cater to students from the US and Canada. Over 35% are from India and Pakistan and 17% from European medical schools. The rest are from an impressive array of countries around the globe.

International Medical School Graduates (IMG) detail

234	"Offshore" schools in the Caribbean	115	Korea, China, Japan
216	Other Central & South America	909	India, Pakistan
462	Europe	267	Philippines
102	Africa	38	other countries
209	Middle East		

Exhibit 1.4

Wisconsin Physicians, Trainees and Medical Students, by Age and Medical School Location



The proportion of graduates from Wisconsin's two medical schools in the state's physician workforce is quite consistent through the years (see Exhibit 1.4). Analysis of DSPS information on degree granting medical school for Wisconsin-based physicians now age 35-54 shows an average of 31% from Wisconsin medical schools, with a range of 26% to 37%.[2] For the same age range, graduates of other medical schools in the US and Canada average 49% of each age cohort, with a range of 37% to 55%. Although the proportion of international medical graduates is lower in Wisconsin than in other states, comparison by age cohort shows an increasing reliance on IMGs in recent years.[3]

Residency Training

Data available from DSPS does not include location of residency training, but date of first Wisconsin license in relation to medical school degree date can be used as an indicator that an individual likely started residency training in Wisconsin:

Date of first Wisconsin license

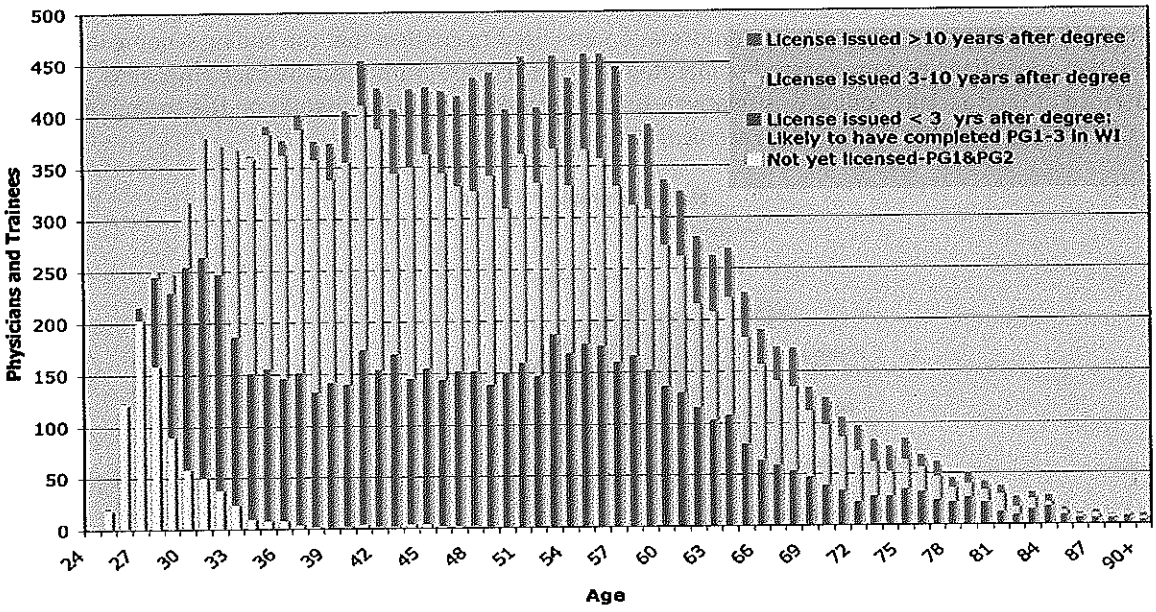
less than 3 years after medical school 37.5%
(likely to have begun residency training in Wisconsin)

3-10 years after medical school 46.3%
(started practice in Wisconsin shortly after completion of residency training, or came to Wisconsin after the PG3 year for subspecialty training or fellowship and remained to practice)

more than 10 years after medical school 16.2%
(moved to Wisconsin after completion of residency training)

Exhibit 1.5

Wisconsin Physicians and Trainees, by Age and Wisconsin License Issue Date
(an indication of proportion who started their residency training in Wisconsin)



[2] According to AAMC data, the retention rate (number of all active UW and MCW graduates who practice in the state) is 37.8% overall (43.3% UW, 33.3% MCW).

[3] For information on the number of International Medical Graduates at U.S. medical schools, see *2011 State Physician Workforce Data Book*, Center for Workforce Studies, Association of American Medicine Colleges, November 2011.

Graduates of UWSMPH and MCW account for 54% of those practicing in Wisconsin today who were licensed within three years of receiving their medical degree. About 40% of those licensed within three years of their degree date are graduates of other US medical schools. The rest are international medical graduates who completed a residency in Wisconsin. Most IMGs practicing in the state today appear to have been recruited after completion of the first three years of residency in another state.*

Exhibit 1.6

Date of First Wisconsin License, by Medial School Location

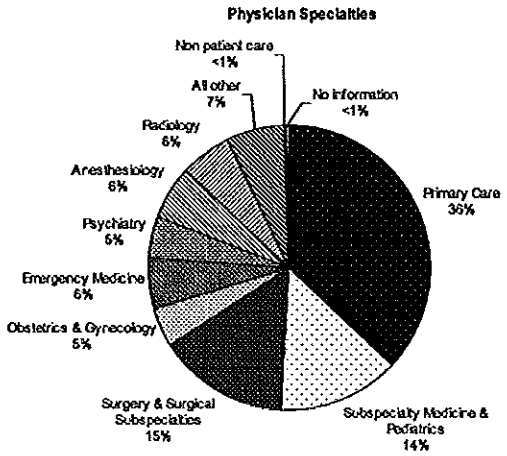
Date of first Wisconsin license	Medical School						
	UWSMPH	MCW	Other US	Offshore IMG	Other IMG	Unknown	Total
Less than 3 years after medical school (likely to have started residency in WI)	1459 (61%)	1536 (70%)	2280 (31%)	107 (46%)	76 (3%)	61 (38%)	5519 (37.5%)
3-10 years after medical school	844 (35%)	599 (27%)	3938 (53%)	117 (50%)	1260 (54%)	53 (33%)	6811 (46.3%)
More than 10 years after medical school	77 (3%)	52 (2%)	1222 (16%)	10 (4%)	986 (42%)	45 (28%)	2392 (16,2%)
	2380 (100%)	2187 (100%)	7440 (100%)	234 (100%)	2322 (100%)	159 (100%)	14722 (100%)

Practice Specialty

The practice specialty indicated in the DSPS record was used for grouping physicians by specialty. DSPS provides a set of standard specialty designations to choose from, and physicians are prompted to update their list of specialties at the time of license renewal. The DSPS data does not include an indication of principal specialty where several are listed, so a set of coding rules was developed to group the specialty information and the results were checked against information available for the survey population.

Physicians who listed general practice, family medicine, general internal medicine, general pediatrics, med-peds or geriatrics as their only specialty were counted as primary care. If an additional subspecialty concentration was listed, the individual was counted as subspecialty. Physicians who completed the survey reported hours of patient care, including an estimate of weekly hours in office-based primary care and office-based specialty care. This information was used to confirm that the coding scheme used for the DSPS-identified specialty correctly separated the primary care from specialty care physicians. The balance of the specialty coding was relatively uncomplicated. For further details on the coding of specialties from the DSPS data, see the *Technical Notes* document.

Exhibit 1.7



*For a list of ACGME residency and fellowship positions in Wisconsin as of December 2011, see supplemental materials to this report at www.ahec.wisc.edu/workforce

Exhibit 1.8
All Physicians Licensed in Wisconsin, by Specialty

WI-based	Out of State	
5599	**1685**	**PRIMARY CARE**
128	68	General Practice
2587	758	Family Medicine
1892	603	General Internal Medicine
992	246	General Pediatrics & Med-Peds
1980	**1001**	**MEDICINE & PEDS SUBSPECIALTIES**
104	43	Allergy & Immunology
209	84	Dermatology
393	262	Cardiology specialties
1037	486	Other subspecialty Internal Med
237	126	Subspecialty Pediatrics
2939	**1314**	**SURGICAL SPECIALTIES**
526	221	General Surgery
547	253	Orthopedic Surgery
387	254	Other surgical specialties
207	93	Otolaryngology
195	91	Urology
384	169	Ophthalmology
693	233	Obstetrics & Gynecology

WI-based	Out of State	
2785	**2148**	**FACILITY-BASED SPECIALTIES**
861	433	Anesthesiology
723	419	Emergency Medicine
765	924	Radiology & Nuclear Medicine
88	79	Radiation Oncology
348	293	Pathology
1419	**744**	**OTHER SPECIALTIES**
731	322	Psychiatry
270	172	Neurology
220	91	Physical Med & Rehabilitation
114	67	Other patient care specialties
32	44	Non patient care specialties
52	48	No information
14722	**6882**	**TOTAL**

Cross-discipline specialties

Many physicians listed a number of additional areas of expertise not captured in the basic practice specialty information. Physicians are not specifically asked about each of these areas when renewing their license, but may select them as their only specialty, or (more likely) in combination with any of the other specialties listed above.

WI-based	Out of State	
405	173	Academic Medicine
95	100	Administrative Medicine
11	29	Aerospace/Aviation Medicine
46	13	Alcoholism & Chemical Dependency
6	5	Genetics
100	57	Geriatrics
15	10	Hyperbaric Medicine
5	1	Institutional Medicine
97	75	Occupational Medicine
121	81	Pain Medicine
66	74	Preventive Medicine/Public Health

Specialty Distribution: Degree Type

Proportionally more DO physicians choose to go into family medicine and emergency medicine, but otherwise the distribution of specialties is quite similar for MDs and DOs, reflecting the fact that DO graduates are subject to the same market factors and lifestyle preferences as MD graduates. A higher proportion of International Medical Graduates choose internal medicine (both general and subspecialty) than US medical graduates, but IMGs are also distributed throughout the other medical specialties.

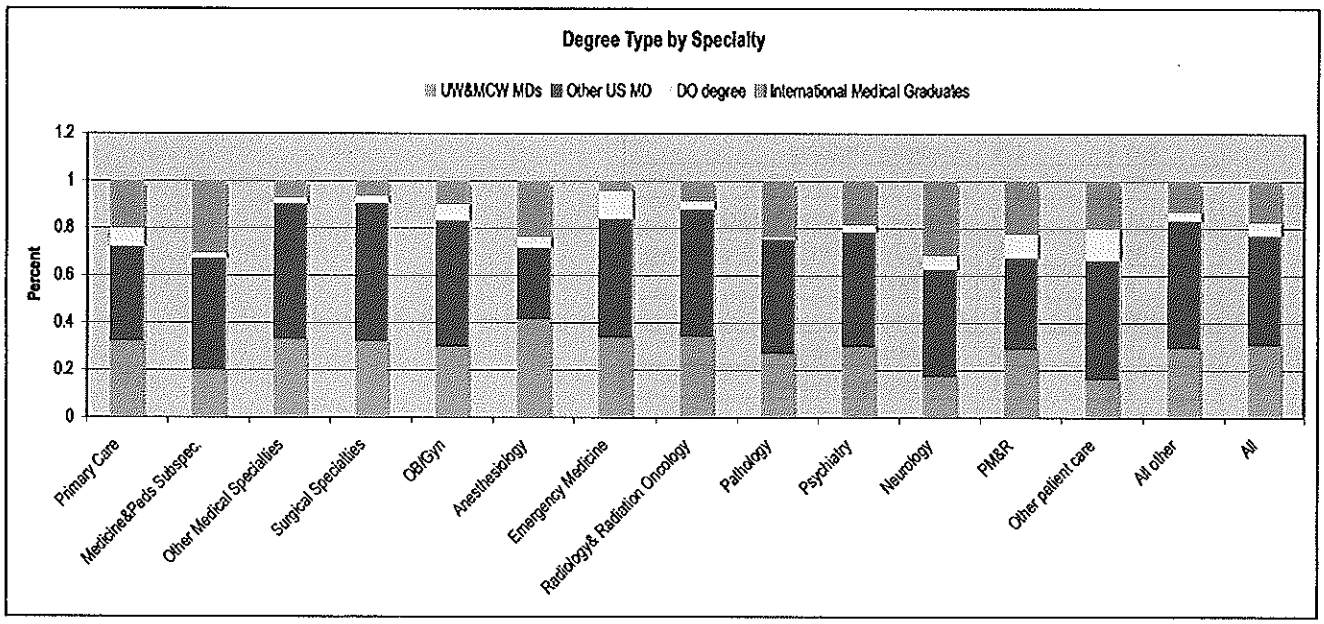
Exhibit 1.9

Specialty Distribution by Degree Type

Specialty	UWSMPH & MCW	% of WI MDs	Other US MD	% of Other US MDs	DO	% of DOs	IMG	% of IMGs
Primary Care[1]	1818	39.8%	2230	32.9%	422	51.5%	1129	44.2%
Subspecialty Medicine & Subspecialty Pediatrics	338	7.4%	783	11.6%	38	4.6%	508	19.9%
Other Medical Specialties[2]	104	2.3%	179	2.6%	8	1.0%	22	0.9%
Surgical Specialties[3]	728	15.9%	1308	19.3%	71	8.7%	139	5.4%
Obstetrics & Gynecology	208	4.6%	368	5.4%	49	6.0%	68	2.7%
Anesthesiology	359	7.9%	260	3.8%	39	4.8%	203	7.9%
Emergency Medicine	246	5.4%	362	5.3%	85	10.4%	30	1.2%
Radiology& Radiation Oncology	294	6.4%	458	6.8%	29	3.5%	72	2.8%
Pathology	95	2.1%	168	2.5%	3	0.4%	82	3.2%
Psychiatry	221	4.8%	354	5.2%	21	2.6%	135	5.3%
Neurology	48	1.1%	122	1.8%	15	1.8%	85	3.3%
Physical Medicine & Rehabilitation	64	1.4%	85	1.3%	22	2.7%	49	1.9%
Other patient care	19	0.4%	57	0.8%	15	1.8%	23	0.9%
All other	25	0.5%	45	0.7%	3	0.4%	11	0.4%
Total	4567	100.0%	6779	100.0%	820	100.0%	2556	100.0%

[1]Primary Care: General Practice, Family Medicine, General Internal Medicine, General Pediatrics, Med-Peds, Adolescent Medicine and Geriatrics.
[2]Other Medical Specialties: Allergy & Immunology, Dermatology
[3]Surgical Specialties: General Surgery, Orthopedics, other surgical subspecialties, and ENT, Urology, and Ophthalmology.

Exhibit 1.10



Specialty Distribution: Female Physicians

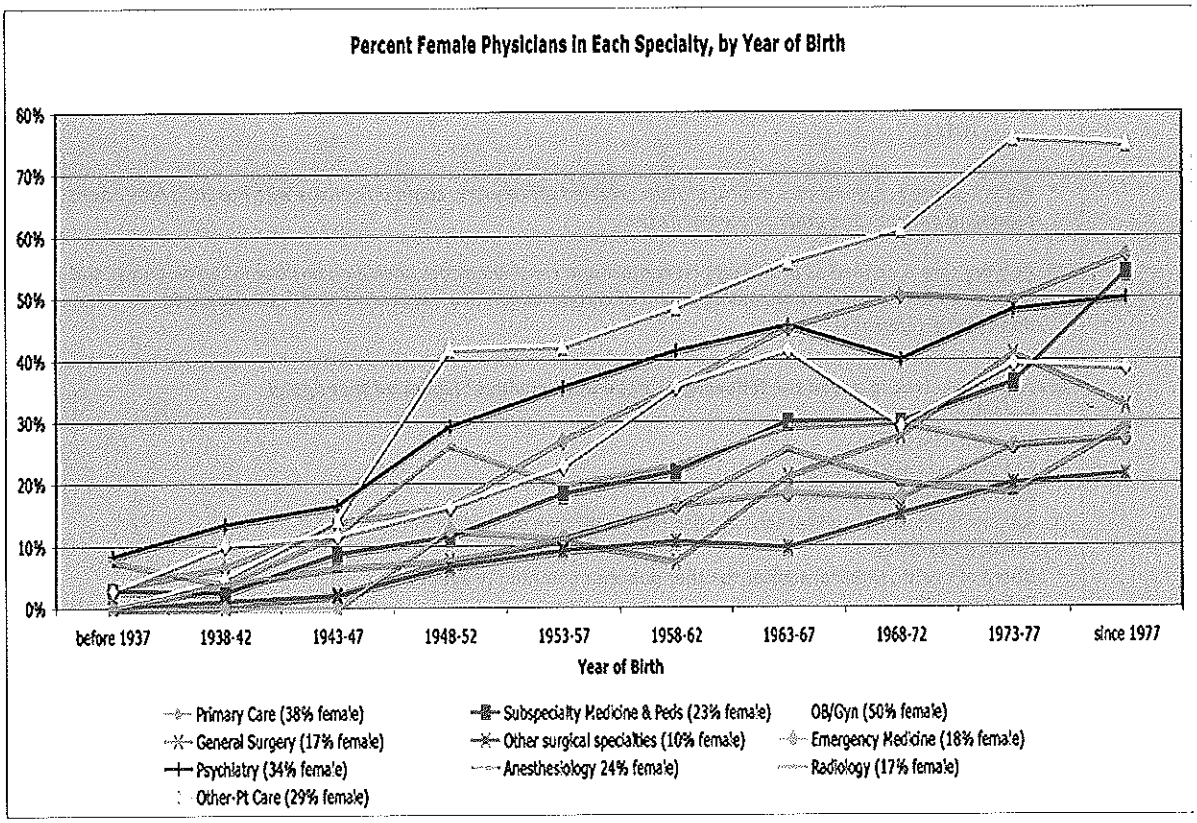
Although certain fields attract more female physicians, the increasing number of women physicians is evident in all specialties.

Exhibit 1.11

Percent Female for Selected Specialties, by Age Group

	All Ages	Age 60 or older	Age 50-59	Age 40-49	Age 30-39
Family Medicine	35.2%	10.5%	26.3%	45.6%	58.7%
General Internal Medicine	31.7%	10.7%	31.5%	41.4%	36.3%
General Pediatrics	56.5%	26.5%	51.9%	66.5%	65.9%
All Primary Care	37.8%	13.0%	31.8%	47.8%	52.3%
Subspecialty Medicine	21.5%	7.4%	18.6%	27.6%	38.3%
Subspecialty Peds	37.6%	15.2%	32.2%	43.2%	57.0%
OB/Gyn	49.8%	20.5%	46.0%	58.3%	76.7%
General Surgery	17.4%	3.3%	9.0%	24.8%	37.1%
Other Surgical Specialties	9.9%	3.0%	9.7%	12.7%	20.5%
Emergency Medicine	17.3%	9.3%	15.1%	18.5%	22.0%
Psychiatry	34.2%	19.7%	37.7%	42.8%	48.5%
Anesthesiology	24.3%	15.1%	22.5%	30.5%	27.0%
Radiology	16.0%	5.7%	12.8%	22.9%	21.4%
Other Patient Care	28.8%	12.0%	30.3%	33.6%	42.0%

Exhibit 1.11



Section 2.
PATIENT CARE PHYSICIANS

Data Source: 2011/12 Wisconsin Physician Survey

The next several sections present information on patient care physician hours of work, geographic distribution, physician rates per 100,000, and population to provider ratios based on results of the *2011/12 Wisconsin Physician Survey*. A complete summary of results of the survey may be found in Appendix A.

The *2011/12 Wisconsin Physician Survey* included a section of questions about hours of patient care by work setting that allowed us to clearly identify primary care physicians, as well as provide detail on work patterns of all physicians providing patient care in Wisconsin. Based on responses to the survey, 13,670 physicians, or 63% of all Wisconsin-licensed physicians, provide patient care in person in Wisconsin.

Exhibit 2.1 **Survey Questions on Hours of Work**

A. In the previous twelve months, how many weeks did you work providing patient care at locations in Wisconsin?

B. During the weeks that you worked in the past year, how many hours per week, on average, did you spend on patient-related care* at all locations where you practice in Wisconsin. Include on-call time only to the extent you were actually engaged in patient care or coordination.

Hours per week

_____Hospital inpatient care
_____Emergency room
_____Primary care** in the office/outpatient setting
_____Specialty care in the office/outpatient setting
_____Telemedicine consults
_____Seeing patients in nursing homes and other non-hospital extended care facilities
_____Seeing patients in their own homes
_____See patients in correctional facilities
_____All other patient-related care activities
_____TOTAL

* *Patient-related care includes clinical practice, related office work, communications with hospitals/physicians regarding patients and other related activities.*

** *Primary care is defined as providing first contact and continuing care, including basic or initial diagnosis and treatment, health supervision, management of chronic conditions, preventive health services, and appropriate referral(s).*

C. Are you involved in any of the following professional activities? *(check all that apply)*

Research
Teaching-classroom
Teaching – clinical setting
Administration in a private practice
Administration in a medical school, hospital, health plan or nursing home
Medical examiner
Board of health, Medical adviser to other public or community agency
Other (specify

D. During the previous twelve months, about how many hours per week, on average, did you spend in all these other professional activities?

Responses were limited to a maximum of 126 hours per week.

