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Infrastructure

Answering the "100 Most Important Family Medicine Research Questions" from the 1985 Hames Consortium

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Introduction: **The 1985 Hames Consortium convened family medicine researchers to identify outstanding questions in their practice.**

Method: **In this descriptive review, we collected, codified, and analyzed available literature to describe the availability of evidence to answer these questions.**

Results: **Of 136 total questions, researchers rated 33 questions as not at all answered (24.2%), 49 questions as somewhat answered (36.0%), 37 as mostly answered (27.2%), and 17 as fully answered – will implement in practice (12.5%). Notably, 2 of the categories with the highest number of total questions, community oriented primary care and the value of comprehensive care, had the highest percentage of unanswered questions.**

Discussion: **The Hames 100 questions and categories themselves demonstrate the values and purpose of family medicine research and can serve as a powerful tool to discuss the future of family medicine research. The varied questions illustrate the broad scope of interest of family physicians in 1985, which remains just as relevant today. Our findings indicate that relatively few questions were fully answered, with even fewer questions answered in family medicine journals. (J Am Board Fam Med 2024;37:S106–S121.)**

Keywords: **ADFM/NAPCRG Research Summit 2023, Evidence-Based Medicine, Family Medicine, Hames Consortium, Practice-Based Research, Research**

Introduction

In 1963, the World Health Organization recognized the "particular contribution" family medicine can make to medical research.[1] The legacy of family medicine research began even before family medicine was a specialty. From Curtis G. Hames[2] to John Fry[3,4] to James Mackenzie, Will Pickles, and F. J. A. Huygen, family physicians advance the care of their patients through research.[5] Family medicine has made valuable contributions to the practice of evidence-based medicine.[6]

Family medicine researchers have regularly convened to set a vision for the discipline,[5,7] including the Ambulatory Sentinel Practice Network (ASPN) in the 1980s.[8] The Curtis G. Hames Lectureship and Professorship Endowment, established in 1981, sponsored the Hames Consortium, an annual meeting to generate innovative ideas for family medicine research.[9] These convenings included members from the Study Group on Family Medicine Research, an autonomous group organized and supported by the Society of Teachers of Family Medicine Task Force on Research Status and Needs; North

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American Primary Care Research Group; American Academy of Family Physicians; College of Family Physicians of Canada; and Family Health Foundation of America.[7] The 1985 Hames Consortium convened family medicine researchers to identify outstanding questions in their practice.[3] The resulting "100 most important family medicine research questions" (Hames 100) set an ambitious agenda for family medicine researchers.

The purpose of this study was to describe the progress researchers have made toward answering these research questions nearly 40 years later.

Method

In this descriptive review,[10] we collected, codified, and analyzed data to describe the availability of evidence to answer the Hames 100. Although these are research questions, we did not isolate them from the context of the practice of family and community medicine. We approached this study through a constructivist lens,[11] to recognize that all practicing family physicians practice within unique contexts that are informed by their communities, patients, and hospital systems.

First, we reviewed all questions to clearly define the sample. See Appendix A for a full list of the questions organized by original categories. For multistep questions (eg, What percent of young men have had a physician encourage/teach testicular self-examination? What percent of these young men do it?), we divided the question into 2 or more questions. Then, we reviewed all questions for clarity and structure. We excluded questions that were: not written as a clear question or hypothesis (eg, Use of computers to manage potential drug interactions within the active patients of a practice); overall too nebulous (eg, what constitutes a community?); had ambiguous concepts that we could not fairly operationalize without knowing the writer's intent (eg, . . . with heavy business-leader input . . .); or too specific to answer outside of the time when it was written (eg, . . . total cost of readily available mammography of $40.00 is sufficient to . . .).

