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Actions to Incorporate Traditional, Complementary, and Integrative Health Care Practices into Primary Disease Prevention and Health Promotion Policies

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Note: Line numbers are included along the left to help quickly identify specific text within the policy brief.

Abstract

Noncommunicable diseases (NCDs) have replaced infectious diseases as the dominant cause of death worldwide; they are responsible for more than 81% of all deaths globally. In the United States, NCDs have long surpassed infectious diseases, with 60% of Americans living with at least one chronic condition. Primary disease prevention, which focuses on health promotion that fosters general wellness, reduces the likelihood of diseases and premature death, and protects a person from disease occurrence, is an upstream approach that reorients health care toward wellness rather than only treating and curing. Traditional, complementary, and integrative health care (TCIH) practices that emphasize self-care, which are relatively low risk and many of them low cost, lack clear incorporation into policies on health promotion and primary disease prevention despite their wide uses and benefits. An overarching approach to maximize their use, guide their long-term development, and prevent potential misuse has not fully come to fruition. The aim of this policy statement is to advocate for a national-level framework for evidence-based use of TCIH-related practices for primary disease prevention in health promotion policies and to provide action steps to further understand and expand their impact on NCD modifiable risk factors.

Key words: health promotion, TCIH, primary disease prevention

Relationship to Existing APHA Policy Statements

- APHA Policy Statement 20215: A Call to Improve Patient and Public Health Outcomes of Diabetes through an Enhanced Integrated Care Approach
- APHA Policy Statement 202012: A Public Health Approach to Protecting Workers from Opioid Use Disorder and Overdose Related to Occupational Exposure, Injury, and Stress
- APHA Policy Statement 201111: Prioritizing Noncommunicable Disease Prevention and Treatment in Global Health
- APHA Policy Statement 20235: Falls Prevention in Adults 65 Years and Over: A Call for Increased Use of an Evidence-Based Falls Prevention Algorithm

Problem Statement

Noncommunicable diseases (NCDs) have replaced infectious diseases as the dominant cause of death worldwide; they are responsible for more than 81% of all deaths globally.[1] Among the NCDs, cardiovascular disease is the leading cause of death annually, followed by cancers, respiratory diseases, and diabetes.[1] Some risk factors, such as aging, are not modifiable; modifiable behavioral risk factors include tobacco use, diet, physical activity, and alcohol consumption, while modifiable metabolic risk factors include high blood pressure and obesity. Health care costs related to treatment of NCDs create a significant individual economic burden; the loss of productivity creates an outsized global economic burden. Some estimates suggest that if NCDs continue to rise as they are currently trending, $47 trillion in productivity loss will occur between 2011 and 2030. [1,2]

In the United States, NCDs have long surpassed infectious diseases, with 60% of Americans living with at least one chronic condition.[3] NCDs account for seven out of 10 deaths; they limit

quality of life and cost the U.S. economy billions of dollars every year.[3,4] They, along with mental health conditions, account for 90% of the $4.5 trillion spent annually on health care expenditures.[5] NCDs disproportionately affect racially and ethnically diverse individuals and those with lower education and lower incomes.[6] Differences also exist depending on the type of chronic disease (e.g., death rates due to heart diseases are 21% higher in rural areas than in urban areas) and biological sex (rural death rates due to heart diseases are 19% higher for males and 21% higher for females than urban death rates), along with other disparities within urban versus rural environments.[2,4,7,8]

Low-income populations are disproportionality impacted by NCDs, with poverty being identified by the World Health Organization (WHO) as a key driver. Census data from 2022 revealed that 37.9 million people lived in poverty in America and 25.9 million people did not have health insurance. Lack of health insurance and low income have been shown to reduce a person's ability to seek primary health care.[9]

Primary disease prevention and health promotion to address NCD risk factors

Primary disease prevention refers to "health promotion, which fosters wellness in general and thus reduces the likelihood of disease and premature death in a non-specific manner, as well as specific protection against the inception of disease."[10] It focuses on healthy people across the life span. WHO defined health promotion initially at the first International Conference in Health Promotion through the Ottawa Charter in 1986; the organization has since adjusted its definition to "the process of enabling people to increase control over, and to improve their health."[11] Investment in both primary disease prevention and health promotion is viewed as an avenue to decrease the NCD burden,[12] signifying a need for cost-effective and accessible nonpharmaceutical approaches. As people live longer, the importance in promoting their health and well-being to enable a healthy and functional life continues to rise.[13]