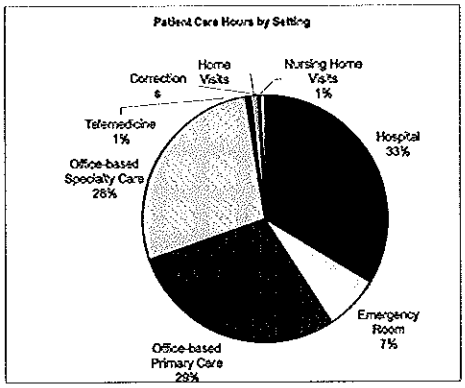
Section 3.
PATIENT CARE PHYSICIANS: WORK SETTING

Data Source: 2011/12 Wisconsin Physician Survey

Exhibit 3.1

Distribution of Hours of Patient-related Care, by Setting

	WI-based (12,936)	Non WI-based* (733)
Hospital	31.4%	34.6%
Emergency Room	6.5%	18.6%
Office-based Primary Care	27.9%	11.9%
Office-based Specialty Care	25.9%	29.6%
Telemedicine	0.5%	0.9%
Nursing Home or Extended Care Facility	1.2%	0.4%
Home Visits	0.2%	0.4%
Corrections	0.6%	1.2%
Other Pt Care	5.9%	2.4%



As part of the process of developing coding rules for grouping physicians by specialty based on the information in the licensure database, we analyzed the information provided by survey respondents under age 75 on weekly hours of work by patient care setting. This analysis confirmed that the coding rules were correctly distinguishing primary care from subspecialty care physicians, and provided information on work setting for other physician specialties.

Exhibit 3.2

Allocation of Patient Care Time by Care Delivery Setting for Individual Specialties

	Portion of weekly patient care hours in each setting								
Specialty	Inpatient	Emergency Room	Office-Based Primary Care	Office-Based Specialty Care	Tele-medicine	Nursing Homes	Home visits	Corrections Facilities	Other patient-related
Primary care specialties									
Family Medicine and General Practice	10%	5%	**72%**	4%	<1%	3%	<1%	1%	5%
General Internal Medicine and Geriatrics*	**42%**	1%	**44%**	6%	<1%	2%	<1%	1%	4%
General Pediatrics, Adolescent Medicine, and Med-Peds*	**24%**	2%	**65%**	4%	<1%	<1%	<1%	.	4%
Other specialties reporting 20% primary care or more									
Obstetrics & Gynecology	**28%**	1%	**26%**	**40%**	<1%	.	.	.	5%
Occupational Medicine	1%	2%	**38%**	**51%**	.	.	<1%	.	7%
Other patient care specialties**	6%	.	**25%**	**51%**	<1%	3%	1%	.	14%
Other medical specialties									
Subspecialty Medicine	**34%**	1%	8%	**50%**	1%	<1%	.	.	6%
Subspecialty Pediatrics	**55%**	3%	6%	**27%**	1%	1%	<1%	.	7%
Allergy & Immunology	3%	.	9%	**83%**	1%	.	.	.	4%
Dermatology	1%	<1%	18%	**76%**	<1%	<1%	.	.	4%
Neurology	**24%**	2%	4%	**62%**	1%	1%	.	.	5%
Physical Medicine & Rehabilitation	**32%**	1%	4%	**57%**	<1%	3%	.	.	2%
Psychiatry	**30%**	1%	14%	**43%**	1%	2%	<1%	5%	3%

Exhibit 3.2 (continued)

Portion of weekly patient care hours in each setting, by specialty

Specialty	Inpatient	Emergency Room	Office-Based Primary Care	Office-Based Specialty Care	Tele-medicine	Nursing Homes	Home visits	Corrections Facilities	Other patient-related
Surgical specialties									
General surgery	**51%**	5%	3%	**34%**	<1%	<1%	.	1%	6%
Neurosurgery, Plastic, Thoracic, & Cardiovascular	**49%**	3%	4%	**38%**	.	<1%	.	1%	4%
Orthopedic surgery	**29%**	4%	3%	**56%**	.	<1%	.	<1%	7%
Urology	**23%**	1%	10%	**61%**	.	<1%	.	.	5%
Otolaryngology	15%	1%	7%	**69%**	<1%	.	.	.	8%
Ophthalmology	2%	1%	12%	**81%**	.	.	.	.	4%
Facility-based support specialties									
Emergency Medicine	1%	**88%**	4%	2%	<1%	<1%	1%	<1%	4%
Anesthesiology	**81%**	<1%	1%	12%	<1%	1%	.	.	4%
Radiology & Nuclear Medicine	**50%**	6%	4%	**28%**	4%	<1%	.	.	7%
Pathology	**42%**	.	3%	**23%**	.	<1%	.	.	**32%**
Radiation Oncology	3%	.	5%	**91%**	.	.	.	.	1%

*Since the DSPS data does not have a hospitalist category, a number of internal medicine and pediatric hospitalists will be included in the primary care internal medicine and pediatrics group and may account for most of the inpatient hours reported for those groups.

**Other patient care specialties include Addiction Medicine, Alternative/Integrative Medicine, Medical Genetics, Pain Medicine, Sleep Medicine, and Sports Medicine, if listed as the principal specialty.

Exhibit 3.2 is based on averages over each specialty group. Closer examination of the patient care hours by work setting reported by those classified as primary care allows us to differentiate hospitalists and residential facility-based primary care physicians from those who provide office-based care for the general population. Group 1 in the table below accounts for 99% of the total office-based primary care hours for primary care physicians as a whole and 82% of all office-based primary care hours reported.

Exhibit 3.3

Weekly Patient Care Hours by Setting for Primary Care Physicians

	Portion of weekly patient care hours in each setting								
Primary care physicians*	Inpatient	Emergency Room	Office-Based Primary Care	Office-Based Specialty Care	Tele-medicine	Nursing Homes	Home visits	Corrections Facilities	Other patient-related
Group 1: majority of patient care time reported in **office-based primary care** [3769 primary care physicians]	7.9%	2.0%	82.6%	0.6%	0.2%	2.2%	0.2%	0.1%	4.3%
Group 2: majority of time providing care in **nursing homes or other residential facilities** [64 primary care physicians]	1.7%	0.0%	3.0%	0.3%	0.0%	68.0%	13.7%	0.0%	13.2%
Group 3: majority of time providing care in **correctional facilities** [58 primary care physicians]	0.0%	0.0%	3.1%	0.0%	0.0%	0.1%	0.0%	90.7%	6.1%
Group 4: Primary care physicians who also have **office-based subspecialty practice** [329 primary care physicians]	18.0%	0.5%	3.0%	65.4%	0.2%	1.1%	0.3%	0.0%	11.4%
Group 5: majority of patient care hours reported in **hospital or emergency room** [951 primary care physicians]	88.1%	7.8%	0.8%	1.0%	0.3%	0.3%	0.0%	0.0%	2%

* Primary care physician total of 5184 includes 13 who did not provide information on hours. Number of physicians in each group is estimated based on weighted survey results. Primary care specialties are as listed in Exhibit 3.2.

Section 4.
PATIENT CARE PHYSICIANS: HOURS OF WORK

Data Source: 2011/12 Wisconsin Physician Survey

Of the 13,670 physicians providing patient care in Wisconsin, 88% provide patient care fulltime (32 hours or more per week). **For all physicians providing patient care in Wisconsin, both fulltime and part-time, the statewide average is 2090 hours of patient care annually.** The average annual hours and hours per week worked is lower for the 734 physicians based in other states who provide care in person in Wisconsin. Physicians were asked to report only patient care hours in Wisconsin. The group of physicians based outside Wisconsin includes a higher proportion of subspecialty medicine and other hospital-based specialties such as emergency medicine and anesthesiology.

Exhibit 4.1 ***Summary: Average Weekly and Annual Hours of Work***

	WI-based (N=12,936)	Non WI-based* WI hrs/yr (N=734)	Combined (N=13,670)
Average patient care hours worked in the past year	2142 hrs/yr	1171 hrs/yr	2090 hrs/yr
Average hours/week in patient-related care	47.2 hrs/wk	36.0 hrs/wk	46.6 hrs/wk
Total hours worked, patient care and other professional responsibilities	2430 hrs/yr	1306 hrs/yr	2369 hrs/yr
Average total hours/week, all professional responsibilities	53.8 hrs/wk	41.4 hrs/wk	53.1 hrs/wk

*Based in a neighboring state and providing patient care in Wisconsin

Average Patient Care Hours per Week: All Physicians

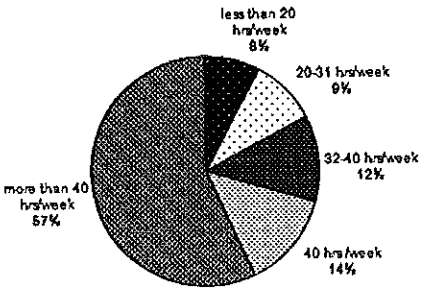


Exhibit 4.2 ***Hours and Weeks Worked, Patient Care Physicians***

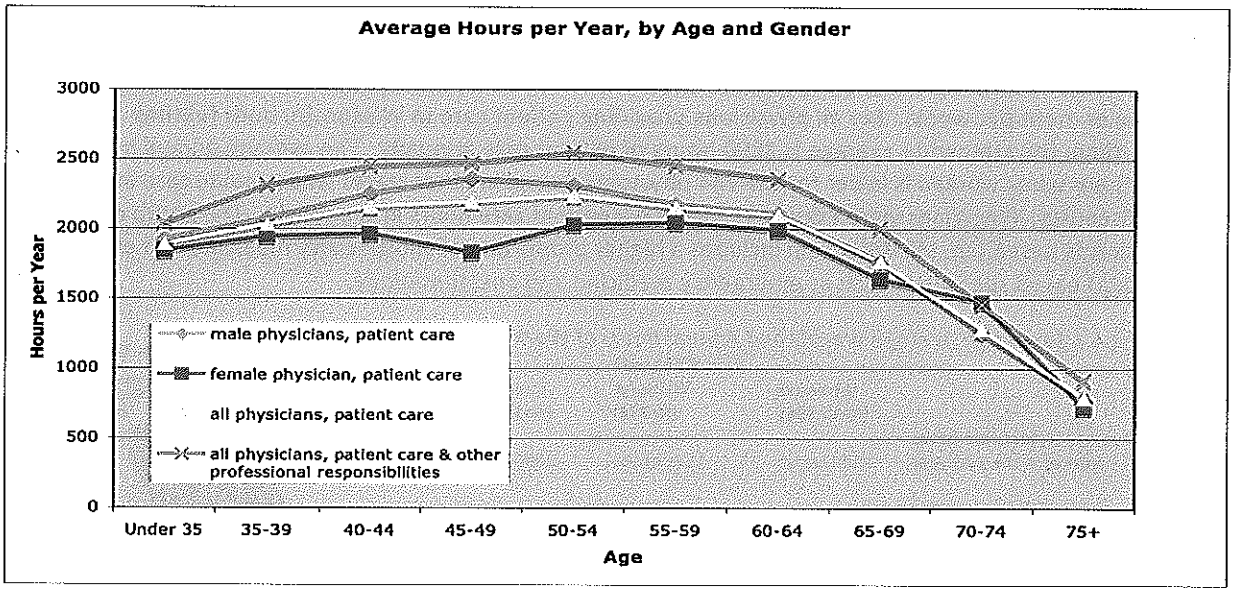
	Number of physicians providing patient care in Wisconsin		Hours per week in patient care	Hours per week in other professional activities	Number of weeks worked per year	Hours per year of patient care	Hours per year other professional activities	Total Hours per Year, all professional activities
Under 35	1140	8%	49.3	4.6	38.0	1890	158	2048
Age 35-39	1839	13%	47.0	7	42.8	2028	289	2317
Age 40-44	2195	16%	48.2	6.9	45.1	2156	299	2455
Age 45-49	2094	15%	47.5	6.6	45.4	2194	285	2479
Age 50-54	2348	17%	48.3	7.1	45.6	2241	314	2555
Age 55-59	1887	14%	46.4	7	45.7	2156	309	2465
Age 60-64	1276	9%	45.4	5.9	45.5	2098	269	2367
Age 65-69	557	4%	38.9	5.6	43.9	1767	244	2011
Age 70-74	195	1%	29.6	4.4	40.5	1281	182	1463
Over 75	139	1%	20.2	3.3	35.0	792	129	921
All physicians	**13670**	**100%**	**46.6**	**6.5**	**44.2**	**2090**	**279**	**2369**

Exhibit 4.3 ***Hours and Weeks Worked, Primary Care Physicians, by Community Size***

Rural*	1505	29%	47.5	4.7	44.6	2131	203	2334
Urban	3679	71%	46.1	7.1	43.8	2003	303	2306
All	5184	100%	46.5	6.4	44.0	2040	274	2314

*Communities of less than 50,000, not a suburb. See section on geographic distribution for details on rural designation.

Exhibit 4.4



The AAMC Center for Workforce Studies 2006 report [AAMC, 2006] identifies the age 50-54 cohort as having the highest average patient care hours (about 55 hours/week). Based on work by Watson *et al.* [Health Affairs, 2006], the AAMC report presents a scenario based on the assumption that each age cohort would maintain its distinctive pattern of work hours over time: the older cohorts will work longer hours later into their career than earlier generations, and "the desire on the part of younger generations of physicians for a work-life balance will lead to fewer work hours than physician cohorts of the past."

Our data also shows the group age 50-54 with the highest average annual hours. However, our survey was done five years after the AAMC survey, so the 50-54 age group is a different cohort of individuals (five years younger), suggesting that hours worked may be function of maturation in a career and other economic factors, as well as the particular work-life balance sought by each age cohort.

Male physicians in the 2006 AAMC study reported approximately 46 hours per week in patient care activities, while female physicians reported 38.6 hours per week. Our data shows a much smaller gender difference and higher average patient care hours per week for both: 47.5 hours per week for male physicians and 44.7 hours per week for female physicians. The difference in total average hours for male and female physicians may be narrowing as the proportion of women increases in the specialties with higher average hours. The relationship between age, gender, specialty and hours worked is complex and an important area for further study in order to more accurately project future physician FTE. Exhibit 4.5 includes information on the hours for male and female physicians by specialty. Additional detail on age, gender and specialty differences in hours of work, from the Wisconsin Physician Survey data, may be found in Appendix B.

*Exhibit 4.5 **Average Hours of Work per Week, by Specialty***

Specialty	Average hours per week – patient care	Average hours per week – all professional activities	Female physicians: annual patient care hours as % of male hours	Female physicians: average total annual hours as % of male hours
General Practice and Family Medicine[1]	45.7	51.1	92%	91%
General Internal Medicine[1]	49.8	57.2	80%	81%
General Pediatrics/Adolescent Medicine & Med-Peds	42.4	49.7	94%	86%
Internal Medicine-Cardiology	54.7	63.6		
Other Subspecialty Medicine[2]	46.7	55.0	89%	89%
Subspecialty Pediatrics	46.8	61.4	100%	94%
Allergy & Immunology	45.6	56.6		
Dermatology	36.7	41.3		
General Surgery	55.7	62.6	87%	104%
Orthopedic surgery	49.1	54.8		
Other Subspecialty Surgery[3]	53.7	58.0		
Otolaryngology	46.4	50.1		
Urology	49.6	53.3		
Ophthalmology	36.1	42.2		
Obstetrics & Gynecology	52.2	57.5	92%	87%
Emergency Medicine	38.8	44.7	87%	85%
Psychiatry	41.0	47.1	101%	92%
Anesthesiology	52.2	58.8	92%	92%
Radiology	48.3	52.8	99%	98%
Radiation Oncology	44.7	52.1		
Pathology	43.7	52.1	113%	111%
Neurology	47.7	54.1	88%	87%
Physical Medicine & Rehabilitation	42.9	48.5	94%	106%
Other Patient Care Specialties[4]	43.5	46.9	79%	87%
All Physicians	46.6	53.1	91%	90%

Source: *2011/12 Wisconsin Physician Survey.*

[1] Geriatrics is included in both family medicine and general internal medicine depending upon the physician's principal specialty.

[2] Other Subspecialty Medicine includes Endocrinology, Gastroenterology, Hematology/Oncology, Immunology/Infectious Diseases, Nephrology, Oncology, Pulmonary Medicine, and Rheumatology

[3] Other Subspecialty Surgery includes Neurosurgery, Plastic Surgery, Thoracic and Cardiovascular Surgery and Peripheral Vascular Surgery.

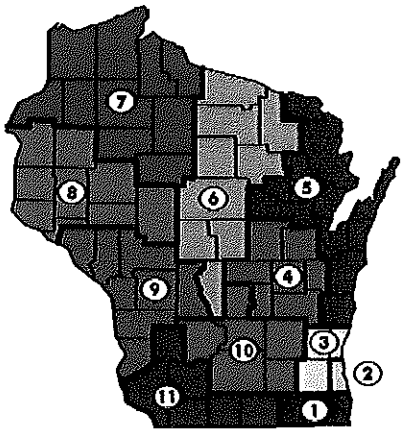
[4] Other Patient Care Specialties include Addiction Medicine, Alternative/Integrative Medicine, Medical Genetics, Pain Medicine, Sleep Medicine, and Sports Medicine, if listed as the principal specialty.

Section 5.
GEOGRAPHIC DISTRIBUTION

The distributions presented below assume all of a physician's time is in the same region or size of community as the principal place of work. In reality, however, physicians in some specialties often travel to many different locations, in different counties, to provide care. This is especially true of psychiatrists and other specialists working with public health agencies to provide services to special populations. Distribution of physicians by region and distribution by community size (rural and urban) are summarized below.

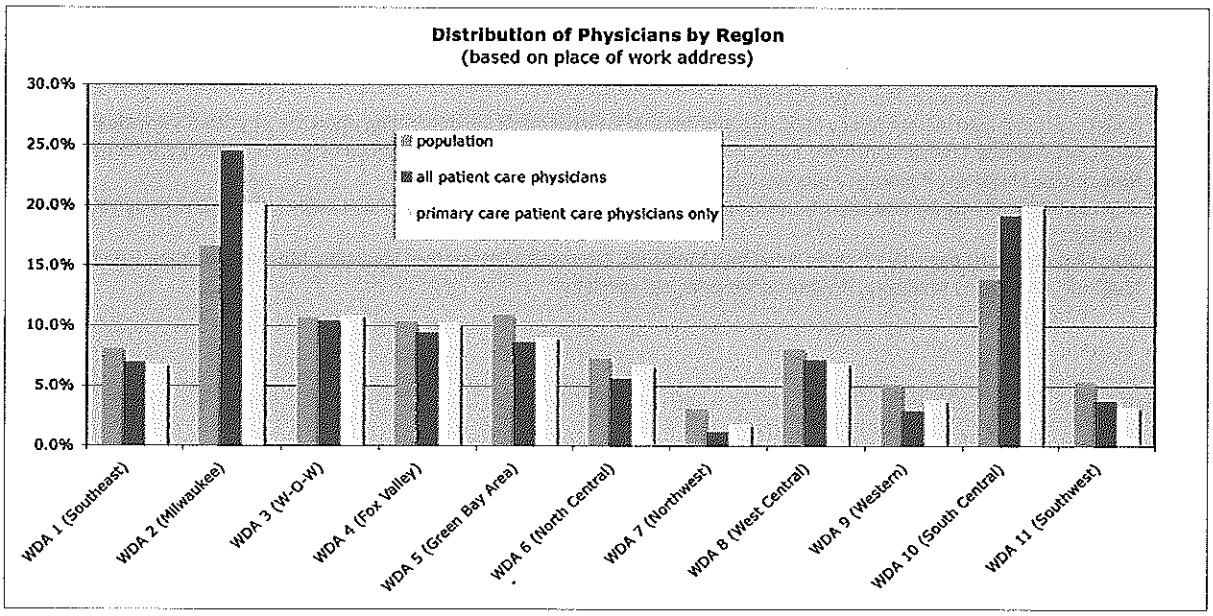
WISCONSIN WORKFORCE DEVELOPMENT AREA (WDA) REGIONS

The state's Workforce Development Areas serve well for regional data summaries because individually or in combination they approximate the areas served by Wisconsin's major health care provider organizations. Two regions, Milwaukee and the South Central region, account for over 40% of all physicians in the state based on primary place of work, reflecting the location of the state's two medical schools, medical research and concentration of tertiary and quaternary care facilities.



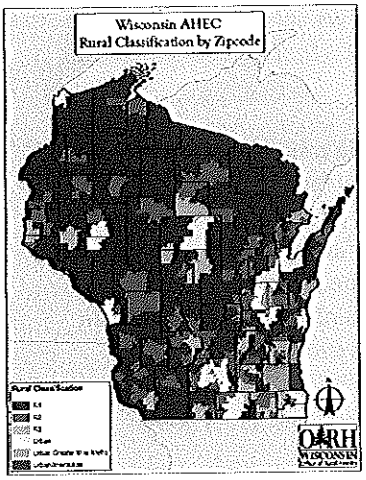
Region 1: Kenosha, Racine, Walworth
Region 2: Milwaukee
Region 3: Washington, Ozaukee, Waukesha
Region 4: Calumet, Fond du Lac, Green Lake, Outagamie, Waupaca, Waushara, Winnebago
Region 5: Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Menominee, Oconto, Shawano, Sheboygan
Region 6: Adams, Forest, Langlade, Lincoln, Marathon, Oneida, Portage, Vilas, Wood
Region 7: Ashland, Bayfield, Burnett, Douglas, Iron, Price, Rusk, Sawyer, Taylor, Washburn
Region 8: Barron, Chippewa, Clark, Dunn, Eau Claire, Pepin, Pierce, Polk, St. Croix
Region 9: Buffalo, Crawford, Jackson, Juneau, La Crosse, Monroe, Trempealeau, Vernon
Region 10: Columbia, Dane, Dodge, Jefferson, Marquette, Sauk
Region 11: Grant, Green, Iowa, Lafayette, Richland, Rock

Exhibit 5.1



RURAL AND URBAN AREAS

Judging from the WDA regional totals, with the exception of WDA Districts 2 and 10 (Milwaukee and Madison areas), and District 7 in northwest Wisconsin, the distribution of physicians would appear to be relatively even throughout the state. However, when we look separately at urban and rural areas, a very different picture emerges, particularly in Regions 5, 6 and 7 across the northern tier of counties.



