INTERNATIONAL BOARD OF LIFESTYLE MEDICINE

Certified Lifestyle Medicine Specialist – Experiential Pathway
Revised 06/08/2023

1. Must be a current "certified LM physician," certified by either ABLM or IBLM.
2. All hours/requirements must be accrued in the seven years prior to application.
3. Must complete a minimum of 1,200 hours of combined clinical and scholarly lifestyle medicine activity.
    - 750 hours must consist of Clinical Lifestyle Medicine Activity with the following minimums:
        - 120 hours of Intensive Therapeutic Lifestyle Change (ITLC) programming
        - 60 hours of Lifestyle Medicine group facilitation
        - 120 hours of individual Lifestyle Medicine clinical interactions
    - 100 hours must consist of Scholarly Lifestyle Medicine Activity work
4. Must submit 10 unique patient case studies evidencing chronic disease reversal or significant clinical improvement due to lifestyle interventions. Each submitted case must document at least 3 contact points (individual patient visits) over a minimum of 6 months.
5. Must pay the non-refundable application fee of $699.
6. Must be approved by a quorum of the then current ABLM/IBLM board members.

Clinical Hour Reporting Requirements

For each clinical activity claimed (ITLC programming, LM group facilitation, LM individual patient interactions), the applicant must list each program for which he/she is claiming contact hours.

- Examples:
    - **ITLC Programming:** Complete Health Improvement Program (CHIP), Ornish, McDougall 10-Day Program, Other ITLC Program
    - **LM Group Facilitation:** Tobacco Dependence Groups, Chronic Disease Group Visits, Other Group Facilitation
    - **LM Patient Interactions:** Loma Linda Lifestyle Medicine Consultation Clinic, Applicant's Lifestyle Medicine Practice

For each specific program for which the applicant is claiming contact hours in each of the three LM clinical activity categories (ITLC, LM Groups, LM Individual), the applicant must provide the following information:

- Name of activity (list each ITLC and Group LM activity separately)
- Location of each activity
- Dates of each activity (e.g. May, 2018 – August, 2018)
- Brief description of the activity, including the specific LM interventions employed (not to exceed 150 words)
- Details regarding the applicant's specific role in the LM intervention activity

- For Group LM activities, the applicant must provide details regarding the number of group sessions, length of each group session, number of participants in sessions.
- For individual patient LM consultations, please provide a description of the clinic setting, number of patient encounters in a typical week, and over what period of time you saw individual patients to account for the minimum 120 hours.

Scholarly Activity Reporting Requirements

Complete at least one Lifestyle Medicine scholarly activity in any of the suggested areas: curriculum development and education; publication and editing; key clinical system/process development (including SMAs and/or ITLCs) and/or business development.

All scholarly activity must be documented for each category for which credit hours are claimed: date of presentation or publication; title of presentation, published article, book chapter; links or PDFs of publications and presentations; letter from program director/faculty member responsible for overseeing teaching activities documenting teaching activity.

- **Presentations** – up to 30 hours per presentation (report actual hours)
  - Media presentations (TV, radio, web, podcasts, blogs)
  - Health professional presentations (community or local/national organization conferences)
- **Curriculum Development and Education** – up to 30 hours per project including creation and/or delivery (report actual hours)
  - Professional CME
  - Medical/resident education
  - Other health professional education
- **Publication and Editing** (report actual hours)
  - Peer reviewed article or case reviews – up to 30 hours per article
  - Non-peer reviewed or lay journal article – up to 15 hours per article
  - Book chapter (20-30 hours per chapter)
  - Editing: articles, curriculum, book chapter(s), books up to 10 hours per project
- **Key Clinical System/Process and/or Business Development** – up to 30 hours per project (report actual hours)
  - Shared medical appointment development
  - ITLC creation
  - Business/service line development (may include implementation of LM into EMR or LM process improvement

General Case Study Requirements

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Clinical conditions that may be used to satisfy the case study requirement are classified as either Category 1 or Category 2 conditions. An individual patient may only be used for one case study and for one condition, i.e., a patient may not be used to satisfy the case study requirement for more than one condition.

Category 1 Conditions: All Category 1 case studies must involve a minimum of 3 patient contacts (in-office or telemedicine visits) over at least 6 months. The applicant **must** include at least one case study from each of the following clinical categories:

- Diabetes Reversal
- Hyperlipidemia Reversal
- Hypertension Reversal
- Weight Loss

The remaining six case studies may be selected from one or more of the Category 1 conditions or from the list of Category 2 conditions; however, if Category 1 conditions are used to satisfy all or part of the remaining six case studies requirement, the case must still document at least 3 patient contacts, but the time requirement is reduced from at least 6 months to at least 3 months.

Category 2 Conditions: All Category 2 case studies must involve a minimum of 3 patient contacts (in-office or telemedicine visits) over at least 3 months.