78

79 ***Current health promotion policies in the United States and primary disease prevention***

80 In the United States, health promotion policies exist at various levels of government, including
81 federal, state, tribal, and local. At the federal level, "Healthy People" initiatives, led by the U.S.
82 Department of Health and Human Services (DHHS), provide a framework to guide the nation's
83 health promotion and disease prevention efforts and thereby improve the health of the nation.
84 These initiatives create goals for tracking the nation's health and well-being and the social
85 determinants of health and foster collaboration and partnerships among various stakeholders in
86 the nation's health.[14]

87

88 The most recently completed initiative, Healthy People 2020, did not reach some of its
89 objectives, particularly for low-income, racially diverse, and immigrant/refugee populations.
90 [15,16] It had 1,111 measurable objectives, of which 985 were trackable. At the end of 2020, we
91 as a nation could meet or exceed only 34% of the trackable objectives and made progress toward
92 another 21%. Furthermore, Healthy People 2020 identified 21 leading health indicators (LHIs),
93 and again only 64% of these indicators were met or exceeded or made progress toward.[16]

94

95 Healthy People 2030 incorporates overarching goals for health and well-being across the life
96 span.[17] Fourteen of the 21 LHIs were carried over from 2020 to 2030 to continue working on
97 them.[18] While it is not expected that all of the leading health indicators will be met within a
98 decade, as most of them are ongoing, it is important to note that there is a need for additional
99 tools and efforts to help bridge the gap between the targeted objectives and projected outcomes.
100 The 2030 initiative has 23 LHIs, mostly focused on factors that impact major causes of death and
101 disease and based on the priorities identified for health and well-being improvement.[19]

102

103 ### *Traditional, complementary, and integrative health care in primary disease prevention*

104 Traditional, complementary, and integrative health care (TCIH) refers to a collaboration between
105 systems of health care and health professionals with the aim of achieving a person-centered and
106 comprehensive approach to health.[20] It incorporates a wide range of mind-body (e.g., tai chi,
107 yoga), nutritional (e.g., special diets, dietary supplements), and whole medical system (e.g.,
108 traditional Chinese medicine, Ayurveda) practices that draw on "the sum of knowledge, skills,
109 and practices based on the theories, beliefs, and experiences indigenous to different
110 cultures."[21] The practices have been used globally by culturally and linguistically diverse
111 groups,[22] in some cases, over hundreds of years; they range from self-care practices such as
112 yoga, tai chi, and meditation to provider-based services such as acupuncture, naturopathy,
113 massage therapy, and chiropractic care.

114

115 TCIH practices are well positioned to support primary disease prevention.[23] Many TCIH
116 approaches involve increasing engagement with and management of one's own physical and/or
117 mental health, key tenets of health promotion.[24] In the United States, adults who use TCIH
118 report using it more for health promotion (24.7%) than to treat illness (17.4%),[23] reinforcing
119 its relevance to primary disease prevention. TCIH users are known to take greater responsibility
120 for their own health and exhibit health information-seeking and wellness lifestyles.[25] Uses of
121 TCIH practices have grown over the past 20 years[26] along with out-of-pocket expenses,
122 reaching more than $30 billion annually.[27] While national-level data collection is limited, the
123 United States National Health Interview Survey has collected data every 5 years since 2002 on
124 certain TCIH practices. The growing base of U.S.-based users of yoga and meditation has been
125 identified as female, White or "other" race, and college educated (undergraduate degree or
126 higher) and as more likely to reside in the western United States; underrepresented groups
127 include males, Hispanics and Blacks, less educated individuals (high school, less than high
128 school), and those residing in the southern United States.[28]

129

130 Challenges in expanding TCIH use for primary prevention of NCDs include provider-based out-
131 of-pocket costs, health care coverage limitations, perceptions and beliefs around TCIH practices,
132 limited funding for prevention research, and cultural and ethical considerations.[29,30] In
133 addition, some efforts exist to expand access to TCIH self-care practices, such as school-based
134 yoga programs[31] and varying types of work-based wellness programs,[32] but currently these
135 opportunities are limited both geographically (e.g., urban versus rural, regional) and financially
136 (e.g., type of employer, school resources).