Rural-urban codes used by Wisconsin AHEC identify communities or zipcode tabulation areas (ZCTAs) based on census data for the size and population density of that place or zipcode area. This classification system is intended to address problems arising from the application of the OMB metropolitan designations to entire counties, including large areas of these counties that have lower population density and are largely rural in character. The AHEC codes also do not incorporate patterns of commuting to work from rural areas to metropolitan areas as the Rural-Urban Commuting Area (RUCA) codes do. A system focused on commuting patterns is not necessarily the most useful way to think about delivery of healthcare in local communities.

R1 = Rural area with no population center greater than 2,500
R2 = Rural area with population center 2,500 – 9,999
R3 = Rural area with population center 10,000 – 49,999
Urban = Urbanized areas with population nucleus of 50,000 up to 1 million
Large Metro = Urbanized areas of 1 million or more (i.e., the Milwaukee metro area). Within the Milwaukee Metropolitan Area, the codes distinguish between Milwaukee county itself and surrounding metropolitan area.
For more information, see www.ahec.wisc.edu/workforce.

Exhibit 5.2

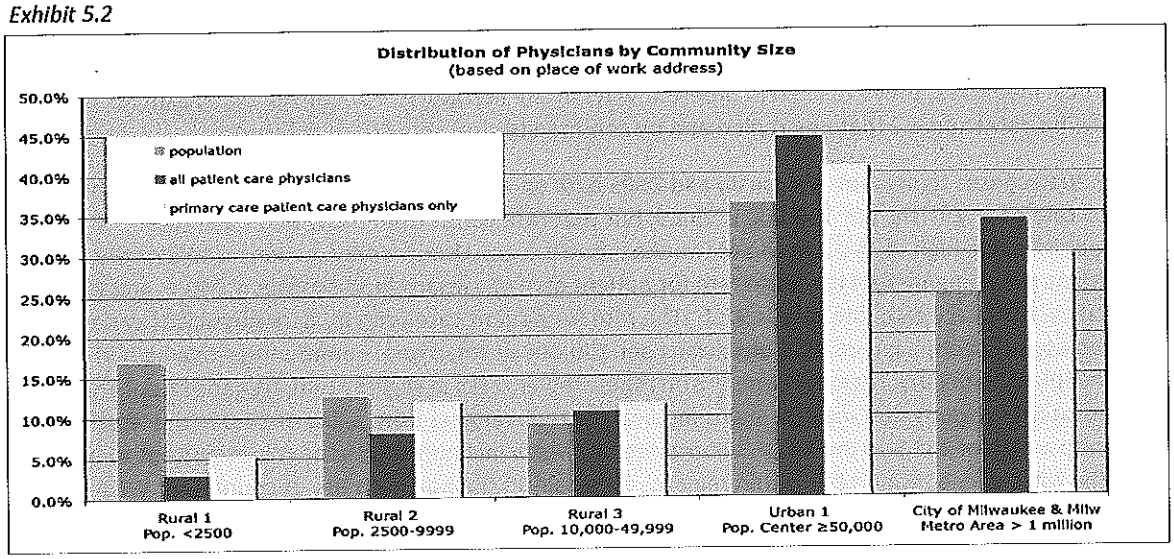


Exhibit 5.3 ***Urban-Rural Physician Distribution by Degree Type***

Degree Type / Place of Work Community Size	US MD (N=10,610)	DO (N=919)	IMG (N=2141)
R1: Pop < 2500	3.2%	3.4%	1.6%
R2: Pop 2500-9999	8.2%	10.2%	5.9%
R3: pop 10,000-49999	10.1%	15.0%	12.4%
Urban 1: Pop 50,000 to 1 million	45.4%	44.2%	39.5%
Urban 2: Milwaukee Metro Area	9.8%	8.9%	8.2%
Urban 3: Milwaukee	23.3%	18.2%	32.5%
Total	100%	100%	100%

D.O. physicians are only slightly more likely to be located in rural areas than MD physicians. International Medical Graduates are more likely to be located in large urban areas (see Exhibit 5.3).

COUNTY-LEVEL DATA

The 2011/12 Wisconsin Physician Survey responses were not sufficient to support a county-by-county analysis of physician supply, but we do have a county-level breakdown for all physicians using the mailing address on file with DSPS. By including only physicians under age 65, we can provide an approximation of the overall physician FTE and the primary care physician FTE serving a county. Please see the table in Appendix C.

Clinical facilities in areas with a shortage of physicians have difficulty providing training opportunities for students while meeting the needs of their patients. At the same time, several federal programs emphasize the importance of providing training opportunities for students in underserved areas. Wisconsin has some underserved counties where physicians and health care facilities do an exceptional job of providing health professions training opportunities. There are also some areas with higher physician rates per 100,000 that may have the capacity for providing more training opportunities than they do at present. Appendix D provides county-level information on the percentage of survey respondents who reported participating in health professions training activities.

Section 6.
PHYSICIAN RATES AND RATIOS

Two measures are commonly used to compare the number of health care providers in service areas, regions and nationally: the rate per 100,000 and the population to provider ratio. While these are reciprocal measures, they are used in different ways in the literature. For convenience, Exhibits 6.1 (statewide data) and 6.2 (data by region and by community size) show both measures.

Using 2010 census figures for Wisconsin and DSPS data on all physicians with an active license, the overall rate of physicians per 100,000 is 258.9, but that rate varies from a low of 63.2 in rural communities to a high of 497.2 in the Milwaukee metro area. Using survey responses to identify physicians providing patient care, the rate for patient care physicians in Wisconsin is 240.4, and for patient care primary care, the rate is 91.1. The rate for patient care primary care physicians varies by community size from a low of 29.1 physicians per 100,000 in small rural communities to a high of 110.4 in Milwaukee. Similarly, regional comparisons show lower rates in regions that are more rural and higher rates in regions that include major medical centers, ranging from a low of 54.0 in the Northwest region to a high of 130.5 in the South Central region, which includes Madison. It is important to note that the rates vary considerably within regions, especially in the northern tier of counties in WDA regions 5, 6 and 7.

The population to provider ratio is based on full time equivalent (FTE) physicians, with FTE based on a specific calculation of patient care hours. Exhibit 6.1 shows two different FTE calculations: head count and standardized FTE. For the head count FTE the number of physicians equals the number of FTE physicians, with one FTE as the average physician hours worked per week in 2011. Using the headcount FTE, our estimate of Wisconsin's population-to-physician ratio is 386:1 for all professionally active physicians. For physicians providing patient care, the ratio is 416:1. For primary care physicians only (family medicine, general internal medicine and pediatrics), the estimated ratio for Wisconsin is 1097:1, ranging from 3432:1 in rural communities with population less than 2500 to 862:1 in communities of 10,000 to 50,000 population.

The standardized FTE calculation is based on one FTE = 40 hours per week or more. For purposes of the Health Professions Shortage Area (HPSA) designations, the Health Resources and Services Administration (HRSA) defines one physician FTE as 40 hours a week or more. Part-time practice is counted at a rate of 4 hours = .1 FTE. The National Health Service Corps uses a similar standard to define full time practice: 40 hours per week for 45 weeks, or a minimum of 1800 hours per year. Using that standard, Wisconsin's effective physician FTE is 11,648 physicians (including 4432 in primary care) and the effective population-to-physician ratio for the state as a whole becomes 488:1. The population to patient care primary care physician ratio would be 1283:1. It is important to note that hospitalists are not separately identified as a specialty and usually end up included in the primary care count of general internal medicine physicians (see further information in Section 3 and Exhibit 3.3). If we eliminate hospitalists and count office-based primary care hours only, the effective primary care FTE is reduced to 3869 primary care physicians and the overall population to PCP ratio for the state would be about 1509:1.

Exhibit 6.1 ***Physician Rates and Population to Physician Ratios for Wisconsin***

		Rate, physicians per 100,000	Population to physician ratio head count*	Population to physician ratio standardized FTE**
Population, 2010 census	5,686,986			
Wisconsin-based physicians	14,722	258.9	386:1	
Wisconsin-based physicians under age 75	14,173	249.2	401:1	
Physicians providing patient care in Wisconsin†	13,670	240.4	416:1	488:1
Patient care primary care physicians†	5184	91.1	1097:1	1283:1
Patient care primary care -- office-based care only***	3769	66.3	1509:1	1741:1

*Head count: average patient care hours per year as reported on 2011/12 Wisconsin Physician Survey = 2090 hours.
**Standardized FTE: 1 FTE = 40 hours/week or more; minimum 1800 patient care hours/year. 4hrs = 0.1 FTE
†Patient care totals include physicians based in neighboring states who provide patient care in person in Wisconsin on a regular basis.
***Excludes primary care physicians practicing as hospitalists, and those in nursing homes, corrections or other facility-based care.

Exhibit 6.2 presents the physician rates and ratios for the geographic areas described in Section 5 above. These calculations assume that all of a physician's time is in the same region or size of community as the principal place of work. Some physicians travel to many different locations, in different counties or regions, to provide care.

Exhibit 6.2 ***Physicians per 100,000 and Population to Physician Ratio by Region and Community Size***

	Total population 2010 US Census	**All Wisconsin-Based Physicians:** By DSPS Address (could be residence or place of work)[1]	**Patient Care Physicians*** By principal place of work (based on weighted results of survey)	**Patient Care Physicians*** **Rate per 100,000** By principal place of work **All patient care settings**	**Patient Care Physicians*** **Ratio[2]: Population to Physician** **All patient care settings**	**Primary Care Patient Care Physicians*** By principal place of work (based on weighted results of survey)	**Primary Care Patient Care Physicians*** **Rate per 100,000** By principal place of work **All patient care settings**	**Primary Care Patient Care Physicians*** **Ratio[2]: Population to Primary Care Physician** **All patient care settings**
Wisconsin	**5,686,986**	**14,722**	**13,670**	**240.4 per 100,000**	**416:1**	**5184**	**91.1 per 100,000**	**1,097:1**
Rural /Urban								
Rural 1 – pop. <2500	966,501 (17.0%)	611 (4.2%)	397 (2.9%)	41.1	2432:1	282	29.1	3,432:1
Rural 2 – pop. 2500-9999	719,750 (12.7%)	1,039 (7.1%)	1,083 (7.9%)	150.4	665:1	618	85.8	1,165:1
Rural 3 – pop. 10,000-49,999	521,776 (9.2%)	1,366 (9.3%)	1,449 (10.6%)	277.7	360:1	606	116.1	862:1
Urban 1 – pop. ≥ 50,000	2,064,906 (36.3%)	6,503 (44.2%)	6,062 (44.5%)	293.6	341:1	2120	102.7	974:1
Urban 2 - Milw Metro	466,223 (8.2%)	2,318 (15.7%)	1,306 (9.6%)	280.2	357:1	509	109.3	915:1
Urban 3 - City of Milw	947,830 (16.7%)	2,885(19.6%)	3,339(24.5%)	352.3	284:1	1046	110.4	906:1

Exhibit 6.2 (continued)

	Total population 2010 US Census	All Wisconsin-Based Physicians: By DSPS Address (could be residence or place of work)[1]	Patient Care Physicians* By principal place of work (based on weighted results of survey)	Patient Care Physicians* Rate per 100,000 By principal place of work All patient care settings	Patient Care Physicians* Ratio[2]: Population to Physician All patient care settings	Primary Care Patient Care Physicians* By principal place of work (based on weighted results of survey)	Primary Care Patient Care Physicians* Rate per 100,000 By principal place of work All patient care settings	Primary Care Patient Care Physicians* Ratio[2]: Population to Primary Care Physician All patient care settings
Workforce Development Areas								
WDA 1 Southeast	464,062 (8.2%)	631 (4.3%)	949 (7.0%)	204.5	489:1	352	75.9	1,318:1
WDA 2 Milwaukee	947,735 (19.0%)	2885 (19.6%)	3339 (24.5%)	352.4	284:1	1046	110.4	906:1
WDA 3 W-O-W	608,173 (10.7%)	2506 (17.0%	1419 (10.4%)	233.3	429:1	565	92.8	1,077:1
WDA 4 Fox Valley	590,250 (10.4%)	1165 (7.9%)	1287 (9.4%)	218.0	459:1	533	90.3	1,107:1
WDA 5 Bay Area	623,328 (11.0%)	1244 (8.4%)	1181 (8.7%)	189.5	528:1	470	75.5	1,325:1
WDA 6 North Central	415,158 (7.3%)	1310 (8.9%)	769 (5.6%)	185.3	540:1	349	84.1	1,190:1
WDA 7 Northwest	178,774 (3.1%)	184 (1.2%)	167 (1.2%)	93.6	1069:1	97	54.0	1,851:1
WDA 8 West Central	462,606 (8.1%)	893 (6.1%)	985 (7.2%)	212.9	470:1	360	77.8	1,286:1
WDA 9 Western	295,244 (5.2%)	774 (5.3%)	406 (3.0%)	137.4	728:1	202	68.3	1,464:1
WDA 10 South Central	794,731 (14.0%)	2671 (18.1%)	2618 (19.2%)	329.4	304:1	1037	130.5	766:1
WDA 11 Southwest	306,925 (5.4%)	459 (3.1%)	517 (3.8%)	168.4	594:1	170	55.4	1,805:1

†Patient care totals include physicians based in neighboring states who provide patient care in person in Wisconsin on a regular basis.
*Total includes 32 for whom place of work location was not indicated.
[1]The number of all physicians in a region (column 3) may be less than the number of patient care physicians in that region (column 4) due to the difference between DSPS address and place of work address. This is particularly apparent where physicians may be commuting from a home in one region to a place of work in another, such as in the Milwaukee area.
[2]Ratios are based on headcount, 1FTE=2090 hours/year, the average for all physicians in Wisconsin providing patient care. Using a standardized FTE calculation based on a 40 hour week for 45 weeks (the standard for the National Health Service Corps), with 1 FTE = 40 hours/week or more, will result in a much lower FTE and higher population to provider ratio.

Comparison to national data and rates for other states

Wisconsin generally ranks right around the middle of the 50 states on overall physician supply measures. The Association of American Medicine Colleges (AAMC) prepares a regular report on physician supply based on information from the AMA Masterfile.[4] The *AAMC 2011 Physician Workforce Data Book* was prepared within a year of our study, so makes a good comparison, with the caution that the AAMC study method for determining active physicians and patient care physicians using AMA Masterfile data may result in higher overall physician counts than our method.[5] Information from the 2011 Physician Data Book is presented in Exhibit 6.3 along with rates based on DSPS data for all physicians and rates for patient care physicians based on our survey results. Wisconsin's overall physician rate of 252.6 per 100,000 places it 23rd among the states in the AAMC data. The state's rate of 91.1 patient care primary care physicians per 100,000 compares favorably to a national rate of 79.4, ranking 14th. Patient care

[4] *2011 Physician Workforce Data Book*, Association of American Medical Colleges, November 2011.
[5]While the reliability of the AMA Masterfile has improved in recent years, there is still concern about over-counting. See discussion of the AMA Masterfile data in *The Complexities of Physician Supply and Demand: Projections through 2025*, Center for Workforce Studies, AAMC, November 2008, pp. 77ff. In the past, physician information in the AMA Masterfile has been updated on a rolling basis, with each individual updated about every 4 years unless they actively manage their profile. Our information from the licensure database and the survey would be up to date because it is done in conjunction with license renewal. In the AMA data, physicians indicate whether they are primarily involved in direct patient care, administration, research, etc. Our data captures these multiple roles, so would count as patient care anyone providing patient care, even if that person is primarily engaged in administration, teaching or research. Our information on hours of work by setting allows us to refine that patient care count, however.

primary care rates for other states range from a low of 58.4 in Utah to a high of 111.5 in Vermont. Massachusetts ranks third among states with 107.7 primary care physicians per 100,000, giving some indication of the rate required to begin to meet population needs with expanded health care coverage.

Exhibit 6.3 ***Comparison to AAMC Physician Data***

	Physicians per 100,000			
	All Physicians	Patient Care Physicians	Primary Care Physicians	Patient Care Primary Care Physicians
AAMC 2011 data for Wisconsin	**252.6**	**223.6**	**95.4**	**86.2**
Median for the 50 states	244.2	215.1	91	80.4
Wisconsin rank	23rd	19th	19th	14th
DSPS data for WI-based physicians				
all physicians	258.9		98.5	
physicians < 75	249.2		95.4	
physicians < 65	212.5		88.9	
Survey data for patient care physicians				
all physicians		227.5		91.1
physicians < 75		225.1		90.1
physicians < 65		212.7		86.8

Section 7.
SHORTAGE AREAS AND SPECIALTIES

Provider shortages in rural communities generally, and specifically in the northwest, western and southwest areas of the state, are evident from the distribution data in the preceding sections. Less clear from this data, but very real, are problems with access to care for low-income populations in our urban centers.

The Health Resources and Services Administration (HRSA) uses a fulltime equivalent primary care provider ratio of 2000:1 as the target ratio for determining the number of additional primary care practitioners needed in areas designated as underserved. The HRSA count of primary care FTE includes medical residents at 0.1 FTE and a portion of the hours of OB/GYN practitioners in primary care service settings. As of July 2012, HRSA estimated that Wisconsin needs 228 additional primary care physicians to reach a 2000:1 population to primary care practitioner ratio in those areas currently designated as underserved. For mental health shortage areas, HRSA uses a population to psychiatrist ratio of 10,000:1 as the target and calculates that 145 additional psychiatrists are required in underserved areas. The Kaiser Family Foundation website www.*statehealthfacts.org* references the same target ratios, but had somewhat higher estimates as of February 2012, with 242 primary care physicians and 150 psychiatrists needed for Wisconsin.[6]

Using data on hours of work from the 2011/12 Wisconsin Physician Survey, a standardized FTE calculation (1 FTE = 40 hours or more of patient-related care per week, with part-time practitioners counted at 0.1 FTE for every 4 hours), and counting office-based care hours only, provides the closest approximation we have to the HPSA methodology. Counting office-based care hours only reduces the FTE by about 30%, giving us the estimation of current primary care shortages by community size and by region shown in Exhibit 7.1. The regional shortage estimates are lower, reflecting the higher staffing

[6] Kaiser Family Foundation, *Statehealthfacts.org*, data for 2012 downloaded from www.statehealthfacts.org, 6/22/2012. The Kaiser Foundation estimates a total of 811,553 professionally active physicians in the US and 46,113 psychiatrists. Using the January 2012 US Census population estimate of 312,780,968, this yields a population to psychiatrist ratio of 6783:1 for the US as a whole, with psychiatry making up 5.7% of the active physician population

levels in more urbanized areas of each region. These estimates are for primary care only and do not include psychiatrists.

Exhibit 7.1 ***Primary Care Physician Rates and Ratios Using Standardized FTE Calculation and Office-based Hours Only***

	Population	# required for population to primary care physician ratio of 2000:1	# primary care physicians based on standardized FTE calculation	Rate per 100,000	Population to physician ratio based on standardized FTE	Additional primary care physicians required to reach minimum 2000:1 in each area
Wisconsin	**5,686,986**	**2,843**	**3,131**	**55.1**	**1,816:1**	
Rural /Urban						
Rural 1 – pop. <2500	966,501 (17.0%)	483	188	19.4	5,146:1	295
Rural 2 – pop. 2500-9999	719,750 (12.7%)	360	430	59.7	1,674:1	
Rural 3 – pop. 10,000-49,999	521,776 (9.2%)	261	367	70.4	1,412:1	
Urban 1 – pop. ≥ 50,000	2,064,906 (36.3%)	1,032	1,265	61.3	1,632:1	
Urban 2 – Milwaukee Metro	466,223 (8.2%)	233	344	73.8	1,354:1	
Urban 3 – City of Milwaukee	947,830 (16.7%)	474	537	56.7	1,764:1	
Workforce Development Areas						
WDA 1 Southeast	464,062 (8.2%)	232	230	49.5	2,022:1	3
WDA 2 Milwaukee	947,735 (19.0%)	474	537	56.7	1,764:1	
WDA 3 W-O-W	608,173 (10.7%)	304	390	64.1	1,560:1	
WDA 4 Fox Valley	590,250 (10.4%)	295	333	56.4	1,773:1	
WDA 5 Bay Area	623,328 (11.0%)	312	330	53.0	1,887:1	
WDA 6 North Central	415,158 (7.3%)	208	215	51.7	1,935:1	
WDA 7 Northwest	178,774 (3.1%)	89	62	34.9	2,861:1	27
WDA 8 West Central	462,606 (8.1%)	231	232	50.2	1,992:1	
WDA 9 Western	295,244 (5.2%)	148	131	44.5	2,246:1	16
WDA 10 South Central	794,731 (14.0%)	397	590	74.3	1,347:1	
WDA 11 Southwest	306,925 (5.4%)	153	81	26.4	3,793:1	73

The regional rates and ratios are based on averages over an entire region, including both rural areas and urban centers. As previously noted, however, regional averages obscure significant differences in access to primary care in more rural communities and within urban areas. While at least 119 more primary care physicians are needed to reach a minimum population to physician ratio of 2000:1 in all regions of Wisconsin, it is clear from the rural/urban data that the shortages are much more severe in smaller rural areas.

The Department of Health Services Primary Care Office manages the federal shortage designation process for Wisconsin. The designation process is complex, and involves measures of population health as well as physician supply. See Appendix E for information on currently designated health professions shortage areas.[7]

The HPSA designation process does not include determinations of shortages in physician specialties other than primary care and psychiatry. However, the 2011/12 Wisconsin Physician Survey included a question asking respondents to indicate up to three specialties for which they or their patients had difficulty scheduling referral appointments. Overall, 25% of patient care physicians indicated that they have difficulty arranging timely appointments when making referrals for their patients. Not surprisingly,

[7] For an explanation and further information on the federal shortage designation process, see http://bhpr.hrsa.gov/shortage/

the number was highest in rural areas (30-38% of physicians indicating difficulty with referrals) and lowest in suburban Milwaukee (15%). The specialties most frequently cited are listed in Exhibit 7.2.