- Anxiety Improvement
- Arthritis Improvement
- Cognitive Impairment Improvement
- Coronary Artery Disease Improvement (Angina Reduction)
- Depression Improvement
- Fibromyalgia and Other Pain Syndromes Improvement
- Metabolic Syndrome Reversal
- Prediabetes Reversal
- Renal Function Improvement
- Tobacco Cessation
- Vascular Disease Symptom Improvement
    - Erectile Dysfunction (ED)
    - Peripheral Artery Disease
- Other Conditions– e.g., Irritable Bowel Syndrome, Polycystic Ovarian Syndrome (PCOS), Autoimmune Conditions (e.g., RA, MS, LE, psoriasis), COPD

<u>Case Study Criteria by Condition Category</u>

Category 1 Required Conditions

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Each Category 1 case study must meet the specified criteria for the clinical category for which the case study is being submitted in fulfillment of the requirements for Lifestyle Medicine Specialist designation. Note that the documentation requirements are uniquely specified for the four required case study conditions of diabetes reversal, hyperlipidemia reversal, hypertension reversal, and weight loss. Each case must be followed for at least 6 months and must document both reversal and holding the reversal for at least 3 months.

Diabetes Reversal

For submitting a Diabetes Reversal case, the candidate should be able to identify, demonstrate, and document partial or complete remission per the following guidelines.

- Previously diagnosed type 2 diabetes, with diagnostic criteria of:
  - HbA1c >6.5%
  - FSG >126mg/dL or above on more than one occasion
- According to ADA guidelines, diabetes can be either put into partial or complete remission.
  - Partial Remission – HbA1C < 6.5, FSG 100-125 mg/dL or 5.6-6.9 mmol/L in the absence of ongoing pharmacotherapy for a period of at least 6 months
  - Complete Remission – HbA1C < 5.7, FSG < 100 mg/dL or < 5.6 mmol/L in the absence of ongoing pharmacotherapy for a period of at least 6 months
- References:
  - Lean MEJ, Leslie WS, Barnes AC, Brosnahan N, Thom G, McCombie L, et al. Durability of a primary care-led weight-management intervention for remission of type 2 diabetes: 2-year results of the DiRECT open-label, cluster-randomised trial. Lancet Diabetes Endocrinol. 2019;7(5):344-55.
  - Lean ME, Leslie WS, Barnes AC, Brosnahan N, Thom G, McCombie L, et al. Primary care-led weight management for remission of type 2 diabetes (DiRECT): an open-label, cluster-randomised trial. Lancet. 2018;391(10120):541-51.
  - Steven S, Hollingsworth KG, Al-Mrabeh A, Avery L, Aribisala B, Caslake M, et al. Very Low-Calorie Diet and 6 Months of Weight Stability in Type 2 Diabetes: Pathophysiological Changes in Responders and Nonresponders. Diabetes Care. 2016;39(5):808-15.
  - Gregg EW, Chen H, Wagenknecht LE, Clark JM, Delahanty LM, Bantle J, et al. Association of an intensive lifestyle intervention with remission of type 2 diabetes. Jama. 2012;308(23):2489-96.
  - Lim EL, Hollingsworth KG, Aribisala BS, Chen MJ, Mathers JC, Taylor R. Reversal of type 2 diabetes: normalisation of beta cell function in association with decreased pancreas and liver triacylglycerol. Diabetologia. 2011;54(10):2506-14.
  - Buse JB, Caprio S, Cefalu WT, Ceriello A, Del Prato S, Inzucchi SE, et al. How Do We Define Cure of Diabetes? Diabetes Care. 2009;32(11):2133-5. doi:10.2337/dc09-9036

Hyperlipidemia Reversal

For submitting a Hyperlipidemia Reversal case, the candidate should be able to identify, demonstrate, and document the following:

- 20% reduction in LDL levels, reflecting what was shown in the *Portfolio Diet* study. This reduction should be sustained for at least 6 months and it should be independent of statin therapy. This means:
  - if the patient is already on statin therapy prior to the implementation of lifestyle interventions, a 20% reduction in LDL-cholesterol must be demonstrated with either no change or a reduction in dosage (including elimination) of statin therapy; or,
  - if the patient is not on statin therapy prior to the implementation of lifestyle interventions, a 20% reduction in LDL-cholesterol must be demonstrated in the absence of statin therapy.
- References:
  - Mozaffarian D, Micha R, Wallace S. Effects on coronary heart disease of increasing polyunsaturated fat in place of saturated fat: a systematic review and meta-analysis of randomized controlled trials. PLoS Med. 2010;7(3):e1000252.
  - Taylor RS, Brown A, Ebrahim S, Jolliffe J, Noorani H, Rees K, et al. Exercise-based rehabilitation for patients with coronary heart disease: systematic review and meta-analysis of randomized controlled trials. Am J Med. 2004;116(10):682-92.
  - Jenkins DJA, Kendall CWC, Marchie A, Faulkner DA, Wong JMW, de Souza R, et al. Effects of a Dietary Portfolio of Cholesterol-Lowering Foods vs Lovastatin on Serum Lipids and C-Reactive Protein. Jama. 2003;290(4):502-10.
  - Mensink RP, Zock PL, Kester AD, Katan MB. Effects of dietary fatty acids and carbohydrates on the ratio of serum total to HDL cholesterol and on serum lipids and apolipoproteins: a meta-analysis of 60 controlled trials. The American journal of clinical nutrition. 2003;77(5):1146-55.
  - Jenkins DJ, Kendall CW, Jackson C-JC, Connelly PW, Parker T, Faulkner D, et al. Effects of high- and low-isoflavone soyfoods on blood lipids, oxidized LDL, homocysteine, and blood pressure in hyperlipidemic men and women. The American journal of clinical nutrition. 2002;76(2):365-72.
  - Ornish D, Scherwitz LW, Billings JH, Gould KL, Merritt TA, Sparler S, et al. Intensive Lifestyle Changes for Reversal of Coronary Heart Disease. Jama. 1998;280(23):2001-7.
  - Ornish D, Brown SE, Scherwitz LW, Billings JH, Armstrong WT, Ports TA, et al. Can lifestyle changes reverse coronary heart disease? The Lifestyle Heart Trial. Lancet. 1990;336(8708):129-33.