137

138 *An unarticulated role for TCIH in health promotion policies*

139 The role of TCIH in the context of the U.S. health care delivery system has garnered much
140 debate over the years, ranging from defining the associated terminology (e.g., alternative versus
141 complementary versus integrative medicine) to determining how to integrate these practices
142 based on available evidence, health care coverage, and cost.

143 TCIH practices also are not part of the current Healthy People framework in the United States.
144 The LHIs within the framework are not directly linked to health promotion and primary
145 prevention of NCDs. The focus of the LHIs is only on reducing the physical disease burden,
146 despite the following foundational principle of Healthy People 2030: "Promoting health and
147 well-being and preventing disease are linked efforts that encompass physical, mental, and social
148 health dimensions." [17]

149

150 Despite an emphasis on health promotion in public health's core philosophy and TCIH's
151 growing and widespread use for health promotion, TCIH practices have not been systematically
152 integrated into primary prevention strategies in health promotion policies.

153

154

155 ## Evidence-Based Strategies to Address the Problem

156

157 **Strategy 1**—Create an overarching approach to provide visibility for and maximize the safe/effective
158 use of TCIH for health promotion and primary prevention: This policy statement distinctly supports the
159 Healthy People 2030 initiative's plan of action to "facilitate the development and availability of
160 affordable means of health promotion, disease prevention, and treatment."[17] Given the inability to
161 successfully address several Healthy People 2020 initiatives as well as a dearth of culturally sensitive
162 health promotion tools, it is evident that there is a need for broader health promotion models. Such
163 approaches and techniques should be relevant for diverse cultural, socioeconomic, and educational
164 groups in a multicultural nation such as the United States of America.

165

166 WHO recently developed a unifying framework for harnessing TCIH for the well-being of
167 populations that are experiencing an increased burden of NCDs and climate change effects
168 within the Western Pacific.[33] The framework focuses on one specific region and proposes four
169 strategic actions: (1) promote the role of TCIH for health and well-being through national
170 policies; (2) strengthen context-specific mechanisms to ensure the safety, quality, and
171 effectiveness of TCIH services; (3) increase coverage of and equitable access to safe and
172 effective TCIH services; and (4) support documentation, research, and innovation for TCIH
173 services.[33] While the framework is intended to be applied regionally, WHO suggests that other
174 member countries apply the framework to their public health policies.

175

176 To reduce health inequity and improve health in the region of the Americas, the Pan American
177 Health Organization (PAHO) proposed a strategy and plan of action on health promotion that
178 recommended social, political, and technical actions and also addressed the social determinants
179 of health. The fourth line of action recommends incorporation of health promotion into national
180 health policies and strategies that are more relevant and concrete.[34] This strategy and plan of

181 action provides tools for health promotion such as virtual courses on health promotion and
182 includes proposed initiatives such as a wellness week. WHO's TCIH framework for the Western
183 Pacific Region can be applied to the tools and initiatives of the PAHO health promotion strategy.
184 Health promotion strategies that are relevant to local conditions and culturally appropriate may
185 be more effective than more generic and global strategies.[34] The International Union for
186 Health Promotion and Education strongly recommends respect for and sensitivity to all aspects
187 of diversity in health promotion practices.[35] This policy statement recommends inclusion of
188 TCIH practices as part of the national health promotion policy framework. Health promotion
189 models that include TCIH practices are considered to be more collective and culturally
190 appropriate and to involve community-based participatory approaches that empower people and,
191 ultimately, may be more successful.[30]

192

193 **Strategy 2**—Use TCIH self-care practices in health promotion policies: The TCIH mind-body
194 practices (e.g., yoga, tai chi, and meditation) and provider-based practices (e.g., traditional
195 Chinese medicine, naturopathy, Ayurveda) could meet the need for a more comprehensive health
196 promotion model if they are explicitly included in health promotion policies. There is an
197 expanding body of evidence demonstrating their ability to positively impact risk factors for
198 NCDs, indicating their relevant contributions to primary disease prevention and health
199 promotion. A plethora of practices are part of TCIH.[25] Three TCIH practices—yoga,
200 meditation, and tai chi—are commonly used, are increasingly visible in popular media in diverse
201 communities in the United States and have been studied frequently for their role in primary
202 prevention. Moreover, they are relatively low risk and cost less to adopt.