As we developed the method, we positioned ourselves as family physicians – who we imagined were the end users for whom the Hames 100 questions were written. Family physicians often seek answers to clinical questions between patient appointments or amid documentation through lunch or after hours. Our goal was to replicate what an average practicing family physician may do. Four medical students who plan to become family physicians acted as data extractors/coders. We selected students to ensure that the coders did not already know if the questions had been answered. The search strategy was limited to PubMed and prioritized meta-analyses and systematic reviews. The searches were date limited to 1969 and afterward. For each question in the dataset, researchers collected the abstracts of up to 10 peer-reviewed publications relevant to each question. See Appendix B for a full summary of search methods. Then, they coded each abstract for what journal it was published in, identifying it as a family medicine journal or not a family medicine journal. They read the abstracts associated with the question and rated the question as: *not at all answered*, *somewhat answered*, *mostly answered*, or *fully answered – will implement in practice*. The coding scheme included the following detailed descriptions. *Not at all answered*: search identifies no abstracts directly addressing the question. *Somewhat answered*: search identifies abstracts that provide a background foundation to answering the question at hand, but abstracts do not specifically answer the parameters that need to be examined. No specific conclusions or relationships within the question are studied. *Mostly answered*: search identifies abstracts that provide a background foundation to answering the question and examine parameters like those asked. However, abstracts do not answer/address the specific parameters that we want to examine. The question is partially answered, and some information can be extrapolated from existing data, but further research can be done to clarify some aspects or to fully answer all facets of the question. When literature presented conflicting evidence, coders rated the question as mostly answered. *Fully answered:* search identifies abstracts that summarized clear answers and solutions they would be able to implement in the context of their practice. Abstracts directly answer the question posed and provided ample evidence to support the answer.

Coders recorded how much time was spent in the search. We limited the time search to 60 minutes, which we anticipated would be more time than most primary care clinicians would have to identify if there is an answer to the clinical question. When coders were uncertain about a rating,

we discussed it as a team to establish the evidence of the rating. In addition, in the coding documents themselves, coders included their rationales for each rating.

Results

As written, the original list of questions presented 144 questions divided into 21 categories. An additional 12 categories included "no questions." 2 categories were cross listed with other categories. After subdividing questions into searchable queries, the list expanded to 167 questions. We then removed 31 questions in the review for clarity and structure.

Researchers searched for 136 total questions. Total search time was 4436 minutes, with an average of 32.62 minutes per question (S.D. 12.69). All searches occurred in December 2023–February 2024. Of 1179 abstracts reviewed, 87 (7.4%) were from family medicine journals. See Box 1.

Box 1. Family Medicine Journals* Represented in the Dataset

African Journal of Primary Health Care & Family Medicine
American Family Physician
Annals of Family Medicine
Archives of Family Medicine
Australian Family Physician
BMC Family Practice
Canadian Family Physician (Médecin de famille canadien)
Family Medicine
Family Practice Research Journal
Family Practice
Journal of Family Medicine and Primary Care
Journal of Family Practice
Journal of the American Board of Family Medicine
Journal of the American Board of Family Practice
South African Family Practice

*We include all journal names as indicated in PubMed to demonstrate the historicity of the sample. For example, the Journal of the American Board of Family Practice is now the Journal of the American Board of Family Medicine. This dataset included abstracts from when the journal published under each name.

For the outcome variable, researchers rated 33 questions as not at all answered (24.2%), 49 questions as somewhat answered (36.0%), 37 as mostly answered (27.2%), and 17 as fully answered – will implement in practice (12.5%). See Figure 1 for a distribution of the variable by category. Categories with higher percent of answered questions included the doctor/patient relationship (33.3%), value of continuity of care (25.0%), natural history of common problems (22.2%), family systems and family dynamics (20.0%), and the value of coordinated care (20.0%). Notably, 2 of the categories with the highest number of total questions, community oriented primary care (COPC) and the value of comprehensive care, had the highest percentage of unanswered questions.