Hypertension Reversal

Cases submitted for Hypertension Reversal must have a demonstrated diagnosis of hypertension according to either Hypertension Canada or AHA Guidelines and must meet treatment targets as specified by either Hypertension Canada or AHA Guidelines:

- According to Hypertension Canada guidelines – diagnosis established if:
  - Non-Ambulatory Office Blood Pressure Monitor SBP>140 and/or DBP>90 in patients without Diabetes
  - Non-Ambulatory Office Blood Pressure Monitor SBP>130 and/or DBP> 80 in patients with Diabetes
  - Home Blood Pressure Monitor SBP>135 and/or DBP>85

    - Ambulatory Blood Pressure Monitor SBP>130 and/or DBP>80
- According Hypertension Canada Guidelines -- Treatment Targets are defined as follows:
    - SBP <140 and DBP<90 in patients without Moderate CVD risk
    - SBP<130 and DBP<80 in patients with Diabetes
    - SBP<120 in high-risk CVD patients
- According to AHA Guidelines:
    - Diagnosis established at BP > 130/80
    - Treatment target for most patients in the 18-65 range – BP < 130/80
- Successful Hypertension Reversal cases must demonstrate blood pressure normalization using either AHA criteria or Hypertension Canada guidelines and a reduction in pharmacotherapy (if on pharmacotherapy) for at least 6 months.
- References:
    - Yokoyama Y, Nishimura K, Barnard ND, Takegami M, Watanabe M, Sekikawa A, et al. Vegetarian Diets and Blood Pressure: A Meta-analysis. JAMA Intern Med. 2014;174(4):577-87.
    - Elmer PJ, Obarzanek E, Vollmer WM, Simons-Morton D, Stevens VJ, Young DR, et al. Effects of comprehensive lifestyle modification on diet, weight, physical fitness, and blood pressure control: 18-month results of a randomized trial. Ann Intern Med. 2006;144(7):485-95.
    - Appel LJ, Champagne CM, Harsha DW, Cooper LS, Obarzanek E, Elmer PJ, et al. Effects of comprehensive lifestyle modification on blood pressure control: main results of the PREMIER clinical trial. Jama. 2003;289(16):2083-93.
    - Appel LJ, Moore TJ, Obarzanek E, Vollmer WM, Svetkey LP, Sacks FM, et al. A Clinical Trial of the Effects of Dietary Patterns on Blood Pressure. New England Journal of Medicine. 1997;336(16):1117-24.

Weight Loss for Overweight / Obesity

Numerous studies show metabolic benefits with as little as 5% to 10% body weight loss. Sleeve gastrectomy leads to about 25% weight loss and medications can lead to weight loss between 5% and 10%. Complicating factors can be co-morbidities and more importantly, weight promoting medications.

- Broad study – mean BMI reduction at 6 months for WFPB was about 4
- For submitting a weight loss case, the candidate should be able to identify, demonstrate, and document the following:
    - Initial clinical status including weight and BMI with inclusion of body fat percentage and waist circumference (WC)
    - Identify possible contributing factors to weight gain including the 6 pillars of lifestyle medicine and any medications or medical conditions.
    - Lifestyle interventions utilized along with rationale
    - Demonstrate at least 10% weight loss using LM interventions without pharmacotherapy assistance over at least 6 months.
- References:

- Jakicic JM, Davis KK, Rogers RJ, King WC, Marcus MD, Helsel D, et al. Effect of Wearable Technology Combined With a Lifestyle Intervention on Long-term Weight Loss: The IDEA Randomized Clinical Trial. Jama. 2016;316(11):1161-71.
- Look AHEAD Research Group. Eight-year weight losses with an intensive lifestyle intervention: the look AHEAD study. Obesity (Silver Spring). 2014;22(1):5-13.
- Gardner CD, Kiazand A, Alhassan S, Kim S, Stafford RS, Balise RR, et al. Comparison of the Atkins, Zone, Ornish, and LEARN diets for change in weight and related risk factors among overweight premenopausal women: the A TO Z Weight Loss Study: a randomized trial. Jama. 2007;297(9):969-77.