203

204 Yoga originated in India several thousand years ago as a spiritual and philosophical practice with
205 body, mind, and breathwork elements; in the United States, however, it is primarily used to
206 promote physical and mental well-being.[36] Almost 80% of yoga users in the United States
207 report that they use yoga for wellness or disease prevention, approximately 50% use it for

208 improving immune function, and up to 20% use it for specific conditions such as back pain,
209 arthritis, and stress.[37] Furthermore, research has shown that yoga was the most commonly used
210 TCIH approach among U.S. adults and children in 2012 and 2017.[38] According to the Centers
211 for Disease Control and Prevention, heart disease is the leading cause of morbidity and mortality
212 in the United States across all genders, races, and ethnic groups.[39] Yoga helps control risk
213 factors for cardiovascular disease such as hypertension, metabolic syndrome, type 2 diabetes,
214 insulin resistance, body weight, lipid profile, coronary atherosclerosis, psychosocial stress,
215 oxidative stress, and smoking behavior.[40]

216

217 Meditation is also a widely used TCIH practice in the United States, with evidence of health-
218 promoting benefits relevant to primary prevention through mitigation of NCD risk factors.[41]
219 Population-based surveys indicate that use of meditation increased more than threefold between
220 2012 and 2017 (from 4.1% to 14.2%) and was mainly used for general wellness (76.2%).[37]
221 Adults 45–64 years of age use meditation more (15.9%) than other age groups.[38] It has been
222 used by children, adolescents, pregnant women, the elderly, health professionals, caregivers, and
223 people with chronic diseases.[37] Meditation is considered to be a low-cost adjunct to current
224 guidelines and lifestyle modifications and involves minimal risk.[37] Also, it is a self-applicable
225 practice[37] and can be taught from a distance as well as over the phone. Therefore, meditation
226 could be accessible to rural populations.

227

228 According to a systematic review of 400 studies, meditation can have long-standing effects and
229 improve psychological outcomes such as perceived stress, mood, and anxiety. In addition, it has
230 been shown to reduce systolic blood pressure and improve insulin resistance, smoking cessation,
231 and quality of sleep, which are critical for health promotion and primary disease prevention.[42]
232 Reviews on meditation have focused on vitality, well-being, and quality of life. Positive
233 outcomes have been noted in cognitive performance and sexual performance as well as
234 development of mindfulness skills, compassion, empathy, and positive emotions.[42]

235 Improvements in cardiovascular health, emotional regulation, socialization, promotion of
236 cognitive functions, and prevention of dementia and/or mild cognitive impairment among older
237 adults are other benefits of meditation. [43–45]

238

239 Mindfulness meditation has been shown to improve metacognition via cultivation of moment-to-
240 moment awareness of oneself and the environment through increased functional brain
241 connectivity, thereby improving individual and global well-being.[46] According to one study,
242 healthy individuals who received meditation and consumed a vegan diet had a significantly
243 different intestinal flora composition than healthy omnivorous individuals who did not receive
244 meditation. An abundance of beneficial bacteria, predominantly Bifidobacterium, was seen in the
245 meditation group. Bifidobacterium is known for improving immunity, gastrointestinal function,
246 and anti-aging.[47] Overall, the literature on preventing cardiovascular, neurological,
247 immunological, and gastrointestinal system disorders using meditation is compelling enough to
248 include it explicitly in health promotion policies.

249

250 The number of tai chi users increased by 64% from 2007 to 2017. The increase was
251 predominantly among vulnerable subgroups such as people with low incomes and poor access to
252 health care.[48] The increase was attributed to tai chi's natural and holistic healing approach
253 toward health and chronic diseases.[49] A scoping review of meta-analyses that investigated the
254 effectiveness of tai chi for health promotion among older adults included 27 analyses with high-
255 and moderate-quality evidence of significant improvements in balance, cardiorespiratory fitness,
256 mobility, cognition, sleep, and strength. The authors also reported significant reductions in the
257 incidence of falls and stroke risk factors.[50]

258

259 Providers trained in traditional and complementary medical systems from around the globe could
260 play a role in primary disease prevention. These systems, such as traditional Chinese medicine