*Exhibit 7.2 **Specialties for which Physicians Experience Difficulty Scheduling Referral Appointments***

Specialty	Of those indicating difficulty with referrals, % who listed this specialty as one of three most problematic
Psychiatry, psychology, mental health services	43%
Dermatology	33%
Neurology	32%
Rheumatology	20%
Primary Care	15%
Various pediatric subspecialties	13%
Gastroenterology	11%
Orthopedics, back, spine, hand surgery	11%
Endocrinology	9%
Pulmonology	5%
Neurosurgery	4%
Dental, pediatric dental	4%
Cardiology	4%

Numerous attempts have been made in recent years to determine physician requirements for various individual specialties. Projections based on the Physician Supply and Demand model developed by the Health Resources and Services Administration (HRSA) are frequently cited.[8] Using 2000 as the base year and assuming that physician supply and demand were balanced in that year, HRSA projected physician requirements through 2025 based on the growth and aging of the population and the level of care provided in 2000. Specialties projected to have the highest percentage growth were cardiology and urology, reflecting the projected needs of an aging population, and the lowest percentage growth projections were for pediatrics and obstetrics and gynecology. Appendix F compares the HRSA estimates for physician requirements in individual specialties in 2020 to the number of physicians providing care in Wisconsin (including estimates from the physician survey for the number of physicians in neighboring states who provide care in person in Wisconsin on a regular basis). Totals for all physicians, physicians under 75 and physicians under 65 are provided, along with the HRSA projections. Caution is in order when using this data, particularly when applied to individual specialties, since the estimated requirements are based on the organization of healthcare delivery in base year 2000 and reflect national patterns rather than Wisconsin-specific data.

The HRSA projections shown in Appendix F reflect a scenario driven primarily by changing demographics. HRSA and the AAMC have explored other scenarios based on a growing role for non-physician clinicians (primarily physician assistants and advanced practice nurses), high economic growth, and physician productivity increase. With passage of the Affordable Care Act and increasing attention to the need to adjust graduate medical education to train the specialties most needed for a reorganized health care delivery system, this is an area of intense interest and current research.

Section 8.
ESTIMATED OVERALL REQUIREMENTS FOR PATIENT CARE PHYSICIANS

Analysis of the relationship between the supply of health care providers and health outcomes and estimation of the ideal population to physician ratio is the focus of much current research, particularly with the introduction of innovations in the organization of health care delivery. While comparison with

[8] *The Physician Workforce: Projections and Research into Current Issues Affecting Supply and Demand,* Bureau of Health Professions, Health Resources and Services Administration, U.S. Department of Health and Human Services, December 2008..

other studies is difficult due to variation in the basis for determination of physician rates and FTEs, several key studies do provide the opportunity for an overall assessment of Wisconsin's current physician supply.

AAMC

The AAMC estimates for Wisconsin in the *2011 State Physician Workforce Data Book* are quite similar to the estimates from our own study, so the data on national averages and rates for other states provide a useful comparison.

Exhibit 8.1

AAMC 2011 State Physician Workforce Data Book – Physician Supply Data

Based on July 2010 census data and physician information from December 2010 AMA Masterfile

	National Rate	Wisconsin	Wisconsin Rank	Lowest Quartile	State Median	Highest Quartile
Active physicians per 100,000	258.7	252.6	23	176.4 (MS) to 213.2 (KS)	244.2	269.6(MN) to 415.5 (MA) median: 307.0
Patient care physicians per 100,000	219.5	223.6	19	159.4 (MS) to 187.9 (KS)	215.1	233.7 (MN) to 314.8 (MA) median: 269.0
Active primary care physicians per 100,000	90.5	95.4	19	63.6 (MS) to 77.4 (SC)	91.0	100.3 (PA) to 132.0 (MA) median: 111.5 (NY)
Patient care primary care physicians per 100,000	79.4	86.2	14	58.4 (UT) to 69.8 (KY)	80.4	100.3 (PA) to 88.5 (WA) median: 94.6 (MD)

Using the AAMC's rates for Wisconsin, 2582 additional patient care physicians, including 478 in primary care, would be needed for Wisconsin to reach the median of the top quartile for patient care and primary care physicians. Our own data show somewhat higher numbers of patient care and primary care physicians, but Wisconsin would still need 1629 additional physicians (196 in primary care) to reach the median of the top quartile.

HRSA

The December 2008 HRSA study, *The Physician Workforce: Projections and Research into Current Issues Affecting Supply and Demand*, provides another means of assessing current shortages in Wisconsin. The HRSA study used data from the National Ambulatory Medical Care Survey (NAMCS) and several other sources to calculate physician per population ratios reflecting current usage patterns and patterns of care by age group. Overall, for the base year 2000, the study estimated that approximately 253 physicians per 100,000 population were engaged primarily in patient care. This estimate of physician supply was based on data on physician activity from the AMA Masterfile for physicians younger than 75, and assumed that physician demand and supply were balanced in the base year (2000). The ratios developed varied substantially by medical specialty, but suggested that the aging of the population will contribute to faster growth, proportionally speaking, in the demand for specialty services relative to primary care. These ratios were then used to project physician requirements through 2020, based on changing population demographics.

Exhibit 8.2

HRSA 2008 Physician Workforce Study – Projected Physician Requirements for 2010 through 2020

Physicians per 100,000

	All physicians	All patient care physicians	Primary care physicians	Non primary care physicians
2010	276	261	96	164
2015	283	267	98	169
2020	291	274	100	174

Using the baseline physician requirements projected for 2010 in the HRSA study and comparing to our study results provides the following estimation of current overall shortages in Wisconsin.

Exhibit 8.3

Number of Physicians Necessary in Wisconsin to Reach the Physician Requirements Estimated for 2010 In the 2008 HRSA Physician Workforce Study

	All WI-based physicians	All patient care physicians*	Primary care physicians*	Non primary care physicians*
Wisconsin				
Current number of active physicians	14722	13670	5184	8486
Number required to meet HRSA estimated requirement for 2010	15696	14843	5460	9383
Number (short) or over HRSA projected requirement for 2010**	(974)	(1,173)	(276)	(897)
Rural /Urban				
Rural 1: pop. <2500	(2,057)	(2,125)	(646)	***
Rural 2: pop. 2500-9999	(948)	(796)	(73)	***
Rural 3: pop. 10,000-49,999	(74)	87	105	(2219)***
Urban 1: pop. ≥ 50,000	804	673	138	535
Urban 2: Milwaukee Metro	1,031	90	62	28
Urban 3: City of Milwaukee	269	866	136	729
Workforce Development Areas				
WDA 1 Southeast	(650)	(262)	(93)	(169)
WDA 2 Milwaukee	269	866	136	730
WDA 3 W-O-W	827	(168)	(19)	(149)
WDA 4 Fox Valley	(464)	(254)	(33)	(220)
WDA 5 Bay Area	(476)	(446)	(128)	(318)
WDA 6 North Central	164	(314)	(50)	(265)
WDA 7 Northwest	(309)	(299)	(75)	(224)
WDA 8 West Central	(383)	(223)	(84)	(138)
WDA 9 Western	(41)	(365)	(82)	(283)
WDA 10 South Central	477	544	274	269
WDA 11 Southwest	(388)	(284)	(125)	(160)

*Patient care physician totals include physicians in neighboring states providing patient care on a regular basis in WI.
**Calculation of total over (short) for the state includes 32 individuals for whom practice location in WI is not known.
***Many non-primary care physicians are of course based in major hospital facilities located in larger communities. For this reason, non-primary care specialty shortages in rural areas have been combined and listed under Rural 3. To understand this issue more clearly would require separate consideration of hospital-based and non-hospital based specialties, and determination of which specialties (such as psychiatry) require more immediate community access. Shortages in non-primary care specialties would be most apparent in the regional hospital centers in communities of over 50,000 that serve the more rural areas of the state.

As noted earlier, the HRSA model uses 2000 as the base year and assumes that supply and demand were in balance in that year. If physicians were over-counted in the base year (not unlikely, given the nature of the AMA Masterfile), then the projected requirements for future years could be high if more accurate data on number of active physicians is available in future years.

While our methodology included all physicians regardless of age, we did have more detailed information on level of activity for the survey respondents than is available in the AMA Masterfile, allowing us to more accurately determine the number of patient care physicians in Wisconsin. That could mean that comparison to the HRSA projections shows a greater discrepancy than is actually the case. An alternative that may be closer to the data used by HRSA would be to use information from the licensure database only, for physicians under 75. See Appendix F for this comparison.

Other Studies

A study by Chiang-Hua Chang, et al., *Primary Care Physician Workforce and Medicare Beneficiaries' Health Outcomes*, recently published in JAMA, used two different methods of measuring primary care physician workforce for a study of patient outcomes related to availability of primary care in the adult population.[9] The first method used 2007 AMA Masterfile data on physicians 26-65 years of age engaged in more than 20 hours of professional activity per week to establish the primary care physician per population rate for a Medicare Primary Care Service Area (PCSA). The second method determined primary care physician clinical FTE by adding relative value units (RVUs) reflected in Medicare claims data for a PCSA and dividing by relative value units per FTE as determined by surveys of large medical clinics in two previous studies.[10] Although there was marked variation across PCSAs and a low correlation between the two primary care workforce measures, the authors concluded that "A higher level of primary care physician workforce, particularly with an FTE measure that may more accurately reflect ambulatory primary care, was generally associated with favorable patient outcomes."

The authors noted however, that the context in which primary care is delivered may be very important to the outcome, and should be a focus of measurement efforts in the future.

> Our findings suggest that a higher local workforce of primary care physicians has a generally positive benefit for Medicare populations, but that this association may not simply be the result of having more physicians trained in primary care in an area. Instead, associations were much stronger with a measure of primary care activity that was linked to a central concept of primary care—ambulatory care delivered in an office or clinic setting by physicians trained in primary care.[11]

The Chang study's first method of determining the availability of primary care physicians in an area (using the AMA Masterfile) is similar to our total of Wisconsin-based primary care physicians below age 65 obtained from the DSPS licensure lists (see county-level data presented in Appendix E).

Method 1: Age- and sex-adjusted office-based AMA Masterfile clinically active physicians per 100 000 population, by quintile for PCSAs in the study population [Chang, 2012]

Quintile	Lowest	2	3	4	Highest
Median	17.4	37.9	47.5	58.0	81.3

On a county-by-county basis (and relying on DSPS mailing address), Wisconsin's primary care physician per 100,000 rate ranges from a high of 220.7 (Wood County) to a low of 0 (Florence County, with a median of 58.9. The rate for the state as a whole is 89.0, putting it above the median of the highest quintile in this study. Of course, we cannot redistribute physicians at will, so we need to look at smaller areas to assess shortages. County data is not necessarily a good proxy for service area (for example, the primary care physicians in Wood County reflect Marshfield Clinic physicians who may provide care in many outlying clinics in other counties).

The second method used for the Chang study (based on RVUs) produces an FTE calculation more closely tied to the actual delivery of patient care, similar to the hours of outpatient clinic-based primary care reported by survey respondents. Making the assumption that a standardized FTE calculation (40 hours or more = 1 FTE) would be similar to the FTE calculation based on RVUs per FTE, we might then compare the rates for Wisconsin with the quintiles identified in the study.

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[9] Chiang-Hua Chang, PhD, Therese A. Stukel, PhD, Ann Barry Flood, PhD, and David C. Goodman, MD, MS, *Primary Care Physician Workforce and Medicare Beneficiaries' Health Outcomes,* JAMA. 2011 May 25; 305(20): 2096–2104.

[10] One FTE equaled 4664 work relative value units for family physicians and 4554 work relative value units for general internists in 2007.

[11] Chang et al., p. 9.

Method 2: Age-, sex-, and race-adjusted office-based primary care FTEs per 100 000 of study beneficiaries, based on RVU calculations, by quintile for PCSAs in the study population [Chang, 2012]

Quintile	Lowest	2	3	4	highest
Median	64.7	77.4	84.1	91.2	103.2

For Wisconsin, the primary care FTE per 100,000 using office-based primary care hours reported on the survey and weighting the results for age, gender, specialty and urban-rural location ranges from 19.4 in small rural areas to 73.8 in the greater Milwaukee area (outside the city of Milwaukee). The statewide mean is 66.3. By this measure, all regions in Wisconsin come up well short of the highest quintile.

Another recent report (June 2012) by the Georgetown University Center on Education and the Workforce, entitled simply *Healthcare*, provides information on healthcare demand and the occupational outlook for the healthcare industry as a whole.[12] The report predicts that health care demand will grow twice as fast as the national economy over the next eight years, resulting in 5.6 million new jobs, but it takes a somewhat different view of the shortage issue observing that, for all health occupations, "shortages do not exist across the board; rural areas and certain specialties are disproportionately affected." The report observes that the impact of Accountable Care Organizations (ACOs) is difficult to assess, but that they will likely lead to greater reliance on nurses, social workers and other case managers.

> Today's doctors are more likely to specialize in a particular aspect(s) of care; a consulting physician may make a difficult diagnosis, then hand the patient off to a team of other healthcare personnel to follow through on treatment. These changing and increasingly specialized roles make it especially hard to predict where skill shortages are likely to be.

The report concludes that, while some analysts maintain that shortages are overstated, the demand for physicians will continue to rise over the next decade.

Section 9.
SHORT TERM PROJECTIONS OF SUPPLY

Primary care physicians who will be completing residency and entering practice in 2019 have already been selected and will begin medical school in the fall of 2012. For other specialties, the timeline is even longer. What can we predict from the number currently in the medical education pipeline?

Between 1992 and 2001, the two medical schools in Wisconsin graduated approximately 3370 physicians. Of this number, 1256 (37.3%) are now active in Wisconsin at ten or more years after graduation.[13] During those same years, 2600 graduates of other US or Canadian medical schools (USMGs) and 1018 international medical school graduates (IMGs) were issued Wisconsin licenses and continue to practice in the state. This represents a net gain of about 1500 physicians over the number of Wisconsin medical graduates, or an average of 150 per year.

While the proportion of Wisconsin medical graduates who practice in Wisconsin has been very steady through the years, Wisconsin's medical schools produce more graduates today than they did forty years ago and have further increased their entering class size in the last several years. For the next eight years

[12] Anthony P. Carnevale, et al., *Healthcare*, Georgetown University Center on Education and the Workforce, June, 2012

[13] "Active In Wisconsin" is based on the DSPS license status and mailing address. This retention rate has been fairly consistent over the years. Graduates who complete a residency out of state and return to practice in Wisconsin generally have done so by the end of the tenth post-graduate year. Most graduates from 2005 to the present are still in the process of completing residency training (requiring from three to seven years or more) and establishing a practice.

(until 2020), assuming that the same proportion of UW and MCW graduates is retained, and that Wisconsin continues to recruit USMGs and IMGs at the same rate as at present, the number of physicians beginning practice in Wisconsin will exceed the number retiring. However, a projected annual population growth rate of slightly less than 1% over that period, will mean a decline in the rate per 100,000 of physicians under age 75 from 249 today to 239 in 2020.

The table in Appendix G shows year by year, since 1999,

- the numbers of UWSMPH and MCW graduates who are retained from graduate medical education,
- the number of other U.S. medical graduates and international medical graduates recruited through residency training positions in Wisconsin and post-GME,
- information on recent graduating classes at the two medical schools and anticipated graduates based on currently enrolled students,
- estimates of annual relocations to other states based on survey responses about future plans,
- estimates of recruitment of other USMGs and IMGs based on the experience of 1992-2001 graduation cohorts, and
- the number of currently practicing physicians reaching age 75 each year.

Predicting the future supply of physicians is hardly this simple, however. As noted by the authors of the November 2011 Wisconsin Hospital Association report on the physician workforce:

> Reform is expected to increase the number of people with insurance by 32 million, or 10.3 percent of the U.S. population; those individuals with coverage, on average, use twice as many health care services as those who do not. Wisconsin already has a high percentage of its citizens covered by insurance or government programs. The increased number of covered individuals is expected to be only 120,000, or two percent of the Wisconsin population. Therefore it is likely that there will be a much greater NEW demand for health services outside of Wisconsin than within the state, meaning that there will be increased efforts at recruiting away Wisconsin physicians by organizations outside the state; likewise is will be more difficult for Wisconsin to maintain its current level of in-migration of new physicians. This means that Wisconsin must compete at a higher level to retain its workforce.[14]

Extrapolating from the most recent prior count of active physicians done in Wisconsin (a survey done by the DHS Bureau of Health Information in 2000), the WHA report based its projections of future shortages on a baseline estimate of 10,144 patient care physicians in 2010. The WHA projection of supply, based on the current UW and MCW enrollment, estimates an increase of about 2730 physicians from 2010 to 2030 after factoring in retirement, recruitment, and losses to other states. That estimate is then reduced by 1030 to account for changing lifestyle expectations for younger physicians, giving a final estimate of 1700 additional physicians compared to the 2010 starting point.[15]

Our analysis of the DSPS data on physicians licensed in Wisconsin, in combination with information from the 2011/12 Wisconsin Physician Survey, gives a much higher estimate of the current physician workforce in Wisconsin: 14,179 active Wisconsin-based physicians under 75. With the new data, we have accurate information on physician age and can better predict the number of retirements each year, but we still lack good information on annual turnover and net losses to other states. Our projection is more optimistic with respect to retention, assuming an annual loss of 2% to other states, and less optimistic with respect to the number of Wisconsin graduates who stay in the state and recruitment from other states. We do not make any adjustment for changing lifestyle expectations. Our projection of physician supply shows an increase of about 670 by 2020, then a decline as retirements begin to outpace the production of new physicians. Neither our projection nor the WHA projection takes into

[14] 100 New Physicians a Year: An Imperative for Wisconsin, Wisconsin Hospital Association (November 2011).
[15] Ibid., p. 15.

account the recently announced major expansion of MCW class size and continued modest growth at UWSMPH.

The WHA study did three projections of physician demand for 2030. The first projection used the HRSA-developed estimates of FTE physician requirements described above. A second projection assumed increases in utilization at the same rate as in the last twenty years. A third projection factored in changes in health care delivery to constrain costs and reduce the rate of increase in utilization. The resulting estimates of the total number of physicians required in 2030 ranges from 12,921 for the low estimate to 15,154 for the high estimate, with the middle estimate of 14,038. Using just the middle estimate, this would indicate a total deficit of 2,196 compared to the WHA-projected supply, or an annual deficit growing by 110 physicians each year for each of the next 20 years.

Our more pessimistic projection nevertheless estimates a total of about 13,618 physicians in 2030 because we start with a much higher baseline. Compared to the WHA middle estimate of demand for 2030, this would be a shortfall of 438 or an annual deficit growing by only 22 per year. While this might seem a more optimistic assessment, it clearly doesn't keep pace with population growth, let alone other demographic and policy changes that may increase demand. As the review of various estimates of physician requirements in Section 9 demonstrates, it is not at all clear what an ideal ratio of physicians to population would be.

It is, however, a certainty that shortages in rural and underserved areas will persist without programs specifically designed to recruit, train and retain students who are likely to practice in these areas. This distribution problem will become much worse if there is greater overall pressure on supply because we have failed to strategically expand training programs or are unable to recruit enough physicians to meet the need. For the short term, the most important area for expansion is in primary care residency positions overall, and rural residency programs in particular. Without that expansion, Wisconsin faces increasing difficulty in attracting and retaining new graduates.

Section 10.
SUMMARY and FUTURE RESEARCH

Predictions of a growing national shortage of physicians in primary care and certain other specialties apply to Wisconsin as well, but the scale of the problem for Wisconsin remains unclear. The Wisconsin physician workforce is younger than national average, but the population is older, so there will be a different balance of supply and demand pressures and timing of the shortage.

In the last few years, Wisconsin's two medical schools have made modest increases in class size. A proposal for creation of a new medical school in Wisconsin has recently been in the news, and a major increase in the MCW class size is under discussion. At the same time, medical education programs around the country have been expanding dramatically. The American Association of Medical Colleges (AAMC) announced in May 2012 that the nation was on track to increase the number of medical graduates by thirty percent by 2016.[16] Assessing how these developments, in combination with expansion of insurance eligibility in other states, will affect Wisconsin's ability to continue to recruit physicians into the state will require a better understanding of what attracts other U.S. medical graduates to Wisconsin to practice.

There is a lively debate and growing body of research on how population growth and changing population demographics, the growing burden of chronic disease, changes in the organization of health care delivery and utilization of non-physician clinicians, and the nature and availability of health

[16] *New Projections Show Medical School Enrollment on Pace to Reach Thirty Percent Increase by 2016*, AAMC, May 3, 2012. Available at https://www.aamc.org/newsroom/newsreleases/281296/new-projections.html

insurance coverage will affect the number of physicians required to meet the population's health care needs and reduce health disparities. There is also a growing appreciation of the critical importance of realigning graduate medical education both nationally and in Wisconsin.

This study provides baseline information needed to assess whether the current number of Wisconsin medical school graduates, the retention rate of Wisconsin graduates, and the rate of recruitment of U.S. medical school graduates and international medical graduates, if sustained, will be sufficient to replace retiring physicians and maintain the current population to physician ratio as the population increases. Answering this question will require regularly updated projections of physician supply and demand based on alternate scenarios and emerging research on the impact of various changes in the organization of health care delivery. These scenarios will need to consider a range of questions, including

1. How will national changes in physician supply and demand affect Wisconsin's ability to retain graduates and recruit physicians from outside the state?

2. How will changes in the funding of graduate medical education and the availability of residency positions affect Wisconsin's ability to recruit and retain the physicians and specialties it needs?

3. How will changes in loan repayment programs, payment incentives and the Health Professions Shortage Area (HPSA) designation process affect the recruitment of physicians to Wisconsin's underserved areas?

4. Is the current population to physician ratio in Wisconsin sufficient? If not, how many additional physicians in which specialties are needed to address current shortages?