Category 2 Conditions

Documentation requirements for Category 2 Conditions are recommended but not required at this time; however, the applicant must document to the satisfaction of the ABLM significant disease reversal or mitigation as the result of lifestyle interventions. For Category 2 conditions, the applicant must demonstrate disease remission/reversal involving a minimum of 3 patient visits over the course of 3 months, including a beginning and a subsequent objective measurement.

Anxiety Improvement

To fulfill the requirement of demonstrating symptom improvement in patients with anxiety in a patient case study, it is recommended that the applicant use a validated assessment instrument such as the Generalized Anxiety Disorder (GAD-7) both before and after lifestyle interventions and document the following:

- The patient has an initial score on the GAD-7 between 6 and 21 (moderate to severe anxiety)
- The patient demonstrates an improvement of at least one severity category (e.g., from moderate anxiety to mild anxiety, from severe anxiety to moderate anxiety)
- The patient demonstrates an improvement in total score of at least 4 points
- GAD-7 scoring severity:
  - None 0-5
  - Mild 6-10
  - Moderate 11-15
  - Severe 16-21
- References:
  - van Dammen L, Wekker V, de Rooij SR, Groen H, Hoek A, Roseboom TJ. A systematic review and meta-analysis of lifestyle interventions in women of reproductive age with overweight or obesity: the effects on symptoms of depression and anxiety. Obes Rev. 2018;19(12):1679-87.

- Agarwal U, Mishra S, Xu J, Levin S, Gonzales J, Barnard ND. A multicenter randomized controlled trial of a nutrition intervention program in a multiethnic adult population in the corporate setting reduces depression and anxiety and improves quality of life: the GEICO study. Am J Health Promot. 2015;29(4):245-54.
- Bogaerts AF, Devlieger R, Nuyts E, Witters I, Gyselaers W, Van den Bergh BR. Effects of lifestyle intervention in obese pregnant women on gestational weight gain and mental health: a randomized controlled trial. Int J Obes (Lond). 2013;37(6):814-21.

Arthritis Improvement

To fulfill the requirement of demonstrating improvement in rheumatoid arthritis symptoms, it is recommended that the applicant use an accepted scoring system such as the ACR scoring system developed by the American College of Rheumatology which helps physicians measure the improvement in their patients' rheumatoid arthritis after being treated with various modalities in possible combination with markers such as RA factor and hs-CRP.

- References:

  - Vadell AKE, Bärebring L, Hulander E, Gjertsson I, Lindqvist HM, Winkvist A. Anti-inflammatory Diet In Rheumatoid Arthritis (ADIRA)-a randomized, controlled crossover trial indicating effects on disease activity. The American journal of clinical nutrition. 2020;111(6):1203-13.
  - Lange E, Kucharski D, Svedlund S, Svensson K, Bertholds G, Gjertsson I, et al. Effects of Aerobic and Resistance Exercise in Older Adults With Rheumatoid Arthritis: A Randomized Controlled Trial. Arthritis Care Res (Hoboken). 2019;71(1):61-70.
  - Sugiyama D, Nishimura K, Tamaki K, Tsuji G, Nakazawa T, Morinobu A, et al. Impact of smoking as a risk factor for developing rheumatoid arthritis: a meta-analysis of observational studies. Ann Rheum Dis. 2010;69(1):70-81.
  - Messier SP, Loeser RF, Miller GD, Morgan TM, Rejeski WJ, Sevick MA, et al. Exercise and dietary weight loss in overweight and obese older adults with knee osteoarthritis: the Arthritis, Diet, and Activity Promotion Trial. Arthritis Rheum. 2004;50(5):1501-10.

Cognitive Impairment Improvement

To fulfill the requirement of demonstrating improvement in cognitive function in a patient case study, it is recommended that the applicant use a validated assessment instrument such as the Montreal Cognitive Assessment (MoCA) both before and after lifestyle interventions and document the following:

- The patient must be age 55 or older
- The patient has an initial score on the MoCA of 25 or less (maximum score = 30)
- The patient has an improvement of at least one severity category (e.g., mild cognitive impairment to normal cognitive function, moderate cognitive impairment to mild cognitive impairment)
- The patient documents an improvement in total score of at least 2 points
- MoCA scoring severity:

  - Normal 26-30
  - Mild 18-25
  - Moderate 10-17
  - Severe < 10
- Note: The MoCA has been validated for 55-85 year-olds. Administration of the MoCA **requires** training and certification. See MoCA website [www.mocatest.org] for details. MoCA may be used, reproduced, and distributed by health professionals **without** permission for clinical use with patients.
- References:

  - van den Brink AC, Brouwer-Brolsma EM, Berendsen AAM, van de Rest O. The Mediterranean, Dietary Approaches to Stop Hypertension (DASH), and Mediterranean-DASH Intervention for Neurodegenerative Delay (MIND) Diets Are Associated with Less Cognitive Decline and a Lower Risk of Alzheimer's Disease-A Review. Adv Nutr. 2019;10(6):1040-65.
  - Wesselman LMP, Doorduijn AS, de Leeuw FA, Verfaillie SCJ, van Leeuwenstijn-Koopman M, Slot RER, et al. Dietary Patterns Are Related to Clinical Characteristics in Memory Clinic Patients with Subjective Cognitive Decline: The SCIENCe Project. Nutrients. 2019;11(5).
  - Mottaghi T, Amirabdollahian F, Haghighatdoost F. Fruit and vegetable intake and cognitive impairment: a systematic review and meta-analysis of observational studies. Eur J Clin Nutr. 2018;72(10):1336-44.
  - Yamamoto N, Yamanaka G, Takasugi E, Ishikawa M, Yamanaka T, Murakami S, et al. Lifestyle intervention reversed cognitive function in aged people with diabetes mellitus: two-year follow up. Diabetes Res Clin Pract. 2009;85(3):343-6.

Coronary Artery Disease Improvement (Angina Reduction)

Cases submitted for Coronary Artery Disease Improvement (Angina Reduction) must demonstrate improvement of at least one Canadian Cardiovascular Society (CCS) Class using lifestyle interventions that is sustained for at least 3 months.

- References:

  - Howden EJ, Sarma S, Lawley JS, Opondo M, Cornwell W, Stoller D, et al. Reversing the Cardiac Effects of Sedentary Aging in Middle Age-A Randomized Controlled Trial: Implications For Heart Failure Prevention. Circulation. 2018;137(15):1549-60.
  - Otterstad JE. Influence on lifestyle measures and five-year coronary risk by a comprehensive lifestyle intervention programme in patients with coronary heart disease. European Journal of Cardiovascular Prevention & Rehabilitation. 2003;10(6):429-37.
  - Ornish D. Avoiding revascularization with lifestyle changes: The Multicenter Lifestyle Demonstration Project. Am J Cardiol. 1998;82(10b):72t-6t.

Depression Improvement

To fulfill the requirement of demonstrating symptom improvement in patients with depression in a patient case study, it is recommended that the applicant use a validated assessment instrument such as the Patient Health Questionnaire 9 (PHQ-9) both before and after lifestyle interventions and document the following:

- The patient has an initial score on the PHQ-9 between 11 and 21 (moderate to severe depression)
- The patient demonstrates an improvement of at least one severity category (e.g., from moderate depression to mild depression, from severe depression to moderate depression)
- The patient demonstrates an improvement in total score of at least 4 points
- PHQ-9 scoring severity:
    - None 0-4
    - Mild 5-9
    - Moderate 10-14
    - Moderately Severe 15-19
    - Severe 20-27
- References:
    - Ein N, Armstrong B, Vickers K. The effect of a very low calorie diet on subjective depressive symptoms and anxiety: meta-analysis and systematic review. Int J Obes (Lond). 2019;43(7):1444-55.
    - Tolkien K, Bradburn S, Murgatroyd C. An anti-inflammatory diet as a potential intervention for depressive disorders: A systematic review and meta-analysis. Clin Nutr. 2019;38(5):2045-52.
    - van Dammen L, Wekker V, de Rooij SR, Groen H, Hoek A, Roseboom TJ. A systematic review and meta-analysis of lifestyle interventions in women of reproductive age with overweight or obesity: the effects on symptoms of depression and anxiety. Obes Rev. 2018;19(12):1679-87.
    - Agarwal U, Mishra S, Xu J, Levin S, Gonzales J, Barnard ND. A multicenter randomized controlled trial of a nutrition intervention program in a multiethnic adult population in the corporate setting reduces depression and anxiety and improves quality of life: the GEICO study. Am J Health Promot. 2015;29(4):245-54.

Fibromyalgia / Other Pain Syndromes Symptom Improvement

To fulfill the requirement of demonstrating symptom improvement in patients with fibromyalgia or other pain syndromes in a patient case study, it is recommended that the applicant use a validated assessment instrument such as the Revised Fibromyalgia Impact Questionnaire (FIQR) both before and after lifestyle interventions and document the following:

- The patient has an initial score on the FIQR of at least 45
- The patient demonstrates an improvement (decrease in total points) of at least 14% (minimal clinical importance) of the total initial FIQR score
- References:

- Lowry E, Marley J, McVeigh JG, McSorley E, Allsopp P, Kerr D. Dietary Interventions in the Management of Fibromyalgia: A Systematic Review and Best-Evidence Synthesis. Nutrients. 2020;12(9).
- Foy CG, Lewis CE, Hairston KG, Miller GD, Lang W, Jakicic JM, et al. Intensive lifestyle intervention improves physical function among obese adults with knee pain: findings from the Look AHEAD trial. Obesity (Silver Spring). 2011;19(1):83-93.
- Bennett RM, Bushmakin AG, Cappelleri JC, Zlateva G, Sadosky AB. Minimal clinically important difference in the fibromyalgia impact questionnaire. J Rheumatol. 2009;36(6):1304-11.
- Lemstra M, Olszynski WP. The effectiveness of multidisciplinary rehabilitation in the treatment of fibromyalgia: a randomized controlled trial. Clin J Pain. 2005;21(2):166-74.