261 (incorporating acupuncture, Chinese herbs, and tai chi),[51] naturopathy (a combination of
262 traditional practices and health care approaches rooted in 19th-century Europe),[52] chiropractic
263 therapy (considered a complementary manual therapy focusing on the musculoskeletal
264 system),[53] and Ayurveda (an ancient Indian medical system),[54] emphasize lifestyle-based
265 health promotion practices that incorporate personalized assessments, leading to person-centered
266 care plans including acupuncture, herbs, nutritional supplements, physical activity, stress
267 management, and sleep for primary disease prevention and wellness. Homeopathy has similar
268 tenets and tools for health promotion. Comprehensive approaches to health primarily consider
269 the interconnectedness of mind, body, and spirit.

270

271 The challenges around provider-based care in the context of TCIH and primary disease
272 prevention include cost barriers, lack of coverage for primary disease prevention
273 services, accessibility issues and inequity, and limited research on the efficacy of such practices.
274 Their role in secondary (detecting and treating a condition early to minimize serious
275 consequences) and tertiary (aiming to reduce the severity and recurrence of a disease) disease
276 prevention is well established, and there is evidence to support it. Nevertheless, their historical
277 use, knowledge, and continuous practice for several centuries with generally safe interventions
278 need a closer examination and could be adapted to match the current requirements for primary
279 disease prevention and health promotion.

280

281 **Strategy 3**—Invest in TCIH research and a workforce focused on prevention: The evidence on
282 TCIH practices falls under the category 2 level of evidence as defined by the National Academy
283 of Medicine (previously known as the Institute of Medicine). This category 2 level stipulates that
284 if evidence supports safety but is inconclusive about effectiveness, the treatment may be
285 cautiously offered with monitoring of patient outcomes.[55] Although this level of evidence may
286 be sufficient to initially adopt TCIH practices in the current health promotion frameworks, there

287 continues to be a need for assessments of effectiveness, safety, and quality along with support for
288 more research and equitable access.

289 Prevention clinical trials focus on the development of evidence-based strategies that include
290 identification of risk factors and enhancement of protective factors to improve the health and well-being
291 of individuals and groups at risk.[56] These clinical trials adopt observational designs and require special
292 skills and funding. Improving research literacy has been reported to be the most effective strategy to
293 address gaps in knowledge, participation, attitudes, and skills among complementary and integrative
294 health professionals engaged in research.[57] Establishing collaborative approaches that build
295 relationships between traditional research institutions and TCIH stakeholders and creating practice-based
296 research networks would help to overcome this barrier of education.

297

298 Funding is the second barrier for TCIH research focused on prevention. The National Institutes
299 of Health (NIH) has been gradually increasing its investment (23.7% of all dollars for new
300 awards in the NIH prevention research trial portfolio from 2010–2016).[46] However, funding
301 for such prevention research awarded to the National Center for Complementary and Integrative
302 Health (NCCIH) is small relative to funding for other institutes.[56] This policy statement
303 recommends increasing funding and support to meet two of NCCIH's objectives in its strategic
304 plan for fiscal years 2021–2025: fostering research on health promotion and restoration,
305 resilience, disease prevention, and symptom management and enhancing the complementary and
306 integrative health research workforce.

307

308 Finally, another aspect of adopting TCIH use for primary prevention is to ensure a properly trained and
309 skillful workforce. Investment in educational standards that lead to certifications and credentialing
310 within the TCIH profession is an essential component to provide assurance to users that they are
311 receiving the quality of services they need. Proper credentialing of TCIH providers is expected to
312 facilitate physician and practitioner collaboration and referral. It will also increase public trust,
313 practitioner rigor, and patient access to a range of credentialed TCIH providers.[58] Similarly, support

314 for creating regulations for TCIH practices that do not currently have regulations but are popular (e.g.,
315 meditation) is also necessary. However, these regulations should not dilute the core philosophy of the
316 practice, constrain the scope of the practice, reduce the diversity of practitioners, dampen creativity, or
317 create administrative burden. Excessive standardization may lead to a decrease in individualization of
318 services and ineffective therapy.[59]

319

320 ## Action Steps to Implement Evidence-Based Strategies

321

	Evidence-Based Strategy		Action Steps
1	Create a national framework that integrates TCIH practices into health promotion policies	1a	Urge the national governing bodies that make prevention recommendations, such as the DHHS, to integrate Healthy People TCIH practices more explicitly into primary disease prevention and health promotion models to enhance physical, emotional, and overall well-being.
		1b	Integrate PAHO health promotion strategies that are relevant to local conditions and culturally appropriate along with WHO's traditional medicine strategy, specifically the organization's TCIH strategy for the Western Pacific Region, into the DHHS national health framework to improve the well-being of people and address health inequities in the United States.