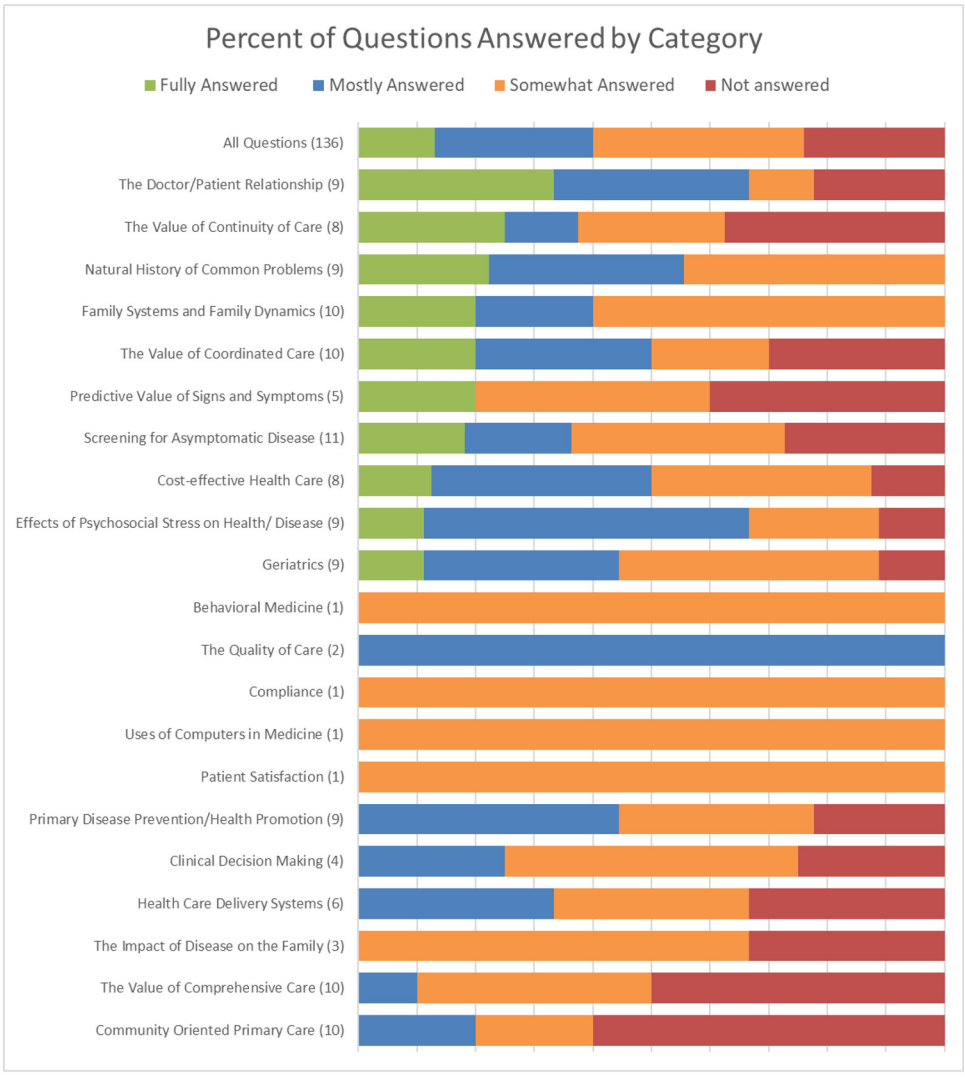
Discussion

The Hames 100 questions and categories themselves demonstrate the values and purpose of family medicine research and can serve as a powerful tool to discuss the future of family medicine research. The varied questions illustrate the broad scope of interest of family physicians in 1985, which remains just as relevant today. Our findings indicate that relatively few (12.5%) questions were fully answered, with even fewer questions answered in family medicine journals. Family medicine is uniquely positioned to address gaps in research that impact the health of our patients and communities. The questions that were fully answered demonstrate great strides in research to understand disease processes and the value of primary care. Research has shown the value of continuity of care and coordination of care, and the clear value of family medicine (eg, Dyer et al[12] and Yang et al[13]). The Hames 100 also can also facilitate discussion on future research questions for the discipline.