5. What adjustment to the population to physician ratio is needed to accommodate
   - the increasing proportion of the population over 65
   - changing average hours of work for physicians under 50, reflecting different lifestyle expectations for younger physicians, and a greater number of women physicians
   - earlier retirement or reduction of hours by physicians over 55 (perhaps influenced by an improving economy, frustration at changes in delivery of health care and administrative requirements, etc.)
   - the increasing burden of chronic disease and impact of environmental factors on health
   - improvements in health due to increased emphasis on prevention and wellness

6. What will be the impact of increasing utilization of physician assistants and advanced practice nurses?

7. How will the implementation of electronic medical records, patient-centered medical home and accountable care organizations affect physician productivity?

The next few years will bring additional research on these questions that will enable us to develop a much more accurate model of physician supply and demand. In order to apply that knowledge to Wisconsin, we will need to maintain a regular program of data collection and analysis to keep our baseline information up to date, monitor new developments and better inform policy development and the planning process at our academic programs and health care organizations. Requiring a survey in conjunction with physician license renewal that includes at least a minimum data set is a necessary first step. We will also need similar studies of physician assistants, advanced practice nurses and other health professionals to understand the interplay of changes in the organization of health care delivery and demand for physicians.

* * *

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Jennifer Thelen and staff at Chamberlain Research Consultants were very adept and efficient in working with the various agency partners involved in implementing the survey. Support from the Medical Examining Board, the Wisconsin Hospital Association, the Wisconsin Medical Society and the Wisconsin Association of Medical Group Managers was critical in improving the response rate on the survey.

Support for programming and hosting the survey online, and the time of DWD staff for consultation and data analysis, was provided through the Wisconsin State Health Care Workforce Development (SHCWD) Planning Grant from the National Center for Health Workforce Analysis at the Bureau of Health Professions (BHPr)/Health Resources and Services Administration (HRSA). The UW School of Medicine and Public Health and the Area Health Education Centers (AHEC) program contributed Ms. Sugden's time for the project. As principal investigator, Ms. Sugden is responsible for the accuracy of the information in the report and any errors or omissions.

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APPENDIX A

2011/12 WISCONSIN PHYSICIAN SURVEY DATA SUMMARY

Source: 2011/12 Wisconsin Physician Workforce Survey

Background

The 2011/12 Wisconsin Physician Survey was funded with a *State Health Care Workforce Development (SHCWD)* planning grant from the Bureau of Health Professions/HRSA/DHHS. The grant was awarded to the Area Health Education Centers (AHEC) program at the University of Wisconsin School of Medicine and Public Health, in partnership with the Department of Workforce Development (DWD). Nancy Sugden, Assistant Dean at the UWSMPH and Director of the Wisconsin AHEC program served as Principal Investigator. The Wisconsin Medical Examining Board approved implementation of the survey as part of the 2011-12 MD and DO license renewal process. DWD and the Department of Safety and Professional Services (DSPS) coordinated implementation of the survey, using an outside vendor (Chamberlain Research Consultants) to program and host the survey online. The Office of Economic Advisors at DWD serves as custodian of the data

The survey was developed in consultation with the members of the Wisconsin Council on Medical Education and Workforce (WCMEW), the Wisconsin Healthcare Workforce Data Collaborative (WHWDC) and staff at the Department of Workforce Development and the Department of Health Services. A variety of questionnaires from other states and national organizations were reviewed in compiling the questionnaire, including surveys done by New York, Massachusetts, Michigan and the Association of American Medical Colleges. The *Proposed Minimum Data Sets for Physicians, PAs and NPs,* distributed at February 2011 State Health Care Workforce Development grantees, was implemented in so far as possible. A copy of the survey questions is available on the AHEC website (www.ahec.wisc.edu/workforce).

The overall response rate for the survey was 28.9% (after exclusion of trainees). In order to assess the quality of the survey sample, we used information from a variety of other sources, including the Association of American of Medical Colleges (AAMC), the American Medical Association (AMA), and information provided by the Wisconsin Medical Society from its member database. Data on all licensed physicians received directly from DSPS allowed us to do a direct comparison on the key variables of age, gender, specialty, medical school and current location.

Responses were determined to be broadly representative of the Wisconsin physician population as a whole, with a few exceptions: compared to the total Wisconsin physician population, the response rate was slightly higher for women physicians, primary care physicians and DO graduates; the response rate for surgeons, international medical graduates and physicians age 40-59 was slightly lower; and survey participation was slightly lower in the Western and West Central regions. The proportion of Wisconsin medical school graduates (both UW and MCW) was about the same in the survey sample as in the physician population as a whole. To correct for potential over- or under-sampling of physicians with certain characteristics, we weighted the survey results for age, gender, specialty and location. The weighting method used does not assume independence across variables but looks at their joint probability distribution. For details on the weighting procedure, see *Technical Notes for the 2012 Wisconsin Physician Workforce Report*, available on the AHEC website (www.ahec.wisc.edu/workforce).

For further information on the analysis of the survey sample, see 2011/12 Wisconsin Physician Survey: Preliminary Report, March 15,2012, also available on the AHEC website.

The survey results are organized as follows:

I. All Wisconsin-based physicians

N= 14,722 (survey responses = 4293)

*The Wisconsin Physician Workforce Report presents data for all physicians active in Wisconsin, including those based in neighboring states. This summary includes Wisconsin-based physicians only, hence some variation in the frequency distributions.

Demographics

Population: 14,722 WI-Based Physicians

Age [Q6]

Under 35	7.4%
35-44	26.7%
45-54	30.4%
55-64	24.3%
65-74	8.5%
75 and older	2.7%

Average age	50.9 yrs

Gender [Q7]

Male	29.0%
Female	71.0%

Citizenship status [Q13]

Native born U.S. citizen	83.1%
Naturalized U.S. citizen	12.1%
Permanent Resident]	3.2%
Temporary (H-1B) or Exchange (J-1) visa	1.2%
Other	0.2%

Race/Ethnic/Cultural Heritage [Q8&9]
(multiple response item)

Under-represented minority*	5.1%
Other minority	12.3%
All minority (unduplicated count)	16.7%
Non-minority or no response	83.3%

*Minorities underrepresented in the health professions: American Indian, Black, Hispanic, Pacific Islander and Southeast Asian

Minority group as % all minority physicians

American Indian or Alaska Native	4.3%
Asian-East Asia (origins in Japan, China, Korea, Taiwan)	14.1%
Asian-Southeast Asia (origins in Burma/Myanmar, Thailand, Cambodia, Laos, Vietnam or Malaysia)	2.4%
Asian-South Asia (origins in India, Pakistan)	32.2%
Asian-Other	4.3%
Black or African American	10.3%
Filipino	11.9%
Hawaiian or Pacific Islander	0.3%
Hispanic	13.8%
Other	9.9%

Are you able to communicate with patients in language other than English? [Q10]

Yes	30.3%
No	69.7%

Detail on other languages spoken

English only	70%
Spanish	12%
Other European languages	12%
Hindi and other languages of the Indian subcontinent	8%
Chinese, Japanese or Korean	2%
Filipino, Tagalog	2%
Southeast Asian languages	<1%
Arabic, Farsi, other Middle East languages	1%
African languages	1%
All other	1%

Distribution of minority physicians by Workforce Development Area, as % of all active physicians in each region

	Minority physicians
WDA 1 Southeast	24.2%
WDA 2 Milwaukee	26.5%
WDA 3 W-O-W	16.3%
WDA 4 Fox Valley	16.4%
WDA 5 Bay Area	10.6%
WDA 6 North Central	16.9%
WDA 7 Northwest	9.3%
WDA 8 West Central	12.9%
WDA 9 Western	15.8%
WDA 10 South Central	12.0%
WDA 11 Southwest	18.6%
WDA 1 Southeast	

Urban or Rural Background

Population: 14,722 WI-Based Physicians

Where attended high school [Q11]
(Multiple responses possible)

Wisconsin	35.2%
Another state	50.6%
Another country	14.1%

Size of hometown community [Q12]

town or city < 50,000	36.7%
suburb in metro area	22.9%
city 50,000-500,000	20.3%
large city (> 50,000)	20.1%

Comparison of high school community size to current practice location

Community Size - Place of Work / High School community size	Population <2500	Population. 2500-9999	Population 10000-49999	Population 50000-less than 1 million	Milwaukee Metropolitan Countties	City of Milwaukee
<50000. not a suburb	62%	53%	40%	37%	35%	6%
Suburb of large city	11%	20%	18%	21%	30%	6%
City 50,000-500000	11%	15%	12%	25%	14%	5%
City > 500000	16%	12%	30%	17%	22%	83%

Medical Education

Population: 14,722 WI-Based Physicians

Where attended medical school* [Q17&18]

University of Wisconsin Medical School/UWSMPH	17.2%
Medical College of Wisconsin/MCW†	15.7%
Iowa	4.4%
Illinois	14.1%
Michigan	3.3%
Minnesota	4.0%
Another state	26.3%
Canada	0.7%
International-Offshore	12.9%
All other international	1.5%

†MCW total includes physicians who attended Marquette Medical School or Milwaukee Medical College, predecessors of MCW.

Degree* [Q16]

MD	94.0%
DO	6.0%

Residency training

Population: 14,722 WI-Based Physicians

Location of initial residency training position [Q26]
(Survey response this item = 3995)

Completed residency program in Wisconsin	38.9%
Completed residency program in another state	59.2%
Residency program in Canada	0.6%
In another country	1.3%

Where first licensed [Q21]
(Survey response this item = 4281)

Wisconsin	41.1%
another state	58.6%

Graduates of MCW & UWSMPH only
32.4 % of those currently practicing in WI
(Survey response this item = 1376)

Completed residency program in Wisconsin	60.1%
Completed residency in another state and returned to Wisconsin to practice	39.9%

Of all physicians practicing in WI, proportion who completed both UME and GME in Wisconsin	19.5%

Initial medical residency [Q25]

Allergy and Immunology	0.2%
Anesthesiology	5.7%
Dermatology	1.1%
Emergency Medicine	3.8%
Family Medicine	18.9%
Internal Medicine	23.2%
Internal Medicine-Pediatrics	1.1%
Medical Genetics	0.0%
Medical Physics	0.0%
Nuclear Medicine	0.1%
Neurology	1.4%
Obstetrics & Gynecology	4.6%
Occupational Medicine	0.3%
Ophthalmology	1.9%
Otolaryngology	1.5%
Pathology	3.0%
Pediatrics	8.4%
Physical Medicine & Rehabilitation	1.2%
Preventive Medicine	0.1%
Psychiatry	4.6%
Radiology-diagnostic	3.9%
Radiology-therapeutic/Radiation Oncology	0.8%
Surgery (General, Neurological, Colon & Rectal, Ortho, Plastic, Vascular, Other)	9.6%
Urology	1.3%
Rotating Internship or Transitional Year only	0.3%
Other	2.2%
No post-graduate training	0.5%
no response	0.1%

Comparison of Initial Residency to Current Practice Specialty

Initial Residency \ Principal Practice Specialty	General practice in this specialty	Subspecialty practice in this specialty	Some other specialty
Family Medicine	88.5%	3.6%	7.9%
Internal Medicine	51.9%	43.5%	4.6%
Pediatrics	66.4%	30.8%	2.8%

Current Status, Work Setting and Practice Specialty — Population: 14,722 WI-Based Physicians

Principal practice specialty all WI-based physicians [Q29]

General Practice	0.9%
Family Medicine*	16.8%
General Internal Medicine*	12.7%
Internal Medicine-Cardiology	2.2%
Other subspecialty Internal Medicine	7.4%
Allergy & Immunology	0.6%
Dermatology	1.3%
General Pediatrics & Med-Peds	6.3%
Subspecialty. Pediatrics	1.9%
OB/GYN	4.7%
General Surgery	3.4%
Orthopedic Surgery	3.2%
Surgery-other specialties	3.0%
Otolaryngology	1.6%
Urology	1.3%
Ophthalmology	2.3%
Emergency Medicine	5.3%
Psychiatry	5.0%
Anesthesiology	5.8%
Radiology (including Nuclear Med)	5.2%
Radiation Oncology	0.5%
Pathology	2.3%
Neurology	1.8%
Physical Medicine & Rehabilitation	1.4%
Other-Patient Care	2.5%
Non-patient care	0.5%

*Geriatrics specialists are included with Family Medicine and General Internal Medicine, as appropriate.

Participation in Teaching, Administration and Research Activities [Q48]
(as indicated in hours of work question)

Teaching & Academic Practice	50.9%
Administration	33.6%
Research	17.6%

Current status [Q1&Q33&Q38]

Provide patient care in Wisconsin, full time (≥ 32 hrs/wk)	77.4%
Provide patient care in Wisconsin, part time (<32 hrs/wk	10.5%
Working in WI, but not providing pt care	2.3%
Providing pt care in another state	2.0%
Not currently active	7.7%

Principal work setting [Q2]

Hospital	36.3%
Office	47.1%
Residential facility	1.4%
Teaching, research, other	8.2%
Does not apply-not currently active	7.0%

Practicing as a hospitalist [Q32]
(caring for acutely ill hospitalized patients only)

Yes	6.9%

Percent patient care time in principal specialty [Q31]

none	9.8%
20% or less	1.4%
25% - 40%	1.6%
45%-60%	3.9%
65%-80%	6.2%
85% or more	77.2%

Cross-disciplinary specialties [Q30]
Not specifically listed on the survey, but provided by respondent, therefore not necessarily a complete count.

Addiction Medicine	0.6%
Geriatric Medicine	1.0%
Hyperbaric Medicine	0.2%
Pain Medicine	1.2%
Genetics	0.5%
Hospice & Palliative Care	0.9%
Integrative/Alternative Medicine	0.1%
Occupational Medicine	0.6%
Preventive Medicine and Public Health	0.4%
Sleep Medicine	0.3%
Sports Medicine	0.7%

Future Plans

Population: 14,722 WI-Based Physicians

PHYSICIANS CURRENTLY PROVIDING PATIENT CARE IN WISCONSIN (N=12,936)

How much longer are you planning to maintain your patient care practice [Q42]

Less than 2 years	3.0%
2-5 years	12.0%
6-10 years	19.0%
11-15 years	18.2%
16-20 years	16.0%
21-25 years	13.1%
26-30 years	9.3%
More than 30 years	8.7%
No response	0.6%

Plans for your patient care practice in the next two years [Q43] (multiple response item)

Continue patient care at current level of activity	87.5%
Increase patient care hours	3.6%
Significantly reduce patient care hours	3.7%
Temporarily stop providing patient care in WI	0.2%
Retire with the next 2 years	1.8%
Relocate to a different practice in WI	1.2%
Relocate to a practice outside WI	2.0%
Other/uncertain	2.7%
No response	0.3%

PHYSICIANS WHO ARE WISCONSIN-BASED AND ACTIVE IN MEDICINE, BUT NOT PROVIDING PATIENT CARE IN WI (N=623)

Current place of employment [Q39]

Patient care facility	36.4%
State or local health dept or other government agency	10.0%
University academic or research facility	15.2%
Healthcare business or corporation	16.2%
Non-healthcare business or corporation	2.7%
Other	17.7%
Locum tenens*	0.9%
No response	0.8%

**Locum tenens was not specifically listed as a response option in the first version of the survey, but many respondents supplied the information. This count may be incomplete.*

Plan to provide pt care in WI in the future? [Q40]

Currently seeking a position	8.8%
Plan to return within next 2 years	5.3%
Plan to return within next 5 years	4.4%
Plans are uncertain	33.7%
Not planning to return to patient care in WI	0.8%

Patient care status

Providing patient care, but only in another state	45.5%
Not providing patient care	54.5%

PHYSICIANS WHO ARE WISCONSIN-BASED, BUT NOT CURRENTLY ACTIVE IN MEDICINE (N=1163)

If not currently active, indicate work status [Q34]

Retired	71.6%
Permanently disabled	4.2%
Working in another field & no plans to return	3.9%
Unemployed, seeking work in medicine	3.7%
Unemployed, seeking work in another field	0.6%
Taking time out & planning to return*	15.2%
No response	0.9%

When planning to return [Q35] (N=176)

Currently seeking a position	25.5%
Return within 2 years	38.4%
Return within 5 years	0.9%
Plans uncertain	33.3%
No response	1.9%

Planning to return to patient care practice in WI? [Q36] (N=176)

Plan to return to patient care in WI	67%
Plan to return to WI, but not to patient care	5%
No immediate plans to return to WI	25%
No response	2%

II. Wisconsin-based patient care physicians — N= 12,936 (survey responses=3676)

Hours of Work in Patient Care and other Professional Activities — Population: 12,936 WI-Based Physicians

Average weeks worked in the past year [Q44]

4 weeks or less	1.6%
5 to 26 weeks	6.3%
27-45	16.1%
46	9.1%
47	3.7%
48	22.2%
49	6.5%
50	11.5%
51	1.2%
52	21.9%
Average weeks worked	45 wks/yr

Hours per week in patient-related care [Q45]

less than 20	7.2%
20-31 hrs/week	10.0%
32-39 hrs/week	12.2%
40 hours/week	13.7%
More than 40 hrs/week	56.9%
Average hours per week	47.2 hrs/wk

Other professional activities (multiple response item) [Q49]

Research	17.6%
Teaching-classroom	14.2%
Teaching-clinical setting	46.7%
Administration in a private practice	14.9%
Administration in a medical school, hospital, health plan, nursing home	18.7%
Medical examiner	0.4%
Board of health	0.9%
Medical adviser to public or community heath agency	6.1%
Other	5.8%
None of the above	34.5%

Hours/week in these other activities during past 12 months

Average hours/week in other professional activities, reported by the 65.4% who indicated other professional activities	10.4 hrs
Average hours/week in other professional activities, averaged over all Wisconsin-based patient care physicians	6.6 hrs

Distribution of hours of patient-related care, by setting [Q45]

Hospital	31.4%
Emergency Room	6.5%
Office-based Primary Care	27.9%
Office-based Specialty Care	25.9%
Telemedicine	0.5%
Nursing Home or Extended Care Facility	1.2%
Home Visits	0.2%
Corrections	0.6%
Other Pt Care	5.9%

Annual hours of patient-related care [Q44&45]

Average annual hours	2142 hrs

Distribution of annual hours of patient-related care

Less than 900 hours/year	10.9%
900-1799 hours/year	21.3%
1800 – 2142 hours/year	20.4%
More than 2142 hours/year	47.4%

Average hours per week in patient care and all other professional activities, for physicians providing patient care

Average hours per week	53.8 hrs/wk

Annual hours of work in patient care and all other professional activities, for physicians providing patient care

Average annual hours	2430 hrs

Practice Locations

Population: 12,936 WI-Based Patient Care Physicians

Number of practice locations in Wisconsin [Q46]

1 location	52.9%
2 locations	20.6%
3 locations	9.0%
4 locations	3.3%
5 locations	1.2%
More than 5 locations	1.7%
No response	11.3%

Do you also provide patient care in another state? [Q41]

Yes, but only via telemedicine	1.0%
Yes, in person	3.2%
Both in person and via telemedicine	0.2%
No	94.6%
No response	0.9%

Do you personally provide services primary care or mental health services in the outpatient setting at any of your practice locations? [Q57]

Yes	41.1%

Number of practice locations for physicians providing primary care or mental health services in the outpatient setting [Q46] (N for this item = 5263)

1 location	61.4%
2 locations	18.7%
3 locations	6.0%
4 locations	2.3%
5 locations	1.0%
More than 5 locations	0.9%
No response	9.7%

Detail on Principal Practice Setting

Population: 12,936 WI-Based Patient Care Physicians

Principal practice setting [Q51]

Non-federal hospital and adjacent outpatient clinics	52.7%
VA or military hospital and associated outpatient facilities	2.8%
Free standing clinic/health center/urgent care clinic/ambulatory surgery center	23.0%
Individual private practice	11.8%
Nursing home or other non-hospital extended care facility	0.6%
Correctional facility	0.8%
State/local health dept or other public/ community health setting, including free clinics	2.3%
Other	5.5%
No response	0.6%

Clinical setup at principal practice setting [Q52]

Single physician practice	7.4%
Single physician practice that shares expenses with other physician practices	1.5%
Single specialty group practice	27.5%
Multi-specialty group practice	56.0%
Locum Tenens	0.6%
Other (specify)	6.5%
No response	0.4%

Are you a salaried employee at your principal practice location? [Q50]

Not a salaried employee	25.9%
Salaried employee with a practice I own or co-own	9.9%
Salaried employee with a corporation or practice that I do not own	22.1%
Salaried employee of a managed care organization	2.6%
Salaried employee of a hospital	12.6%
Salaried employee of a university or teaching institution	16.9%
Federal employee	2.5%
State government employee	1.8%
Salaried employee of another type of organization	2.8%
No response	2.9%

Number of physicians at this practice location [Q53]

1 physician	7.2%
2-5 physicians	20.0%
6-10 physicians	15.8%
11-20 physicians	12.8%
21-50 physicians	10.7%
51-75 physicians	4.1%
76-100 physicians	3.1%
More than 100	24.5%
No response	1.6%

Are any of the following advanced practice providers a part of your practice group at this location? [Q54]
(multiple response item)

PA	47.7%
NP	52.7%
CNM	7.0%
CRNA, CNS and other	5.0%

Unduplicated count of physicians whose practices include a PA, NP, CNM or other advanced practice provider	68.9%

Do you also provide medical oversight through a collaborative agreement with a physician assistant or nurse practitioner-managed practice at another location? [Q54b]

Yes	7.4%

III. Physicians based in a neighboring state and regularly providing care in person in Wisconsin N=734 (survey responses = 199)

Demographics

Population: 734 Physicians in Neighboring States

Age [Q6]

Under 35	10%
35-44	38%
45-54	28%
55-64	17%
65-74	6%
75 and older	<1%

Average age	46.6 yrs

Gender [Q7]

Male	73%
Female	27%

Citizenship status [Q13]

Native born U.S. citizen	73%
Naturalized U.S. citizen	19%
Permanent Resident]	6%
Temporary (H-1B) or Exchange (J-1) visa	2%
Other	

Race/Ethnic/Cultural Heritage [Q8&9]
(multiple response item)

Under-represented minority*	
Other minority	
All minority (unduplicated count)	
Non-minority or no response	

*Minorities underrepresented in the health professions: American Indian, Black, Hispanic, Pacific Islander and Southeast Asian

Are you able to communicate with patients in language other than English? [Q10]

Yes	
No	

Detail on other languages spoken

English only	
Spanish	
Other European languages	
Hindi and other languages of the Indian subcontinent	
Chinese, Japanese or Korean	
Filipino, Tagalog	
Southeast Asian languages	
Arabic, Farsi, other Middle East languages	
African languages	
All other	

Urban or Rural Background

Where attended high school [Q11]
(Multiple responses possible)

Wisconsin	8%
Another state	71%
Another country	21%

Size of hometown community [Q12]

Town or city < 50,000	25%
Suburb in metro area	27%
City 50,000-500,000	18%
Large city (> 50,000)	31%

Medical Education

Population: 734 Physicians in Neighboring States

Where attended medical school* [Q17&18]

University of Wisconsin Medical School/UWSMPH	5%
Medical College of Wisconsin/MCW†	2%
Iowa	4%
Illinois	25%
Michigan	4%
Minnesota	16%
Another state	19%
Canada	<1%
International-Offshore	4%
All other international	20%

†MCW total includes physicians who attended Marquette Medical School or Milwaukee Medical College, predecessors of MCW.