322

		1c	Create a DHHS framework (or realign existing frameworks) that ensures increased coverage of and equitable access to TCIH practices that are safe and effective for primary disease prevention.
		1d	Introduce new or expand existing health insurance plans offered by the government and third-party payers that reimburse TCIH for health promotion and primary prevention.
2	Use TCIH practices for health promotion.	2a	Encourage local, state, and federal public health organizations to promote TCIH practices by developing programs to educate the general public about the empirical evidence of TCIH for health promotion and providing opportunities to participate in TCIH self-care practice programs, especially for low-income groups, rural populations, and other underserved populations. • Identify physical spaces such as community libraries and parks and resources such as yoga mats, virtual yoga, tai chi, and meditation apps. • Hire qualified instructors and practitioners. • Offer public sessions focused on stress reduction and coping mechanisms to address the challenges faced by diverse populations. • Secure ongoing funding for training, resources, and program maintenance.

		2b	Create and implement TCIH practices such as yoga and meditation in public schools led by local administrators. • Design age-appropriate educational modules and programs to align with educational goals and standards. • Provide teachers with training programs to ensure that they can effectively deliver the content. • Organize parental workshops to improve understanding of the benefits of TCIH for health promotion. • Collaborate with TCIH professionals to establish referral systems for students who may benefit from additional support or personalized interventions.
3	Invest in TCIH research and the TCIH workforce.	3a	Urge Congress and the states to fund programs to promote TCIH practices for the general public and to fund research to evaluate the effectiveness of such programs for health promotion and disease prevention.
		3b	Support training of TCIH practitioners to become part of the research workforce through NCCIH grants.
		3c	Urge NCCIH to create additional opportunities for collaboration between research-intensive centers and TCIH professionals; create additional funding opportunities, grants, and scholarships for TCIH

			researchers working on health promotion; and provide funding specifically for randomized controlled trials to improve available evidence related to TCIH.
		3d	Support the adoption of comprehensive healthy workplace policies that include TCIH practices.
		3e	Secure funding for ongoing training, credentialing, and regulation of TCIH professions.

323

324 ## Opposing Arguments

325 **Opposing argument:** A framework for health promotion and primary disease prevention already
326 exists through Healthy People initiatives and nongovernmental organizations; a need for a
327 national policy is unwarranted.

328

329 **Response:** Despite the existence of national guidance, TCIH is underpromoted with respect to
330 health and well-being and a role is not clearly articulated. By creating a national framework, we
331 can recognize the many users of these practices, help clarify their benefits for others, ensure
332 safety and quality, and harness their potential to support health and well-being more fully across
333 the life span.

334

335 **Opposing argument:** Funding and strategies for health promotion are already in place through
336 NCCIH. There is no need for additional funding and strategies.

337 **Response:** Funding and strategies are meager and are not sufficient to meet the rampant increase
338 of NCDs in our country. The socioeconomic impact of NCDs and their disproportionate effect on
339 people at risk warrant additional efforts and funding to address modifiable behavioral risk factors
340 and metabolic risk factors. Increased funding and strategies that enhance the involvement of
341 nongovernmental organizations and the workforce are needed.

342

343 **Opposing argument:** There is a general lack of evidence for the effectiveness of individual
344 services/outcomes.

345

346 **Response:** Evidence for the effectiveness of individual TCIH practices is generally limited to
347 certain practices such as yoga and meditation. Training, funding opportunities, grants, and
348 scholarships for TCIH researchers working on health promotion are crucial to increase the
349 evidence. Creating opportunities for TCIH practitioners to collaborate with research-intensive
350 centers also helps to produce evidence. Programs and policies related to changes at the social,
351 political, and environmental levels are required to support healthy lifestyles and community
352 participation.

353

354

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