Notably, 25% of questions posed were not answered, and 63% of questions were only partially answered. The paucity of answered questions causes us to reflect on how family physicians practice evidence-based medicine. Family physicians often make clinical decisions extrapolated from highly controlled research. Patients are unique and complex, and function within a unique socioecological and psychosocial context. The aggregate of many decisions, when combined into a single patient with unique circumstance, has little evidence base. The practice of medicine necessitates coping with a certain level of uncertainty.[14,15]

The questions that continue to be unanswered are indicative of the complexity of family medicine and the challenges of finding clear answers to the problems our patients and communities face. These searches revealed how little we understand about some family medicine specific questions such as underlying causes of depression, differences across the life course, or specific recommendations for

Figure 1. Proportion of Hames 100 questions answered by category.



Note: Numbers in parenthesis represent total number of questions in each category.

clinical conversations about cancer prevention and screening.

Research funding for Departments of Family Medicine remains limited, in particular compared with the proportion of the physician workforce providing clinical care.[16] As noted in the 2021 National Academies of Sciences, Engineering, and Medicine (NASEM) report on Implementing High-Quality Primary Care, "the current research funding environment has prevented addressing meaningful questions critical to the advancement of primary care."[17] The disease-specific focus and limited time frame of grant funding mechanisms may incentivize a reductionist approach to health conditions, or research on "low-hanging fruit." Although individual research studies may inform disease-specific management, broader questions on health systems, coordination of care, and comprehensive care cannot be easily answered. Investigating more complex health systems questions require full research programs (with qualitative, quantitative, and mixed-methods research expertise), interdisciplinary expertise and collaboration, as well as longitudinal, sustainable funding mechanisms.

Many questions addressed foundational constructs of family medicine,[18] such as continuity, comprehensiveness, and community. However, the evidence for these questions did not uniformly conceptualize or operationalize these concepts, limiting how we can synthesize and apply findings. For

example, although family medicine researchers have clearly defined continuity,[19] the broader literature did not use these definitions or measures. One notable concept in this dataset is COPC.[20] Although family medicine is founded in the context of community, little evidence was available for the value of community-oriented family medicine. However, this lack of evidence could be connected to the rare use of this term. As researchers, we must attend to how we define and describe these concepts. Otherwise, lessons we learn from COPC or, more recently, patient-centered medical homes (PCMH)[21] will be lost in the literature.

Although family medicine researchers are well positioned to answer questions that include layers of family, systems, and community, our results show that evidence to these family medicine questions is more commonly found in literature outside family medicine journals. This could relate to the overlap with other specialties (eg, research on cancer may be more likely to be published in cancer specific journals). However, it also reduces our ability to understand the impact family medicine researchers have on the medical literature.

Interpretations are limited to the method and search strategy. Searches were limited to PubMed; however, some of the questions would likely be better answered by social scientists and indexed in the American Psychological Association PsycINFO or the Education Resources Information Center (ERIC). The Hames 100 predates the FINER criteria,[22] with many questions difficult to truly interpret or assess. These family medicine pioneers did not review the questions for feasibility, interest, novelty, ethics, and relevance when they created the list. Many research questions were specific to their time period and context and are not relevant or applicable in the current health care landscape. Some of the research questions listed are no longer important to today's clinical practice.

As our team discussed the available evidence for some questions, we debated whether a question was answered if the existing evidence was bound by time. Ultimately, this study demonstrated that research questions must be revisited and studies replicated. Two question contexts were particularly sensitive to time: money and relationships. When the question queried the cost of health care, we were less likely to consider a question fully answered. Cost models were bound by the larger economy at the time of study. Similarly, many questions involved relationships: between the patient and physician and within families. Since relationships are culturally situated, the evidence from older studies was less applicable to today's practice.

Furthermore, important questions may have been missing from the Hames 100. It is important to continually review these lists to guide the future of primary care research. The NASEM report on Implementing High-Quality Primary Care identified many examples of research questions that go unasked due to the current funding and peer-review environment.[17]

The Hames 100 questions provide a fascinating look into the values and broad scope of care of family physicians at the time of the 1985 Hames Consortium. Many questions remain practical and important today, yet few questions from this time period are fully answered. This study highlights the importance of translational research to implement care that we know to be evidence-based, but also flags the importance of increased and sustained investment in family medicine research and support for longitudinal interdisciplinary collaborations to research more complex and broad health care questions that remain unanswered. Further, these findings indicate the important role of family physicians in research.