Degree* [Q16]

MD	83%
DO	15%
MBBS/MBChB	3%

Residency Training

Population: 734 Physicians in Neighboring States

Location of initial residency training position [Q26]

Completed residency program in Wisconsin	5%
Completed residency program in another state	94%
Residency program in Canada	
In another country	1%

Where first licensed [Q21]

Wisconsin	7%
Another state	93%

Practice Specialty

Population: 734 Physicians in Neighboring States

Principal practice specialty all WI-based physicians [Q29]

General Practice	
Family Medicine	7%
General Internal Medicine	11%
Internal Medicine-Cardiology	3%
Other subspecialty Internal Medicine	15%
Allergy & Immunology	
Dermatology	2%
General Pediatrics & Med-Peds	6%
Subspecialty. Pediatrics	2%
OB/GYN	2%
General Surgery	0%
Orthopedic Surgery	2%
Surgery-other specialties	2%
Otolaryngology	1%
Urology	2%
Ophthalmology	0%
Emergency Medicine	19%
Psychiatry	2%
Anesthesiology	6%
Radiology (including Nuclear Med)	4%
Radiation Oncology	2%
Pathology	4%
Neurology	3%
Physical Medicine & Rehabilitation	1%
Other-Patient Care	1%
Non-patient care	

Practicing as a hospitalist [Q32]
(caring for acutely ill hospitalized patients only)

Yes	13%

Participation in Teaching, Administration and Research Activities [Q48]
(as indicated in hours of work question)

Teaching & Academic Practice	36%
Administration	18%
Research	13%

Current Status and Work Setting **Population: 734 Physicians in Neighboring States**

Full time or Part time [Q33]

Full time (≥ 32 hrs/wk)	87%
Part time (<32 hrs/wk	13%

Current status [Q38]

Provide care in person at a location in WI	96%
Provide care in WI both in person and via telemedicine	3%
Provide care in WI as locum tenens	1%

Principal work setting [Q2]

Hospital	58%
Office	40%
Residential facility	1%
Teaching, research, other	1%

IV. Physicians located in other states and providing care in person in Wisconsin on an occasional basis N=260 (survey responses = 71)

Full time or Part time [Q33]

Full time (≥ 32 hrs/wk)	75%
Part time (<32 hrs/wk	25%

Current status [Q38]

Provide care in person at a location in WI	94%
Provide care in WI as locum tenens	5%
Provide care as camp physician or similar capacity	1%

Medical Education [Q17-18]

Completed undergraduate medical education at UW or MCW	5%
Other states	57%
International Medical Graduates	38%

Residency Training [Q26]

Completed residency training in Wisconsin	11%
Completed residency training in another state	89%

Principal work setting [Q2]

Hospital	71%
Office	23%
Residential facility	1%
Teaching, research, other	5%

V. Physicians maintaining a Wisconsin license, but NOT professionally active in the state

N= 5578 patient care physicians based outside WI (survey responses = 1564)
N= 309 non patient care physicians based outside WI (survey responses = 123)

Current status [Q1 and Q33]

Provide patient care in another state full time]	82%
Provide patient care in another state part time]	12%
Not working as a physician	6%

Principal work setting [Q2]

Hospital	38%
Office	40%
Residential facility	1%
Teaching, research, other	15%
Not working as a physician	6%

Age [Q6]

35-44	25%
45-54	31%
55-64	31%
65-74	11%
75 and older	3%

Average age	52.9 yrs

Gender [Q7]

Male	78%
Female	22%

Citizenship status [Q13]

Native born U.S. citizen	75%
Naturalized U.S. citizen	18%
Permanent Resident]	3%
Temporary (H-1B) or Exchange (J-1) visa	2%
Other	1%

Medical Education [Q17-18]

Completed undergraduate medical education in WI	15%
Other states or Canada	64%
International Medical Graduates	21%

Residency Training [Q26]

Completed residency training in Wisconsin	27%
Completed residency training in another location	73%

Plan to provide pt care in WI in the future? [Q40]

Currently seeking a position [1]	4%
Plan to return within next 2 years [2]	3%
Plan to return within next 5 years [3]	4%
Plans are uncertain [4]	55%
Not planning to return to patient care in WI [5]	28%
No response	6%

Current place of employment [Q39]

Patient care facility	58%
State or local health dept or other govt agency	8%
University academic or research facility	12%
Healthcare business or corporation	6%
Non-healthcare business or corporation	1%
Other	16%

Principal practice specialty all WI-based physicians [Q29]

General Practice	1%
Family Medicine*	12%
General Internal Medicine*	8%
Internal Medicine-Cardiology	3%
Other subspecialty Internal Medicine	7%
Allergy & Immunology	<1%
Dermatology	1%
General Pediatrics & Med-Peds	4%
Subspecialty. Pediatrics	2%
OB/Gyn	3%
General Surgery	3%
Orthopedic Surgery	3%
Surgery-other specialties	4%
Otolaryngology	2%
Urology	1%
Ophthalmology	3%
Emergency Medicine	4%
Psychiatry	5%
Anesthesiology	6%
Radiology (including Nuclear Med)	15%
Radiation Oncology	1%
Pathology	4%
Neurology	2%
Physical Medicine & Rehabilitation	1%
Other-Patient Care	1%
Non-patient care	1%

*Geriatrics specialists are included with Family Medicine and General Internal Medicine, as appropriate.

VI. Trainees: residents and fellows (PG3 and above) N=1162 (survey responses = 431)

Note: Survey responses from residents and fellows were not weighted. Survey respondents do not include PG-1 and PG-2 trainees not yet licensed.

Demographics

Population: 1162 Residents or Fellows

Location (DSPS address)

Wisconsin	85%
Another state	15%

Age* [Q6]

Under 35	73%
35-44	20%
45-54	4%
55-64	2%
65 and older	<1%

Average age	33.6yrs

Gender* [Q7]

Male	58%
Female	42%

Citizenship status [Q13]

Native born U.S. citizen	76%
Naturalized U.S. citizen	10%
Permanent Resident]	7%
Temporary (H-1B) or Exchange (J-1) visa	3%
Other	4%

Race/Ethnic/Cultural Heritage [Q8&9]
(multiple response item)

Under-represented minority	10%
Other minority/non-white	20%
White or no response	70%

Are you able to communicate with patients in language other than English? [Q10]

Yes	43%
No	57%

Detail on other languages spoken

English only	57%
Spanish	16%
Other European languages	12%
Hindi and other languages of the Indian subcontinent	8%
Chinese, Japanese or Korean	5%
Filipino, Tagalog	-
Southeast Asian languages	<1%
Arabic, Farsi, other Middle East languages	2%
African languages	<1%
All other	4%

Urban or Rural Background

Where attended high school [Q11]
(Multiple responses possible)

Wisconsin	27%
Another state	54%
Another country	19%

Size of hometown community [Q12]

Town or city < 50,000	33%
Suburb in metro area	21%
City 50,000-500,000	24%
Large city (> 50,000)	22%

Medical Education

Population: 1162 Residents or Fellows

Where attended medical school* [Q17&18]

University of Wisconsin Medical School/UWSMPH	12%
Medical College of Wisconsin/MCW†	14%
Iowa	3%
Illinois	15%
Michigan	2%
Minnesota	2%
Another state	33%
Canada	<1%
International-Offshore	2%
All other international	17%

Degree* [Q16]

MD	88%
DO	9%
MBBS/MBChB	3%

Current Status

Population: 1162 Residents or Fellows

Are you currently enrolled in a post-graduate training program? [Q3]

Internship or residency	57%
Fellowship	43%

Year of post-graduate training [Q4]

1	-
2	1%
3	29%
4	27%
5	17%
6	13%
7	3%
8	6%
No response	4%

Location of initial residency training position [Q26]

Completed residency program in Wisconsin	62%
Completed residency program in another state	26%
Residency program in Canada	-
In another country	2%
No response	10%

Where first licensed [Q21]
(Survey response this item =)

Wisconsin	74%
another state	26%

Completing more than one residency/fellowship [Q27]

Yes	9%

Initial medical residency [Q25]

Allergy and Immunology	<1%
Anesthesiology	7%
Dermatology	1%
Emergency Medicine	3%
Family Medicine	11%
Internal Medicine	23%
Internal Medicine-Pediatrics	2%
Medical Genetics	-
Medical Physics	-
Nuclear Medicine	<1%
Neurology	2%
Obstetrics & Gynecology	3%
Occupational Medicine	-
Ophthalmology	1%
Otolaryngology	1%
Pathology	2%
Pediatrics	10%
Physical Medicine & Rehabilitation	1%
Preventive Medicine	<1%
Psychiatry	4%
Radiology-diagnostic	9%
Radiology-Therapeutic/Radiation Oncology	1%
Surgery (General, Neurological, Colon & Rectal, Ortho, Plastic, Vascular, Other)	14%
Urology	1%
Other	1%

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APPENDIX B

HOURS OF WORK DETAIL BY AGE, GENDER AND SPECIALTY

AGE GROUP DATA

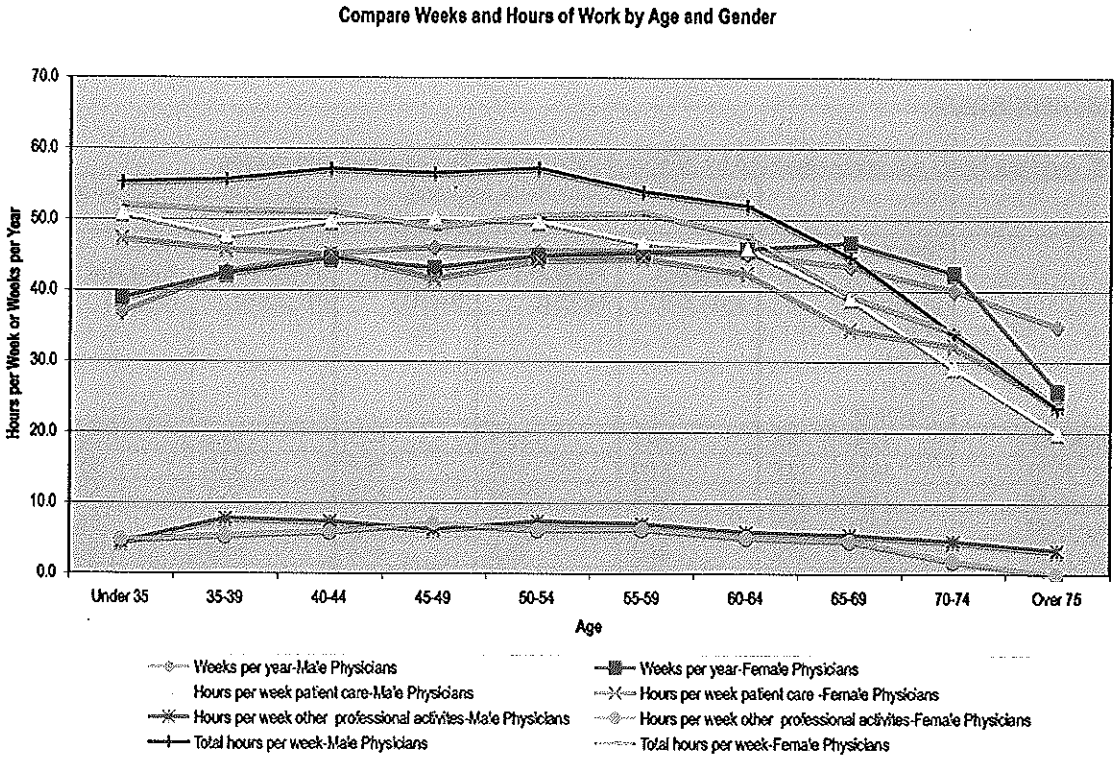
B1. Average hours per week reported by Wisconsin physicians, by age group and gender

			Average Patient Care Hours per Week			Total Hours per Week, all professional activities		
	Number of physicians providing patient care in Wisconsin		All Physicians N=13,670	Male Physicians N=9,516	Female Physicians N=4,154	All Physicians N=13,670	Male Physicians N=9,516	Female Physicians N=4,154
Under 35	1140	8%	49.3	50.9	47.5	53.9	55.3	52.3
Age 35-39	1839	13%	47.0	47.8	46.0	54.0	55.7	51.5
Age 40-44	2195	16%	48.2	49.8	45.3	55.1	57.2	51.4
Age 45-49	2094	15%	47.5	50.3	41.9	54.1	56.6	49.1
Age 50-54	2348	17%	48.3	49.8	44.4	55.4	57.3	50.8
Age 55-59	1887	14%	46.4	46.9	44.7	53.4	54.0	51.2
Age 60-64	1276	9%	45.4	46.0	42.6	51.3	52.0	47.9
Age 65-69	557	4%	38.9	39.1	34.7	44.5	44.7	39.5
Age 70-74	195	1%	29.6	29.3	32.4	34.0	34.0	34.4
Over 75	139	1%	20.2	20.1	24.0	23.5	23.5	24.0
All physicians	**13670**	**100%**	**46.6**	**47.5**	**44.7**	**53.1**	**54.2**	**50.7**

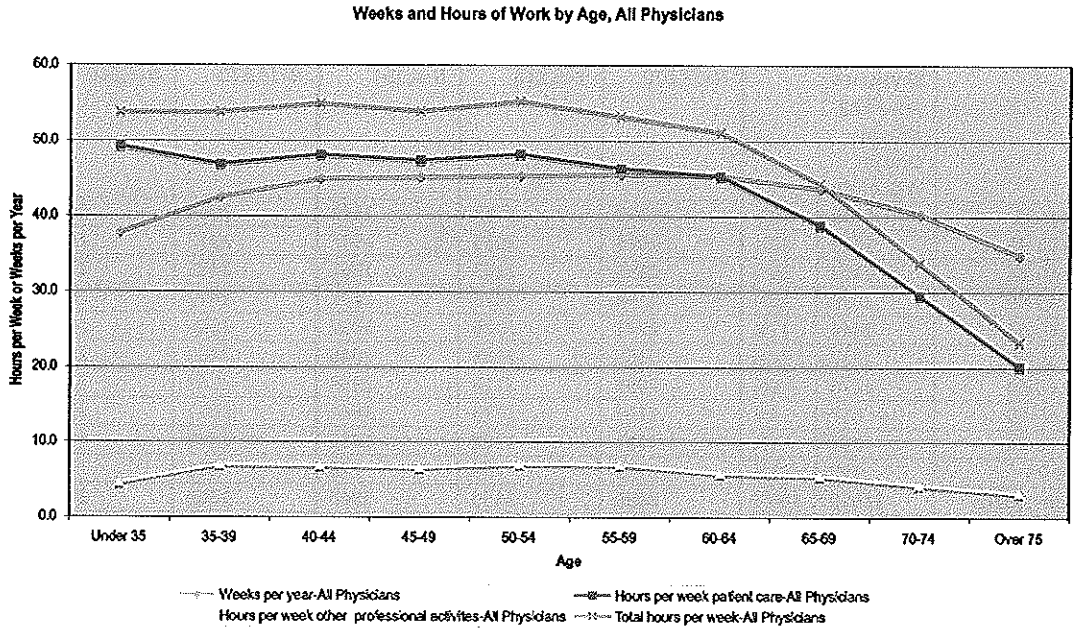
B2. Average annual hours reported by Wisconsin physicians, by age group and gender

			Average Patient Care Hours per Year			Total Hours per Year, all professional activities		
	Number of physicians providing patient care in Wisconsin		All Physicians N=13,670	Male Physicians N=9,516	Female Physicians N=4,154	All Physicians N=13,670	Male Physicians N=9,516	Female Physicians N=4,154
Under 35	1140	8%	1890	1933	1841	2048	2074	2019
Age 35-39	1839	13%	2028	2086	1947	2317	2411	2184
Age 40-44	2195	16%	2156	2263	1966	2455	2577	2236
Age 45-49	2094	15%	2194	2373	1832	2479	2658	2117
Age 50-54	2348	17%	2241	2325	2032	2555	2655	2306
Age 55-59	1887	14%	2156	2188	2046	2465	2503	2333
Age 60-64	1276	9%	2098	2119	1994	2367	2393	2241
Age 65-69	557	4%	1767	1773	1644	2011	2018	1882
Age 70-74	195	1%	1281	1262	1483	1463	1454	1558
Over 75	139	1%	792	794	728	921	926	728
All physicians	**13670**	**100%**	**2090**	**2155**	**1940**	**2369**	**2445**	**2194**

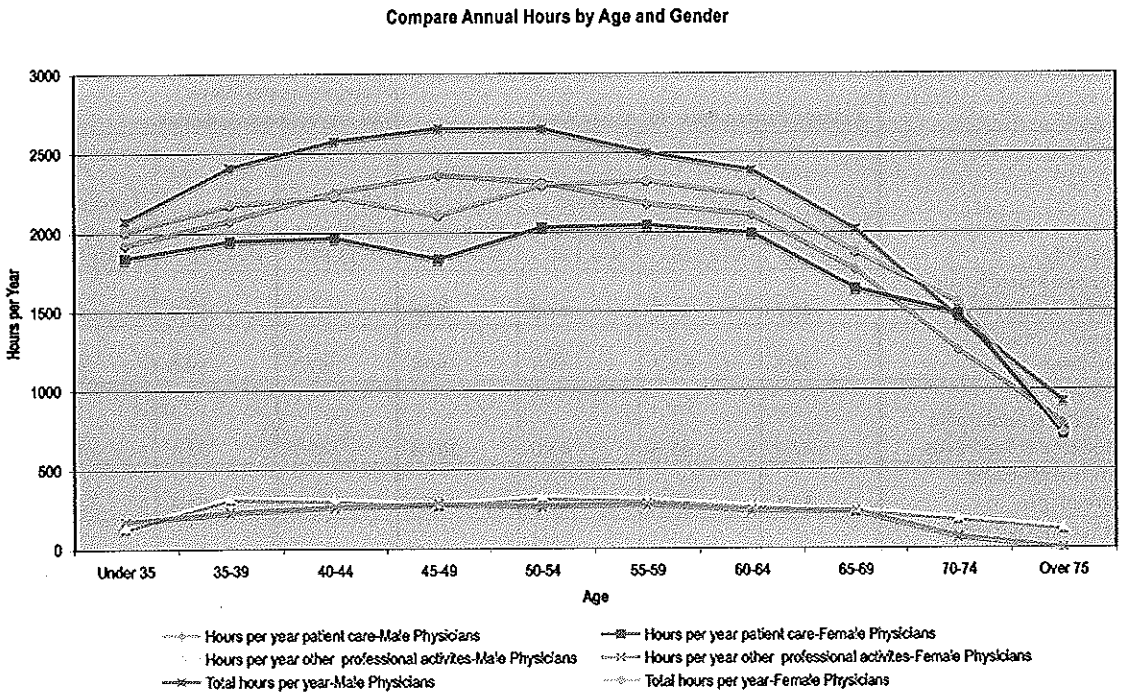
B3.