Metabolic Syndrome Reversal

It is recommended that cases submitted for Metabolic Syndrome Reversal meet the following criteria:

- Diagnosis established if any three of the following criteria are present:
  - Waist circumference > 102cm (40in) in men and > 88cm (35in) in women
  - Serum triglycerides >150 mg/dL (1.7mmol/l)
  - Serum HDL <40mg/dL (1/mmol/l) in men and <50mg/dL (1.3 mmol/l) in women
  - Brood pressure > 130/85
  - Fasting glucose > 100mg/dL (5.6mmol/l)

Applicants must demonstrate the reversal in all three criteria that were used to diagnose metabolic syndrome in the patient for at least 3 months for Experiential Pathway applicants.

- References:

  - Mamun A, Kitzman H, Dodgen L. Reducing metabolic syndrome through a community-based lifestyle intervention in African American women. Nutr Metab Cardiovasc Dis. 2020;30(10):1785-94.
  - Chiang TL, Chen C, Hsu CH, Lin YC, Wu HJ. Is the goal of 12,000 steps per day sufficient for improving body composition and metabolic syndrome? The necessity of combining exercise intensity: a randomized controlled trial. BMC public health. 2019;19(1):1215.
  - Guevara-Cruz M, Flores-López AG, Aguilar-López M, Sánchez-Tapia M, Medina-Vera I, Díaz D, et al. Improvement of Lipoprotein Profile and Metabolic Endotoxemia by a Lifestyle Intervention That Modifies the Gut Microbiota in Subjects With Metabolic Syndrome. J Am Heart Assoc. 2019;8(17):e012401.
  - Dunkley AJ, Charles K, Gray LJ, Camosso-Stefinovic J, Davies MJ, Khunti K. Effectiveness of interventions for reducing diabetes and cardiovascular disease risk in people with metabolic syndrome: systematic review and mixed treatment comparison meta-analysis. Diabetes Obes Metab. 2012;14(7):616-25.

Prediabetes Reversal

It is recommended that cases submitted for Prediabetes Reversal meet the following criteria:

- Patients have an initial HbA1C of 5.7 to 6.4 and/or a FG of 100-125mg/dL or 5.6 to 6.9 mmol/L to be considered pre-diabetic
- Patients achieve a HbA1C of less than 5.7 and FG less than 100mg/dl or 5.6mmol/L in the absence of pharmacotherapy
- References:
    - Luo Y, Paul SK, Zhou X, Chang C, Chen W, Guo X, et al. Rationale, Design, and Baseline Characteristics of Beijing Prediabetes Reversion Program: A Randomized Controlled Clinical Trial to Evaluate the Efficacy of Lifestyle Intervention and/or Pioglitazone in Reversion to Normal Glucose Tolerance in Prediabetes. J Diabetes Res. 2017;2017:7602408.
    - Diabetes Prevention Program Research Group. Reduction in the Incidence of Type 2 Diabetes with Lifestyle Intervention or Metformin. New England Journal of Medicine. 2002;346(6):393-403.

Renal Function Improvement

To fulfill the requirement of demonstrating improvement in renal function, it is recommended that the applicant use established biological markers such as BUN, creatinine, eGFR, and cystatin-C to document significant improvement in renal function (e.g., at least a 5-point increase in eGFR) due to lifestyle medicine interventions.

- References:
    - Bolignano D, Zoccali C. Effects of weight loss on renal function in obese CKD patients: a systematic review. Nephrol Dial Transplant. 2013;28 Suppl 4:iv82-98.
    - Tirosh A, Golan R, Harman-Boehm I, Henkin Y, Schwarzfuchs D, Rudich A, et al. Renal function following three distinct weight loss dietary strategies during 2 years of a randomized controlled trial. Diabetes Care. 2013;36(8):2225-32.
    - Straznicky NE, Grima MT, Lambert EA, Eikelis N, Dawood T, Lambert GW, et al. Exercise augments weight loss induced improvement in renal function in obese metabolic syndrome individuals. J Hypertens. 2011;29(3):553-64.

Tobacco Cessation

Cases submitted for Tobacco Cessation should demonstrate complete cessation of all tobacco use in previous tobacco users for at least 6 months by means of lifestyle interventions. Pharmacotherapy (Wellbutrin, Chantix, nicotine replacement therapy) may be a part of the intervention, but the patient must be off all pharmacotherapy for at least 3 months before the case study can be submitted.

- Note: A maximum of 2 tobacco cessation cases may be submitted in fulfillment of the case study requirement.
    - References:
        - Eriksson MK, Franks PW, Eliasson M. A 3-year randomized trial of lifestyle intervention for cardiovascular risk reduction in the primary care setting: the Swedish Björknäs study. PLoS One. 2009;4(4):e5195.

- Otterstad JE. Influence on lifestyle measures and five-year coronary risk by a comprehensive lifestyle intervention programme in patients with coronary heart disease. European Journal of Cardiovascular Prevention & Rehabilitation. 2003;10(6):429-37.