In the original document, each question is followed by a set of initials. We presume these to indicate the authors of the "100 Most Important Family Medicine Research Questions." However, the Curtis G. Hames, Sr., Papers 1943-1999, located in Historic Collections and Archives in the Robert B. Greenblatt, M.D. Library at the Medical College of Georgia, have no additional information about the question writers. Thus, we acknowledge them here: LC, MW, LG, PF, KW, PN, LB, MG, CB, CS, GF. We also thank John Frey and John Saultz for reviewing early versions of this manuscript.

To see this article online, please go to: http://jabfm.org/content/37/S2/S106.full.

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Appendix A

Question list recreated from the original list available in the Curtis G. Hames, Sr., Papers 1943-1999 at the Medical College of Georgia, all language, punctuation, and capitalization as the original

Questions marked with a ✓ were rated as fully answered

Hames Consortium "100 Most Important Family Medicine Research Questions" 10/18/1985

1.	**Cost-Effective Health Care**
	Can structured screening and abnormal follow-up programs that are practice-based be cost-effective, producing time-discounted, health-cost savings?
	Does providing aggressive mental health care in a primary care setting reduce the cost of non-mental health care utilization?
✓	Does providing health care to all household family members in a family-sensitive manner result in lower health care costs than when care is provided to household members by different physicians?
	Is a community outreach program cost-effective in the management of chronic conditions (use of a tracer condition)?
	There is an inverse relationship between expenditures for primary care and tertiary care.
	Total health care expenditures for persons living in a geopolitical unit rise as the rate of specialists/primary care clinicians rises.
	What are the costs and outcome differences between primary care delivered by family physicians and primary care delivered by specialists, controlling for case mixed by severity of disease?
	How can laboratory tests be used in the most cost-effective manner in the care of individual illnesses (i.e., glucose with diabetes)?
	Weight loss in patients who report their weights weekly by postcard costs less and is as effective as monthly visits to a family physician for counseling. Practices should be randomized.
	Patients with irritable bowel syndrome who are referred to a gastroenterologist for consultation only have the same number of episodes and/or discomfort or disability days during the six-month period following the index visit to a family physician as patients who are not referred.
	Patients with specified chronic disease who report their status regularly in practices which have a regular daily "telephone" hour use fewer hospital days per year than do similar patients in practices which do not have a "telephone" hour. Practices should be randomized if necessary.
	What are the cost implications of coordinated care? Hypothesis: the total care for an individual (or household) over time is less when the total care is coordinated by a primary care physician.
2.	**Effects of Psychosocial Stress on Health/ Disease**
✓	What is the co-morbidity of specifically defined anxiety states or confirmed depressions in a family practice population?
	What is the impact of effective treatment (defined outcomes) of depression on co-morbidity?
	To what extent do acute stress or chronic stress (or the combination) increase an individual's susceptibility to acute infections?
	To what extent is hypertension a stress-related disease? If so, does it have the same cardiovascular implications as non-stress-related hypertension?
	Can measures of current life stresses predict response of patients with mild hypertension to nonpharmacologic therapies?
	Exacerbations of cardiac failure in patients under regular treatment is associated with a loss or separation that can be recalled or reported by the patient or a close observer.