Compare Weeks and Hours of Work by Age and Gender
Hours per Week or Weeks per Year
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Under 35
35-39
40-44
45-49
50-54
55-59
60-64
65-69
70-74
Over 75
Age
Weeks per year-Male Physicians
Weeks per year-Female Physicians
Hours per week patient care-Male Physicians
Hours per week patient care -Female Physicians
Hours per week other professional activites-Male Physicians
Hours per week other professional activites-Female Physicians
Total hours per week-Male Physicians
Total hours per week-Female Physicians

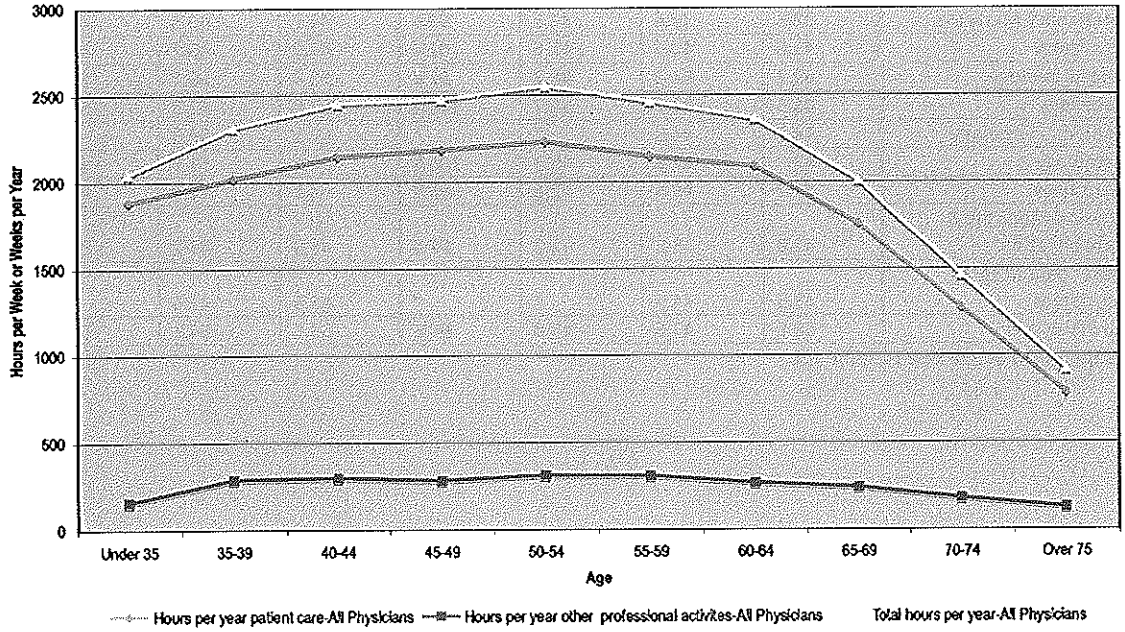
B4.


Weeks and Hours of Work by Age, All Physicians
Hours per Week or Weeks per Year
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Under 35
35-39
40-44
45-49
50-54
55-59
60-64
65-69
70-74
Over 75
Age
Weeks per year-All Physicians
Hours per week patient care-All Physicians
Hours per week other professional activites-All Physicians
Total hours per week-All Physicians

B5.


Compare Annual Hours by Age and Gender
Hours per Year
3000
2500
2000
1500
1000
500
0
Under 35
35-39
40-44
45-49
50-54
55-59
60-64
65-69
70-74
Over 75
Age
Hours per year patient care-Male Physicians
Hours per year other professional activites-Male Physicians
Total hours per year-Male Physicians
Hours per year patient care-Female Physicians
Hours per year other professional activites-Female Physicians
Total hours per year-Female Physicians

B6.


Annual Hours by Age, All Physicians
Hours per Week or Weeks per Year
3000
2500
2000
1500
1000
500
0
Under 35
35-39
40-44
45-49
50-54
55-59
60-64
65-69
70-74
Over 75
Age
Hours per year patient care-All Physicians
Hours per year other professional activites-All Physicians
Total hours per year-All Physicians

SPECIALTY DATA

B7. Physician Hours by Specialty: Hours per Week

	Average Patient Care Hours per Week				Total Hours per Week, All Professional Activities			
Specialty	All Physicians N=13,670	Male Physicians N=9,516	Female Physicians N=4,154	Female Physician Hours as % of Male	All Physicians N=13,670	Male Physicians N=9,516	Female Physicians N=4,154	Female Physician Hours as % of Male
General Practice and Family Medicine[1]	45.7	46.3	44.8	*97%*	51.1	52.0	49.8	*96%*
General Internal Medicine[1]	49.8	51.7	46.3	*90%*	57.2	59.0	53.7	*91%*
General Pediatrics/Adolescent Medicine & Med-Peds	42.4	41.6	43.0	*103%*	49.7	51.1	48.7	*95%*
Internal Medicine-Cardiology	53.1	53.4	49.9	*93%*	61.2	61.3	60.1	*98%*
Other Subspecialty Medicine[2]	46.7	48.0	42.3	*88%*	55.0	56.5	50.1	*89%*
Subspecialty Pediatrics	46.8	48.6	44.0	*91%*	61.4	65.1	55.5	*85%*
Allergy & Immunology	45.6	46.6	*	*	56.6	58.8	*	*
Dermatology	36.7	36.4	37.0	*102%*	41.3	39.0	43.6	*112%*
General Surgery	55.7	56.7	51.0	*90%*	62.6	61.6	67.4	*109%*
Orthopedic surgery	49.1	50.0	*	*	54.8	55.9	*	*
Subspecialty surgery[4]	53.7	53.5	*	*	58.0	58.0	*	*
Otolaryngology	46.4	45.6	*	*	50.1	49.4	*	*
Urology	49.6	49.4	*	*	53.3	53.1	*	*
Ophthalmology	36.1	37.3	32.2	*86%*	42.2	44.5	34.9	*78%*
Obstetrics & Gynecology	52.2	52.3	52.1	*100%*	57.5	59.5	55.9	*94%*
Emergency Medicine	38.8	39.4	36.1	*92%*	44.7	45.8	40.2	*88%*
Psychiatry	41.0	40.6	41.6	*102%*	47.1	48.2	45.3	*94%*
Anesthesiology	52.2	53.4	48.7	*91%*	58.8	60.1	54.5	*91%*
Radiology	48.3	47.7	51.7	*108%*	52.8	52.3	55.5	*106%*
Radiation Oncology	44.7	46.3	*	*	52.1	54.3	*	*
Pathology	43.7	42.8	45.3	*106%*	52.1	51.9	52.3	*101%*
Neurology	47.7	49.5	42.6	*86%*	54.1	56.4	47.5	*84%*
Physical Medicine & Rehabilitation	42.9	43.3	42.2	*97%*	48.5	47.2	50.8	*108%*
Other patient care specialties	43.5	44.5	*	*	46.9	47.6	*	*
All Physicians	46.6	47.6	44.8	*94%*	53.1	54.3	50.7	*93%*

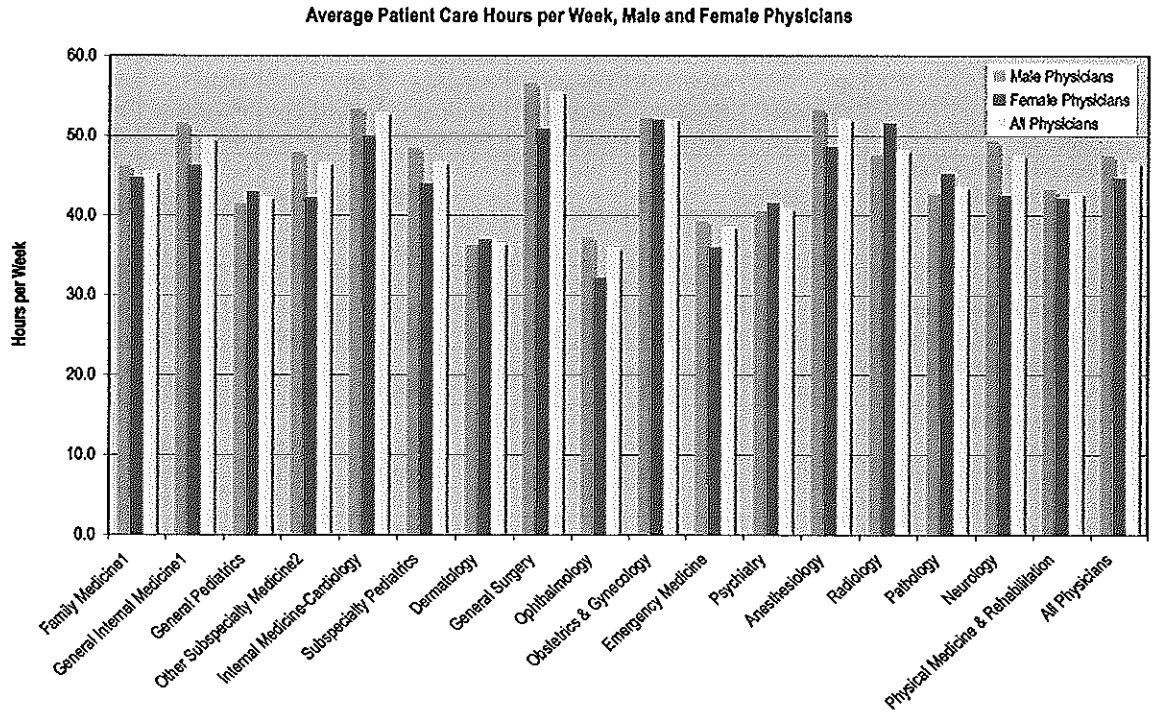
*Suppressed due to small sample size.

B8. Physician Hours by Specialty: Hours per Year

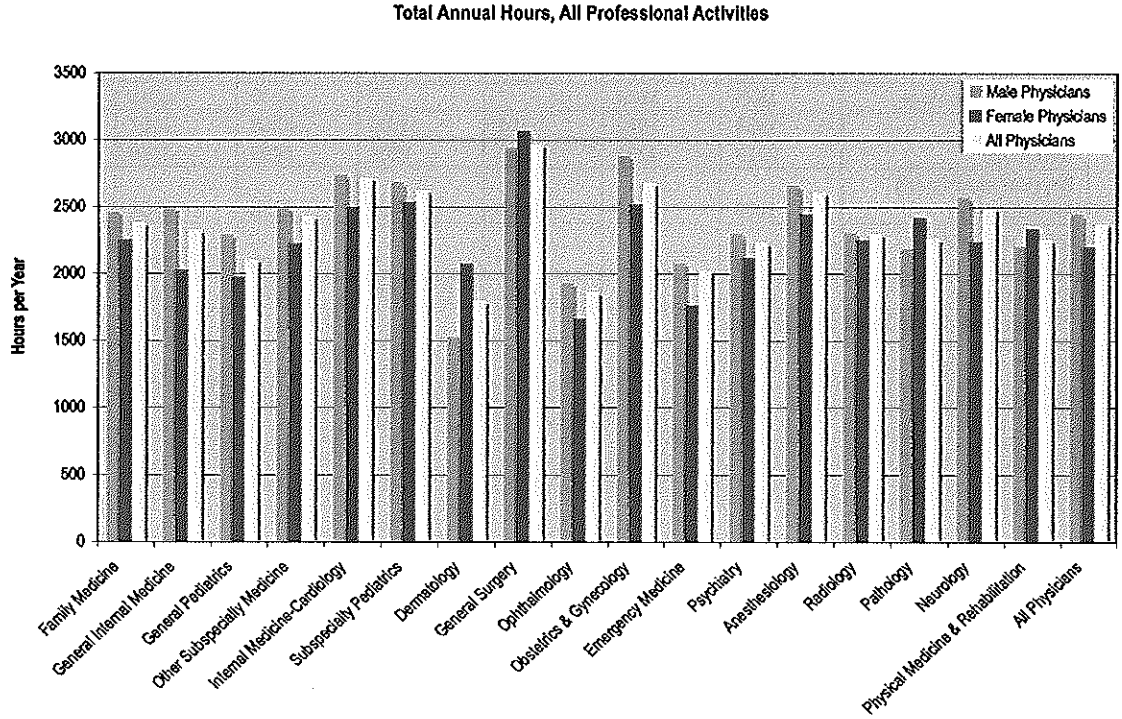
	Average Patient Care Hours per Year				Total Hours per Year, All Professional Activities			
Specialty	All Physicians N=13,670	Male Physicians N=9,516	Female Physicians N=4,154	*Female Physician Hours as % of Male*	All Physicians N=13,670	Male Physicians N=9,516	Female Physicians N=4,154	*Female Physician Hours as % of Male*
General Practice and Family Medicine[1]	2131	2196	2022	*92%*	2384	2462	2253	*91%*
General Internal Medicine[1]	2040	2193	1756	*80%*	2329	2491	2028	*81%*
General Pediatrics/Adolescent Medicine & Med-Peds	1803	1871	1758	*94%*	2102	2295	1973	*86%*
Other Subspecialty Medicine[2]	2089	2141	1908	*89%*	2432	2492	2226	*89%*
Internal Medicine-Cardiology	2372	2415	1973	*82%*	2718	2742	2492	*91%*
Subspecialty Pediatrics	2026	2028	2023	*100%*	2629	2687	2537	*94%*
Allergy & Immunology	2055	2104	*	*	2477	2545	*	*
Dermatology	1597	1427	1768	*124%*	1800	1528	2075	*136%*
General Surgery	2639	2704	2343	*87%*	2967	2944	3071	*104%*
Orthopedic surgery	2220	2256	*	*	2464	2510	*	*
Subspecialty surgery[4]	2458	2418	*	*	2653	2619	*	*
Otolaryngology	2230	2210	*	*	2414	2394	*	*
Urology	2286	2276	*	*	2463	2452	*	*
Ophthalmology	1669	1712	1536	*90%*	1869	1934	1666	*86%*
Obstetrics & Gynecology	2441	2553	2352	*92%*	2682	2887	2519	*87%*
Emergency Medicine	1766	1809	1579	*87%*	2022	2081	1765	*85%*
Psychiatry	1944	1938	1955	*101%*	2236	2304	2120	*92%*
Anesthesiology	2311	2356	2171	*92%*	2610	2662	2448	*92%*
Radiology	2100	2103	2086	*99%*	2302	2311	2255	*98%*
Radiation Oncology	1875	1924	*	*	2220	2318	*	*
Pathology	1953	1872	2108	*113%*	2268	2187	2423	*111%*
Neurology	2223	2292	2024	*88%*	2493	2579	2242	*87%*
Physical Medicine & Rehabilitation	1989	2034	1915	*94%*	2258	2208	2341	*106%*
Other patient care specialties	2148	2198	*	*	2305	2338	*	*
All Physicians	2090	2161	1954	*90%*	2369	2450	2205	*90%*

*Suppressed due to small sample size.

B9.


Average Patient Care Hours per Week, Male and Female Physicians
Hours per Week
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Male Physicians
Female Physicians
All Physicians
Family Medicine1
General Internal Medicine1
General Pediatrics
Other Subspecialty Medicine2
Internal Medicine-Cardiology
Subspecialty Pediatrics
Dermatology
General Surgery
Ophthalmology
Obstetrics & Gynecology
Emergency Medicine
Psychiatry
Anesthesiology
Radiology
Pathology
Neurology
Physical Medicine & Rehabilitation
All Physicians

B10.


Total Annual Hours, All Professional Activities
Hours per Year
3500
3000
2500
2000
1500
1000
500
0
Male Physicians
Female Physicians
All Physicians
Family Medicine
General Internal Medicine
General Pediatrics
Other Subspecialty Medicine
Internal Medicine-Cardiology
Subspecialty Pediatrics
Dermatology
General Surgery
Ophthalmology
Obstetrics & Gynecology
Emergency Medicine
Psychiatry
Anesthesiology
Radiology
Pathology
Neurology
Physical Medicine & Rehabilitation
All Physicians

APPENDIX C
COUNTY-LEVEL DATA

The 2011/12 Wisconsin Physician Survey data will not support a county-by-county analysis of patient care and primary care physicians, but we can provide a county-level breakdown for all physicians using the mailing address on file with DSPS. This is only an approximation of the number of patient care physicians serving a county, as it does not capture commuting patterns from suburbs to large cities (typical in the Milwaukee area) and from larger urbanized areas to outlying clinics in more rural areas. Overall totals are quite similar to the totals for patient care physicians derived from the survey responses.

County	Population (2010 census)	All physicians (DSPS address)	Physicians < age 65	Rate per 100,000-Physicians < age 65	Primary Care Physicians < age 65	Rate per 100,000-Primary Care Physicians <age 65	Ratio-Population to Primary Care Physician < age 65	Revised ratio, including physicians based in neighboring states
Adams	20,875	7	4	19.2	3	14.4	**6958:1**	
Ashland	16,157	48	39	241.4	24	148.5	673:1	
Barron	45,870	102	88	191.8	49	106.8	936:1	
Bayfield	15,014	11	6	40.0	4	26.6	**3754:1**	
Brown	248,007	671	605	243.9	197	79.4	**1259:1**	
Buffalo	13,587	4	3	22.1	2	14.7	**6794:1**	2843:1
Burnett	15,457	6	5	32.3	4	25.9	**3864:1**	
Calumet	48,971	12	9	18.4	6	12.3	**8162:1**	5412:1
Chippewa	62,415	91	80	128.2	53	84.9	**1178:1**	
Clark	34,690	21	19	54.8	17	49.0	**2041:1**	
Columbia	56,833	54	49	86.2	34	59.8	**1672:1**	
Crawford	16,644	20	17	102.1	15	90.1	**1110:1**	
Dane	488,073	2325	2002	410.2	687	140.8	710:1	
Dodge	88,759	103	93	104.8	53	59.7	**1675:1**	
Door	27,785	66	37	133.2	17	61.2	**1634:1**	
Douglas	44,159	21	16	36.2	14	31.7	**3154:1**	1915:1
Dunn	43,857	39	35	79.8	23	52.4	**1907:1**	1702:1
Eau Claire	98,736	460	422	427.4	135	136.7	731:1	
Florence	4,423	2	2	45.2		0.0	***4423:0***	
Fond du Lac	101,633	188	155	152.5	66	64.9	**1540:1**	
Forest	9,304	6	4	43.0	4	43.0	**2326:1**	
Grant	51,208	36	29	56.6	18	35.2	**2845:1**	
Green	36,842	68	55	149.3	24	65.1	**1535:1**	1413:1
Green Lake	19,051	36	29	152.2	15	78.7	**1270:1**	
Iowa	23,687	30	24	101.3	18	76.0	**1316:1**	
Iron	5,916	4	3	50.7	2	33.8	**2958:1**	1450:1
Jackson	20,449	26	22	107.6	19	92.9	1076:1	
Jefferson	83,686	77	68	81.3	35	41.8	**2391:1**	2090:1
Juneau	26,664	28	25	93.8	18	67.5	**1481:1**	
Kenosha	166,426	221	193	116.0	82	49.3	**2030:1**	1526:1
Kewaunee	20,574	12	12	58.3	7	34.0	**2939:1**	
La Crosse	114,638	600	540	471.0	211	184.1	543:1	535:1
Lafayette	16,836	9	7	41.6	6	35.6	**2806:1**	
Langlade	19,977	30	24	120.1	12	60.1	**1665:1**	
Lincoln	28,743	35	32	111.3	26	90.5	**1106:1**	
Manitowoc	81,442	167	149	183.0	54	66.3	**1508:1**	
Marathon	134,063	400	358	267.0	130	97.0	**1031:1**	

County	Population (2010 census)	All physicians (DSPS address)	Physicians < age 65	Rate per 100,000- Physicians < age 65	Primary Care Physicians < age 65	Rate per 100,000- Primary Care Physicians <age 65	Ratio- Population to Primary Care Physician < age 65	Revised ratio, including physicians based in neighboring states
Marinette	41,749	76	71	170.1	33	79.0	**1265:1**	1167:1
Marquette	15,404	2	1	6.5	1	6.5	**15404:1**	
Menominee	4,232	3	3	70.9	2	47.3	**2116:1**	
Milwaukee	947,735	2885	2498	263.6	840	88.6	**1128:1**	1099:1
Monroe	44,673	46	38	85.1	26	58.2	**1718:1**	
Oconto	37,660	20	16	42.5	10	26.6	**3766:1**	
Oneida	35,998	155	131	363.9	48	133.3	750:1	687:1
Outagamie	176,695	443	410	232.0	181	102.4	976:1	
Ozaukee	86,395	452	385	445.6	133	153.9	650:1	
Pepin	7,469	5	3	40.2	2	26.8	**3735:1**	
Pierce	41,019	31	26	63.4	23	56.1	**1783:1**	1610:1
Polk	44,205	70	62	140.3	43	97.3	1028:1	
Portage	70,019	141	120	171.4	51	72.8	**1373:1**	
Price	14,159	16	13	91.8	12	84.8	**1180:1**	
Racine	195,408	295	243	124.4	96	49.1	**2036:1**	1654:1
Richland	18,021	23	19	105.4	14	77.7	**1287:1**	
Rock	160,331	293	256	159.7	105	65.5	**1527:1**	1423:1
Rusk	14,755	15	15	101.7	13	88.1	**1135:1**	
St. Croix	84,345	75	72	85.4	48	56.9	**1757:1**	1242:1
Sauk	61,976	109	100	161.4	67	108.1	925:1	
Sawyer	16,557	21	18	108.7	14	84.6	**1183:1**	
Shawano	41,949	30	28	66.7	24	57.2	**1748:1**	
Sheboygan	115,507	197	184	159.3	74	64.1	**1561:1**	
Taylor	20,689	19	18	87.0	14	67.7	**1478:1**	
Trempealeau	28,816	13	7	24.3	7	24.3	**4117:1**	
Vernon	29,773	37	30	100.8	22	73.9	**1353:1**	
Vilas	21,430	36	24	112.0	12	56.0	**1786:1**	
Walworth	102,228	115	93	91.0	45	44.0	**2272:1**	
Washburn	15,911	23	21	132.0	16	100.6	994:1	
Washington	131,887	182	164	124.3	86	65.2	**1534:1**	
Waukesha	389,891	1872	1614	414.0	587	150.6	664:1	
Waupaca	52,410	35	30	57.2	23	43.9	**2279:1**	
Waushara	24,496	11	8	32.7	5	20.4	**4899:1**	
Winnebago	166,994	440	383	229.3	135	80.8	**1237:1**	1196:1
Wood	74,749	500	438	586.0	165	220.7	453:1	447:1
	5,686,986	**14722**	12802	225.1	5061	89.0	1124:1	1089:1

*These counties are also served by providers based in a neighboring state. See table on the following page for estimates of the number of physicians commuting to these counties from a neighboring state.

†Commuting between counties in the Milwaukee metropolitan area (mostly from suburban residences to practice locations in the city) makes the separate totals for these counties unreliable. A four county summary may be a better reflection of this region. Since the DSPS data does not indicate workplace address, it is not possible to give a reliable estimate of inner city and suburban totals. The disparities in access to care in inner city Milwaukee are evident in the Health Professions Shortage Area (HPSA) data – see separate discussion.