Vascular Disease Symptom Improvement – Erectile Dysfunction:

To fulfill the requirement of demonstrating improvement in erectile dysfunction in a patient case study, it is recommended that the applicant use a validated assessment instrument such as the Sexual Health Inventory for Men (SHIM), an abridged and slightly modified 5-item version of the 15-item International Index of Erectile Dysfunction, both before and after lifestyle interventions and document the following:

- The patient has an initial score on the SHIM of between 5 and 16 (severe to mild-to-moderate erectile dysfunction)
- The patient has an improvement of at least one severity category (e.g., severe erectile dysfunction to moderate erectile dysfunction or higher, mild-to-moderate erectile dysfunction to no significant erectile dysfunction)
- The patient demonstrates an improvement in total score of at least 3 points
- References:

  - Gupta BP, Murad MH, Clifton MM, Prokop L, Nehra A, Kopecky SL. The effect of lifestyle modification and cardiovascular risk factor reduction on erectile dysfunction: a systematic review and meta-analysis. Arch Intern Med. 2011;171(20):1797-803.
  - Esposito K, Giugliano F, Di Palo C, Giugliano G, Marfella R, D'Andrea F, et al. Effect of Lifestyle Changes on Erectile Dysfunction in Obese MenA Randomized Controlled Trial. Jama. 2004;291(24):2978-84.

Vascular Disease Symptom Improvement – Peripheral Artery Disease:

To fulfill the requirement of demonstrating symptom improvement in patients with peripheral artery disease in a patient case study, it is recommended that the applicant use a validated assessment instrument such as the Vascular Quality of Life Questionnaire 6 (VQ-6), a short version of the VascuQoL-25, both before and after lifestyle intervention and document the following:

- The patient has an initial score on the VQ-6 of between 6 and 15
- The patient must have an improvement in total score of at least 4 points
- References:
    - McDermott MM, Guralnik JM, Criqui MH, Ferrucci L, Zhao L, Liu K, et al. Home-based walking exercise in peripheral artery disease: 12-month follow-up of the GOALS randomized trial. J Am Heart Assoc. 2014;3(3):e000711.
    - McDermott MM, Liu K, Guralnik JM, Criqui MH, Spring B, Tian L, et al. Home-based walking exercise intervention in peripheral artery disease: a randomized clinical trial. Jama. 2013;310(1):57-65.

INTERNATIONAL BOARD OF LIFESTYLE MEDICINE

Lifestyle Medicine Intensivist Application Form

Name: **Degrees:** **Date:**

1. Must be a current "certified LM physician," certified by either ABLM or IBLM. Met ☐ Not Met ☐

- Primary ABMS Certification (Type/Dates):
- Lifestyle Medicine Certification (Dates):

2. All hours/requirements must be accrued in the seven years prior to application. Met ☐ Not Met ☐

3. Must complete a minimum of 1,200 hours of combined clinical and scholarly lifestyle medicine activity. Met ☐ Not Met ☐

Clinical Activities: 750 hours Met ☐ Not Met ☐

Must consist of Clinical Lifestyle Medicine Activity with the following minimums:

- 120 hours of Intensive Therapeutic Lifestyle Change (ITLC) programming Met ☐ Not Met ☐
- 60 hours of Lifestyle Medicine group facilitation Met ☐ Not Met ☐
- 120 hours of individual Lifestyle Medicine clinical interactions Met ☐ Not Met ☐

(Please provide additional sheets if needed)

Description of Clinical Activity	Location	Type (click to select)	# of Hours	Earliest Date
		ITLC		
		ITLC		
		ITLC		
		ITLC		
		ITLC		

		ITLC		
		ITLC		
		ITLC		
		ITLC		
		ITLC		
		ITLC		
		ITLC		

Scholarly Activities: 100 hours must consist of Scholarly Lifestyle Medicine Activity work. Met ☐ Not Met ☐

(Please provide additional sheets if needed)

Description of Scholarly Activity	Location	Type (click to select)	# of Hours	Earliest Date
		Presentation		
		Presentation		
		Presentation		
		Presentation		
		Presentation		
		Presentation		
		Presentation		
		Presentation		
		Presentation		
		Presentation		
		Presentation		
		Presentation		


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4. Must submit 10 unique patient case studies evidencing chronic disease reversal or significant clinical improvement due to lifestyle interventions.

Each submitted case must document at least 3 contact points (individual patient visits) over a minimum of 6 months.