	Widows and widowers report more illness episodes, make more physician visits, and use more hospital days per year in the year following the death of their spouse than in the previous year.
	Families of workers who lose their jobs as a result of plant closings or layoffs report more episodes of illness, make more physician visits, and use more hospital days in the six months following the announcement of job loss than the six months before.
	Is there an association between life stress and compliance with advice to use medication or to undertake preventive lifestyle changes?
	To what extent are the associations between stresses and illnesses modified by specific family characteristics (such as family size, family composition, family interaction patterns, family resources)?
3.	**Natural History of Common Problems**
✓	What is the natural history of the types of common problems that ASPN is and can study (e.g., low back pain, headache, depression, chest pain, varicose veins, genital herpes, non-insulin-dependent diabetes, insomnia, alcoholism, vaginitis, problem patient, abdominal pain, angina, spontaneous abortions, and troubled adolescents)?
	At the level of primary care, what is the diagnostic distribution and consumption of medical services for fatigue, chest pain, abdominal pain, back pain, headache, difficulty sleeping, unexplained weight loss, and painful, inflamed joints?
	What are the presymptomatic manifestations of COPD in smokers and non-smokers?
	No harm, detected by customary clinical appraisal, accrues when declining to investigate further fatigue of greater than four months' duration.
4.	**Predictive Value of Signs and Symptoms**
	What relationship exists between reasons for visit (including symptoms, feeling states, fear, etc.) and final provider diagnoses?
	What is the prevalence of (1) acute pain and (2) chronic pain as a presenting symptom in practice?
	What is the predictive value of the symptoms: 1) fatigue, 2) headache, 3) chest pain as related to specific serious organic illnesses?
	What is the probability that a person with: (a) liver span greater than 12 cm (adult), (b) isolated bibasilar rales (adult), (c) systolic murmurs (infant, child, adult), (d) palpable spleen (child, adult), (e) enlarged, painless lymph node (child, adult), (f) thyroid nodule (adult) has … (a) an illness or problem for which specific treatment exists (b) an illness or problem judged serious by: 1) the clinician, (2) the patient?
	In patients with acute pelvic pain or acute low back pain, what historical features, physical findings, psychological characteristics, job features, and concurrent stresses are associated with difficult diagnosis, recurrences, or prolonged disability?
✓	What is the yield of treatable abnormalities when CT scans are done for patients with headache but no other abnormal neurological findings on history or physical examination?
	Can recognition and early treatment of depression or other mental health problems be improved by screening patients for these problems at their first visit with one of the following problems: chest pain, fatigue, headache, epigastric pain, recurrent or frequent infections, pelvic pain, low back pain?
	Can family physicians, by using their knowledge of a family's interaction patterns and health problems, predict (and possibly prevent) problems associated with major family life cycle transitions (e.g., parenting problems, adolescent substance abuse, teen pregnancy, involutional depression)?
5.	**Geriatrics**
	How can we measure geriatric therapeutic outcomes in terms of function?

	How should geriatric patients, their families, and medical professionals relate in making management decisions when the patient is incompetent?
	Can personal computers be useful in maintaining cognitive stimulation, physical mobility, and/or communication among the homebound elderly?
	Can we objectively assess in geriatric patients the preference between longevity and independence?
	What is the impact (financial, psychological) of the increasing geriatric population on the "sandwich generation" (those with both young and old dependent on them)?
✓	What strategies (pill container, written instructions, personal lecture) are effective in assuring elderly patients take medications appropriately? Categories of elderly patients that might be studied, e.g., over a certain age, with certain diseases, etc.
	What psychosocial factors in addition to typical biological factors/risks should be included in determining frequency of screening visits recommended for the elderly? This question relates also to preventive medicine.
	Men over 70 years of age who live alone are at greater risk of consulting with "masked depression" than are women over 70 who live alone.
	Patients over the age of 80 who smoke at least a pack of cigarettes daily experience no more disability and/or bed days per year than do non-smokers over the age of 80.
6.	**The Doctor/Patient Relationship**
✓	What are the effects of different types of bonding between physician and patient on treatment outcomes (using a tracer condition such as MI or HNP)?
	Does the establishment of transference relationships at the individual, part-family, and whole-family level impact on therapeutic outcome?
	What components of the doctor/patient relationship contribute to the placebo effect, and how might these components be emphasized?
	What are the characteristics of patients for whom the placebo effect seems to be most profound? Is the placebo effect, in these patients' problems, specific, related to physician characteristics, the communication style of the physician, etc.?
	The level of satisfaction experienced by the patient is directly related to the proportion of the doctor/patient visit devoted to listening by the doctor.
✓	When the doctor and patient agree as to what the problem is, the patient improves.
	Is there less postpartum depression or child abuse among those women and families receiving family-oriented, low-intervention obstetric care versus those receiving less person-oriented, more procedurally-oriented care? (Difficult question to put in a category.)
✓	Patients under regular treatment for cardiac failure use fewer hospital days per year if they report their status to their family physician or surrogate by telephone regularly (e.g., weekly) than do patients who do not report in this manner. Practices should be randomized.
7.	**Primary Disease Prevention (Health Promotion and Risk Factor Modification)**
	Can the family physician effectively counter-advertise against cigarette buying?
	Can supplemental educational presentations by the family physician have an added impact on students in addition to regular school health curriculum?
	Does (1) peer pressure or (2) advertising play a bigger role in middle teen buying habits?
	What specific characteristics identify the smoker who is mentally ready to quit smoking?
	What is the relationship between lifestyle variables known to be associated with improved (reduced) mortality and morbidity and (a) problem/diagnosis and (b) utilization of medical services?