Milwaukee Ozaukee Waukesha Washington	1,555,908	5,391	4,661	299.6	1,646	105.8	945:1	933:1

Number of physicians based in neighboring states who work in Wisconsin on a regular basis (estimated, based on survey response):

	All physicians	Physicians under age 65	Primary Care Physicians under age 65
Buffalo	7	3	3
Calumet	3	3	3
Douglas	36	36	9
Dunn	5	3	3
Green	18	18	16
Iron	2	2	2
Jefferson	5	5	5
Kenosha	87	87	27
La Crosse	20	18	3
Marinette	9	9	3
Milwaukee	70	65	22
Oneida	4	4	4
Pierce	22	22	2
Polk	30	26	
Racine	75	75	22
Rock	48	46	8
St Croix	122	115	20
Winnebago	5	5	5
Wood	2	2	2
All other counties	164	144	3
	734	689	162

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APPENDIX D

PARTICIPATION IN EDUCATION OF HEALTH PROFESSIONALS, BY COUNTY

Clinical facilities in areas with a shortage of physicians have difficulty providing training opportunities for students while meeting the needs of their patients. At the same time, several federal programs emphasize the importance of providing training opportunities for students in underserved areas. Wisconsin has some underserved counties where physicians do an exceptional job of providing health professions training opportunities. There are also some areas with higher physician rates per 100,000 that may have the capacity for providing more training opportunities than they do at present. The table below shows the percentage of survey respondents who reported participating in health professions training activities in each county, ranked from lowest to highest, compared to the overall rate of physicians under age 65 per 100,000 and primary care physicians under age 65 per 100,00.

top quartile
bottom quartile
Bold=above statewide avg

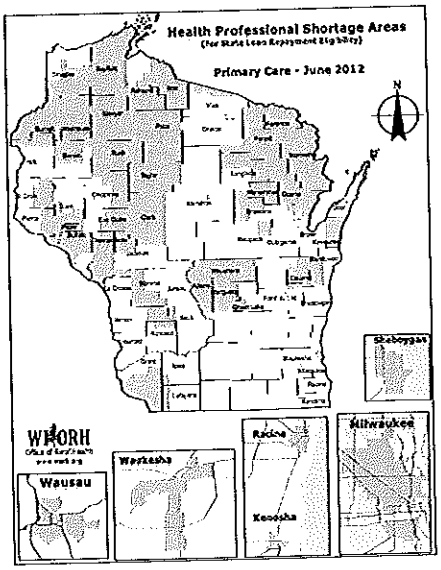
		Physician survey data	All physicians (from DSPS data)	
County	Population (2010 Census)	% of survey responses reporting teaching activity	All physicians under age 65 Rate per 100,000	Primary care physicians under age 65 Rate per 100,000
Florence	4,423	0%	45.2	0.0
Calumet	48,971	0%	18.4	12.3
Buffalo	13,587	0%	22.1	14.7
Iron	5,916	0%	50.7	33.8
Sawyer	16,557	0%	108.7	84.6
Rusk	14,755	0%	101.7	88.1
Marquette	15,404	0%	6.5	6.5
Forest	9,304	0%	43.0	43.0
Portage	70,019	6%	**171.4**	72.8
Langlade	19,977	7%	120.1	60.1
Oconto	37,660	9%	42.5	26.6
Door	27,785	12%	133.2	61.2
Racine*	195,408	16%	124.4	49.1
Fond du Lac	101,633	16%	152.5	64.9
Winnebago	166,994	16%	**229.3**	80.8
Bayfield	15,014	17%	40.0	26.6
Clark	34,690	17%	51.8	49.0
Dunn	43,857	17%	79.8	52.4
Monroe	44,673	17%	85.1	58.2
Ashland	16,157	17%	**241.4**	**148.5**
Sheboygan	115,507	17%	159.3	64.1
Marinette	41,749	18%	**170.1**	79.0
Kenosha*	166,426	19%	116.0	49.3
Price	14,159	20%	91.8	84.8
Manitowoc	81,442	21%	**183.0**	66.3
Oneida	35,998	22%	**363.9**	**133.3**
Walworth*	102,228	23%	91.0	44.0
Columbia	56,833	24%	86.2	59.8
Waushara	24,496	25%	32.7	20.4

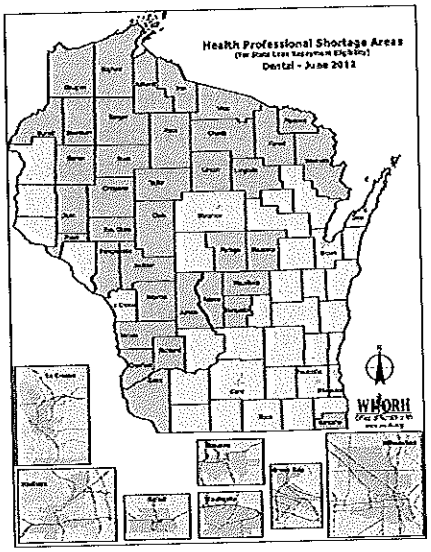
		Physician survey data	All physicians (from DSPS data)	
County	Population (2010 Census)	% of survey responses reporting teaching activity	All physicians under age 65 Rate per 100,000	Primary care physicians under age 65 Rate per 100,000
Pepin	7,469	25%	40.2	26.8
Waupaca	52,410	25%	57.2	43.9
Saint Croix*	84,345	26%	85.4	56.9
Eau Claire*	98,736	27%	427.4	136.7
Brown	248,007	27%	243.9	79.4
Green*	36,842	28%	149.3	65.1
Grant*	51,208	29%	56.6	35.2
Pierce*	41,019	29%	63.4	56.1
Outagamie	176,695	30%	232.0	102.4
Polk*	44,205	31%	140.3	97.3
Washington†	131,887	31%	124.3	65.2
Dodge	88,759	33%	104.8	59.7
Trempealeau	28,816	33%	24.3	24.3
Kewaunee	20,574	33%	58.3	38.9
Lafayette	16,836	33%	41.6	35.6
Iowa	23,687	33%	101.3	76.0
Washburn	15,911	33%	132.0	100.6
Sauk	61,976	33%	161.4	108.1
Ozaukee†	86,395	34%	445.6	153.9
Vilas	21,430	36%	112.0	56.0
Waukesha†	389,891	37%	414.0	150.6
Chippewa	62,415	37%	128.2	84.9
Marathon	134,063	38%	267.0	97.0
Rock*	160,331	39%	159.7	65.5
Jefferson	83,686	40%	81.3	41.8
Wood	74,749	42%	586.0	220.7
La Crosse*	114,638	44%	471.0	184.1
Barron	45,870	44%	191.8	106.8
Vernon	29,773	46%	100.8	73.9
Adams	20,875	50%	19.2	14.4
Burnett	15,457	50%	32.3	25.9
Taylor	20,689	50%	87.0	67.7
Richland	18,021	50%	105.4	77.7
Lincoln	28,743	50%	111.3	90.5
Milwaukee*†	947,735	51%	263.6	88.6
Juneau	26,664	53%	93.8	67.5
Shawano	41,949	53%	66.7	57.2
Green Lake	19,051	53%	152.2	78.7
Douglas*	44,159	57%	36.2	31.7
Jackson	20,449	60%	107.6	92.9
Dane	488,073	61%	410.2	140.8
Menominee	4,232	67%	70.9	47.3
Crawford	16,644	80%	102.1	90.1
	5,686,986	47%	225.1	89.0

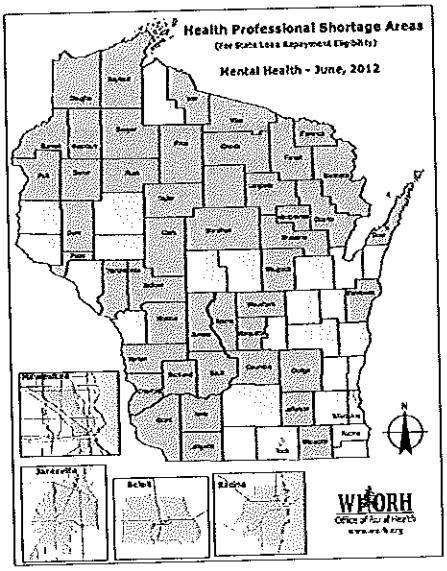
APPENDIX E

HEALTH PROFESSIONS SHORTAGE AREAS

The federal Health Professions Shortage Area designation process provides detail on physician supply at the county and census tract level for underserved areas of the state. Wisconsin has a shortage of primary care providers in 10 full counties and parts of 27 other counties. Limited access to dental care in many of the same areas or populations exacerbates these disparities, as dental health is closely related to overall health status. Mental health providers, including psychiatrists, are also in short supply in many areas of the state.







	Primary Care	Dental Care	Mental Health
Total HPSA designations	101	74	107
Whole county HPSAs (Adams, Burnett, Clark, Florence, Kewaunee, Marinette, Marquette, Menominee, Sawyer, Taylor)	10	0	47
Service Area HPSAs (Service areas in Buffalo, Calumet, Chippewa, Door, Douglas, Dunn, Eau Claire, Fond du Lac, Green Lake, Iron, Jackson, Kenosha, Langlade, Manitowoc, Marathon, Milwaukee, Monroe, Oconto, Outagamie, Pepin, Racine, Shawano, Sheboygan, St. Croix, Trempealeau, Washburn, Waukesha)	21	0	6
Population Group HPSAs (Low income groups in Ashland, Barron, Bayfield, Brown, Dane, Forest, Grant, Iowa, Iron, Juneau, Lafayette, Langlade, Monroe, Oneida, Outagamie, Polk, Price, Richland, Rusk, Sauk, Trempealeau, Vernon, Vilas, Washburn, Waupaca, Waushara	16	41	0
Facility HPSAs	54	33	54
Total population living in a HPSA	899,031	693,875	2,086,137
Estimated unserved population (2000:1)	507,815	502,775	1,728,264
Practitioners needed to remove HPSA designations	89	114	212
Practitioners needed to achieve a 2000:1 ratio in underserved areas	228	143	145

http://ersrs.hrsa.gov/ReportServer?/HGDW_Reports/BCD_HPSA/BCD_HPSA_SCR50_Smry&rs:Format=HTML3.2 Downloaded 7/11/12

The shortage area determination process is complex, with separate standards for designating geographic areas, population groups and facilities as primary care HPSAs. A geographic area is considered a primary care HPSA if the full-time equivalent primary care provider ratio exceeds 3500:1, or 3000:1 in areas with exceptionally high need. Geographic mental health HPSA designations require a population to core mental health provider ratio exceeding 6,000:1 (4,500:1 in areas with unusually high need) and a population to psychiatrist ratio greater than 20,000:1. Dental HPSA designations require a

	Number of Physicians					Rate per 100,000		Physicians:
Practice specialty as listed in DSPS licensure records	All WI-Based[1] Physicians *(DSPS data)*	Not WI-based but working in WI[2] *(Survey data)*	All physicians working in WI	All physicians working in WI < age 75	Subtotals: physicians < age 75	Rate per 100,000, physicians < age 75	Estimated physician requirements for 2010 (rate per 1000,000) (HRSA, 2008[3])	Number (short) /over HRSA estimated physician requirement
SURGERY - GENERAL	526	3	529	497	497	*9*	*14*	(324)
ORTHOPEDIC SURGERY	547	15	562	541	541	*10*	*9*	41
SURGERY - THORACIC| CARDIOVASCULAR	93	7	100	92				
SURGERY - COLON AND RECTAL	23		23	22				
HAND SURGERY	17		17	17				
SURGERY - MAXILLOFACIAL	7		7	7				
SURGERY - NEUROLOGICAL	107	2	109	101				
SURGERY - PERIPHERAL VASCULAR	43	5	48	47				
SURGERY - PLASTIC	97		97	91				
Other Subspecialty Surgery					377	*7*	*6*	32
OTORHINOLARYNGOLOGY - ENT	207	8	215	205	205	*4*	*4*	3
UROLOGY	195	13	208	192	192	*3*	*4*	(28)
OPHTHALMOLOGY	384	2	386	364	364	*6*	*7*	(25)
OBSTETRICS AND GYNECOLOGY	665	18	683	653				
OB/GYN |ONCOLOGY	5		5	5				
OB/GYN|PERINATOLOGY	20		20	19				
OB/GYN |ENDOCRINOLOGY	1		1	1				
OB/GYN |UROLOGY	1		1	1				
OB/GYN |OCCUPATIONAL MEDICINE	1		1	1				
All Obstetrics & Gynecology					680	*12*	*14*	(141)
EMERGENCY MEDICINE	644	135	779	778				
EMERGENCY MEDICINE|FAMILY PRACTICE	44	3	47	47				
INTERNAL MEDICINE|EMERGENCY MED	23		23	23				
EMERGENCY MEDICINE|PEDIATRICS	6		6	6				
EMERGENCY MED|OCCUPATIONAL MED	6		6	6				
All Emergency Medicine					860	*15*	*9*	330
PSYCHIATRY	549	15	564	532				
PSYCHIATRY|ALCOHOLISM - CHEMICAL DEPENDENCY	26		26	25				
PSYCHIATRY|PSYCHIATRY - CHILD	152		152	149				
PREVENTIVE MEDICINE|PSYCHIATRY	1		1	1				
PSYCHIATRY|GERIATRICS	3		3	3				
All Psychiatry					710	*12*	*14*	(78)
ANESTHESIOLOGY	795	35	830	805				
ANESTHESIOLOGY|PAIN	66	12	78	77				
All Anesthesiology					882	*16*	*14*	94
RADIOLOGY - DIAGNOSTIC	633	18	651	634				
RADIOLOGY - DIAGNOSTIC| NUCLEAR MED	112	13	125	123				
RADIOLOGY –DIAGNOSTIC| ULTRASOUND	20		20	20				
All Radiology					777	*14*	*11*	132
RADIATION ONCOLOGY	88	18	106	105	105	*2*	*NA*	105
PATHOLOGY	348	33	381	362	362	*6*	*6*	(1)
NEUROLOGY	262	19	281	278				
NEUROLOGY|NEUROPHYSIOLOGY	8		8	8				
All Neurology					286	*5*	*NA*	(see other)

	Number of Physicians					Rate per 100,000		Physicians:
Practice specialty as listed in DSPS licensure records	All WI-Based[1] Physicians *(DSPS data)*	Not WI-based but working in WI[2] *(Survey data)*	All physicians working in WI	All physicians working in WI < age 75	Subtotals: physicians < age 75	Rate per 100,000, physicians < age 75	Estimated physician requirements for 2010 (rate per 100,000) (HRSA, 2008[3])	Number (short) /over HRSA estimated physician requirement
PHYSICAL MEDICINE AND REHABILITATION	220	7	227	222	222	*4*	*NA*	(see other)
OTHER PATIENT CARE (unspecified)		4	4	4				
AEROSPACE MEDICINE|AVIATION MEDICINE	3		3	2				
HYPERBARIC MEDICINE	3		3	3				
ALCOHOLISM - CHEMICAL DEPENDEN	9		9	9				
GENETICS (see also PEDIATRICS|GENETICS)	5		5	5				
PAIN (see also ANESTHESIOLOGY|PAIN)	31		31	30				
OCCUPATIONAL MEDICINE*	63	9	72	68				
All Other Patient Care					121	*2*	*NA*	(see other)
All other (Allergy & Immunology, Dermatology, Neurology, Physical Medicine & Rehabilitation, All Other Patient Care)							*19*	(113)
All Patient Care Specialties					14853	*261*	*261*	10
PREVENTIVE MEDICINE|PUBLIC HEALTH*	21		21	19				
ACADEMIC MEDICINE*	3		3	1				
ADMINISTRATIVE MEDICINE*	7		7	6				
RESEARCH*	1		1	0				
SPECIALTY NOT SPECIFIED	32		32	25				
Patient Care and Non Patient Care					14904	*262*	*276*	(792)
RETIRED	20		20	0				
All Physicians	14722	734	15456	14904	14904			

Totals may differ from sum of items in each column due to rounding.

*Not a complete count, as these specialties may also be listed by physicians in combination with various other specialties above.
**A separate estimated requirement for subspecialty pediatrics was not available. If subspecialty pediatricians are combined with subspecialty medicine, the combined number short would be (137).

[1] WI-based = Mailing address in Wisconsin. Actual count from DSPS.
[2] Non WI-based but working in WI = Mailing address in a neighboring state, survey response indicates working on a regular basis in Wisconsin. Estimated based on survey responses weighted for age, gender, specialty and location.
[3] *The Physician Workforce: Projections and Research into Current Issues Affecting Supply and Demand,* DHHS, HRSA, Bureau of Health Professions, December 2008. The HRSA estimates and projections are based on AMA and AOA Masterfile data on physicians' activity status for physicians younger than age 75.

Number of physicians required to meet selected physician to population rates, projection through 2025

1	2	13	14	15	16	17	18
Year	Population Estimate	Projected total physicians < age 75	Total required to maintain rate at 248.2	Cumulative additional required to maintain rate at 248.2	Annual additional required to maintain rate at 248.2	Total required for rate of 291 in 2020	Annual additional required to reach rate of 291 in 2020 and maintain that rate through 2025
1999							
2000							
2001							
2002							
2003							
2004							
2005							
2006							
2007							
2008							
2009							
2010	5,686,986						
2011	**5,711,767**	**14,179**					
2012	*5,768,885*	*14,300*	14,318	*19*	*19*		*385*
2013	*5,826,574*	*14,413*	14,462	*48*	*30*		*385*
2014	*5,884,839*	*14,518*	14,606	*88*	*40*		*385*
2015	***5,988,420***	*14,608*	14,863	*255*	*167*		*385*
2016	*6,036,327*	*14,693*	14,982	*289*	*34*		*385*
2017	*6,084,618*	*14,760*	15,102	*342*	*53*		*385*
2018	*6,133,295*	*14,789*	15,223	*434*	*92*		*385*
2019	*6,182,361*	*14,827*	15,345	*517*	*84*		*385*
2020	***6,202,810***	*14,848*	15,395	*548*	*30*	*18,050*	*120*
2021	*6,240,027*	*14,835*	15,488	*653*	*105*	*18,158*	*120*
2022	*6,277,467*	*14,782*	15,581	*799*	*146*	*18,267*	*160*
2023	*6,315,132*	*14,733*	15,674	*941*	*142*	*18,377*	*160*
2024	*6,353,023*	*14,666*	15,768	*1,102*	*161*	*18,487*	*180*
2025	***6,390,900***	*14,557*	15,862	*1,306*	*203*	*18,598*	*220*

From DSPS data for physicians licensed in Wisconsin prior to 9-1-11 and renewed by 3-1-15

Projected. See column notes

For more information about the health workforce in Wisconsin, visit the AHEC website at:
www.ahec.wisc.edu/workforce

AREA HEALTH EDUCATION CENTER SYSTEM

WISCONSIN

Wisconsin Area Health Education Center System
UW School of Medicine and Public Health
Health Sciences Learning Center, 4th floor
750 Highland Ave; Madison, WI 53705

Subject:	Med Board Newsletter - Spring 2018
Sent:	05/18/2018 03:42 PM CDT
Sent By:	Kate.Stolarzyk@wisconsin.gov
Sent To:	Subscribers of Medical Examining Board

21,432 Recipients

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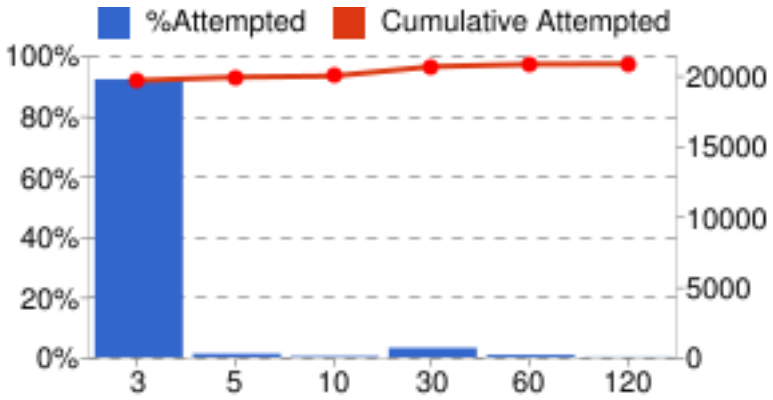
92% Delivered

0% Pending
8% Bounced
31% Open Rate
10% Click Rate

Email Delivery Stats



Minutes	Cumulative Attempted
3	92%
5	93%
10	94%
30	97%
60	97%
120	98%

Delivery Metrics - Details

21,432	Total Sent
19,737 (92%)	Delivered
0 (0%)	Pending
1,695 (8%)	Bounced
0 (0%)	Unsubscribed

Bulletin Analytics

11,323	Total Opens
6061 (31%)	Unique Opens
3,074	Total Clicks
2030 (10%)	Unique Clicks
6	# of Links

Delivery and performance

These figures represent all data since the bulletin was first sent to present time.

	Progress	% Delivered	Recipients	# Delivered	Opened Unique	Bounced/Failed	Unsubscribes
Email Bulletin	Delivered	92.1%	21,339	19,644	6061 / 30.9%	1,695	0
Digest	n/a	n/a	93	93	0 / 0.0%	0	0
SMS Message	Delivered	0.0%	0	0	n/a	0	n/a

Link URL	Unique Clicks	Total Clicks
https://dsps.wi.gov/Pages/BoardsCouncils/MEB/Newsletters.a…	1,836	2,828
http://dsps.wi.gov/home?utm_medium=email&utm_source=…	103	135
https://public.govdelivery.com/accounts/WIDSPS/subscriber/e…	84	103
https://subscriberhelp.govdelivery.com/	3	4
https://insights.govdelivery.com/Communications/Subscriber…	2	2
https://twitter.com/wi_dsps?utm_medium=email&utm_sourc…	2	2