1. Patient Initials: **Age:** **Sex (select):** Female **Primary Diagnoses:** **Total # of Contacts:**

	Service Dates	BMI	SBP	DBP	Hgb-A1C	LDL Choles-terol	Trigly-cerides	Other Testing (e.g., HOMA2-IR, cardiac function)	Smoking Status (click to select)	Relevant Medications	Dose	Comments
Start									Former smoker			
Middle									Former smoker			
End									Former smoker			
Total Change	≥6 mth? Yes ☐											

Other Comments:

2. Patient Initials: **Age:** **Sex (select):** Female **Primary Diagnoses:** **Total # of Contacts:**

	Service Dates	BMI	SBP	DBP	Hgb-A1C	LDL Choles-terol	Trigly-cerides	Other Testing (e.g., HOMA2-IR, cardiac function)	Smoking Status (click to select)	Relevant Medications	Dose	Comments
Start									Former smoker			
Middle									Former smoker			
End									Former smoker			
Total Change	≥6 mth? Yes ☐											

Other Comments:

3. Patient Initials: **Age:** **Sex (select):** Female **Primary Diagnoses:** **Total # of Contacts:**

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	Service Dates	BMI	SBP	DBP	Hgb-A1C	LDL Choles-terol	Trigly-cerides	Other Testing (e.g., HOMA2-IR, cardiac function)	Smoking Status (click to select)	Relevant Medications	Dose	Comments
Start									Former smoker			
Middle									Former smoker			
End									Former smoker			
Total Change	≥6 mth? Yes ☐											
Other Comments:												
4. Patient Initials: **Age:** **Sex (select):** Female **Primary Diagnoses:** **Total # of Contacts:**												
	Service Dates	**BMI**	**SBP**	**DBP**	**Hgb-A1C**	**LDL Choles-terol**	**Trigly-cerides**	**Other Testing (e.g., HOMA2-IR, cardiac function)**	**Smoking Status (click to select)**	**Relevant Medications**	**Dose**	**Comments**
Start									Former smoker			
Middle									Former smoker			
End									Former smoker			
Total Change	≥6 mth? Yes ☐											
Other Comments:												
5. Patient Initials: **Age:** **Sex (select):** Female **Primary Diagnoses:** **Total # of Contacts:**												
	Service Dates	**BMI**	**SBP**	**DBP**	**Hgb-A1C**	**LDL Choles-terol**	**Trigly-cerides**	**Other Testing (e.g., HOMA2-IR, cardiac function)**	**Smoking Status (click to select)**	**Relevant Medications**	**Dose**	**Comments**
Start									Former smoker			
Middle									Former smoker			
End									Former smoker			

Total Change	≥6 mth? Yes ☐											
Other Comments:												

6. Patient Initials: **Age:** **Sex (select):** Female **Primary Diagnoses:** **Total # of Contacts:**

	Service Dates	**BMI**	**SBP**	**DBP**	**Hgb-A1C**	**LDL Choles-terol**	**Trigly-cerides**	**Other Testing (e.g., HOMA2-IR, cardiac function)**	**Smoking Status (click to select)**	**Relevant Medications**	**Dose**	**Comments**
Start									Former smoker			
Middle									Former smoker			
End									Former smoker			
Total Change	≥6 mth? Yes ☐											
Other Comments:												

7. Patient Initials: **Age:** **Sex (select):** Female **Primary Diagnoses:** **Total # of Contacts:**

	Service Dates	**BMI**	**SBP**	**DBP**	**Hgb-A1C**	**LDL Choles-terol**	**Trigly-cerides**	**Other Testing (e.g., HOMA2-IR, cardiac function)**	**Smoking Status (click to select)**	**Relevant Medications**	**Dose**	**Comments**
Start									Former smoker			
Middle									Former smoker			
End									Former smoker			
Total Change	≥6 mth? Yes ☐											
Other Comments:												

8. Patient Initials: **Age:** **Sex (select):** Female **Primary Diagnoses:** **Total # of Contacts:**

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	Service Dates	BMI	SBP	DBP	Hgb-A1C	LDL Choles-terol	Trigly-cerides	Other Testing (e.g., HOMA2-IR, cardiac function)	Smoking Status (click to select)	Relevant Medications	Dose	Comments
Start									Former smoker			
Middle									Former smoker			
End									Former smoker			
Total Change	≥6 mth? Yes ☐											
Other Comments:												

9. Patient Initials: **Age:** **Sex (select):** Female **Primary Diagnoses:** **Total # of Contacts:**

	Service Dates	BMI	SBP	DBP	Hgb-A1C	LDL Choles-terol	Trigly-cerides	Other Testing (e.g., HOMA2-IR, cardiac function)	Smoking Status (click to select)	Relevant Medications	Dose	Comments
Start									Former smoker			
Middle									Former smoker			
End									Former smoker			
Total Change	≥6 mth? Yes ☐											
Other Comments:												

10. Patient Initials: **Age:** **Sex (select):** Female **Primary Diagnoses:** **Total # of Contacts:**

	Service Dates	BMI	SBP	DBP	Hgb-A1C	LDL Choles-terol	Trigly-cerides	Other Testing (e.g., HOMA2-IR, cardiac function)	Smoking Status (click to select)	Relevant Medications	Dose	Comments
Start									Former smoker			
Middle									Former smoker			
End									Former smoker			

Total Change	≥6 mth? Yes ☐											
Other Comments:												

5. Must pay the non-refundable application fee of $499. Applicant fee submitted: Yes ☐ No ☐

(This section to be completed by ABLM/IBLM)

6. Must be approved by a quorum of the then current ABLM/IBLM board members. Applicant approved: Yes ☐ No ☐