	Can we help families with a high incidence of coronary artery disease in their family histories modify the diet fed to their children enough to keep (a) keep cholesterol levels low or (b) keep lipids low with a high HDL, and does the above noted dietary intervention change the expected rate of coronary artery occlusion compared to a group of families who do not receive such dietary education but do have similar family histories?
	Are employer-sponsored exercise programs cost-effective interventions for improved health care (i.e., are wellness programs, in general, worth the cost)?
	How can preventive health care be best integrated into office visits for acute problem?
	What strategy is most effective in increasing elderly patients' consistent intake of calcium supplements? (Independent variables could include pamphlets, audio-tapes, personal instruction by physician, nurse, or peer, etc.).
8.	**Clinical Decision Making**
	Under what conditions are decisions made by physicians with intimate knowledge of the patient superior to those made by computerized "expert systems"?
	Is there a difference in the decisions made/time to make decisions/errors in final decisions between students receiving formal courses in medical decision-making and students who receive no such training?
	At what stage can computers best aid decision-making, e.g., in data gathering or hypothesis generation, or management, etc.?
	What is the relation between level of cognitive development and level of moral development to clinical reasoning ability?
9.	**Health Care Delivery Systems**
	Can "small decentralized clinics" with broad discretion in organizational decision-making thrive inside a heavily managed healthcare delivery system?
	Under what conditions can the small nonaffiliated clinic survive as an option to heavily managed, prepaid health care delivery systems?
	What criteria should be used in deciding on alternative health plans for various types of users, e.g., families with children, families with no children, single individuals, indigent, etc.?
	What are the specific competencies needed by the entry/first contact/primary physician in an HMO, and is there a primary specialty (general internal medicine, general pediatrics, family practice, etc.) whose competencies best match the ones needed by the entry physician in an HMO? Which specialty is most frequently selected?
	When given the choice of an HMO versus a fee-for-service health benefit, which delivery systems do physicians usually choose?
	Is there a difference in patient or physician satisfaction in HMOs versus other health care delivery systems?
	Are the factors that motivate a patient to select a physician or practice (e.g., specialty, location, sex, fee) the same ones that motivate a patient to stay with a physician?
	Does (1) primary care case manager or (2) "free" access with tight utilization review impact more favorably on the FP specialist in an ADS/HMO system?
	What is the impact of a new primary care gatekeeper HMO on the relationship of primary care MDs and consultant MDs?
	Is it the natural history of urgent care clinics to develop a nucleus of regular and returning patients?
	How does a prepaid health care system affect physician test ordering and/or health promotion?
10.	**Individual Functional Health Status — no questions**
11.	**The Impact of Disease on the Family (similar to section 13)**

	A descriptive study of how individual families respond to and mobilize their resources for an acute critical event in the life of one of the family members or for a long-term chronic health event.
	How does major disease in one family member impact the disease profile of the rest of the family over time?
	How reliable (replicable) are patient and family therapeutic decisions when made under the stress of life-threating illnesses or injuries?
12.	**Community Oriented Primary Care (COPC)**
	Can COPC interventions decrease hip fractures in the elderly?
	Can COPC interventions increase the seeking of health care in early pregnancy by high social risks (low SES, single parent, adolescent) women?
	Will a COPC approach with heavy business-leader input succeed in addressing the needs of the community's general population?
	What constitutes a community?
	Can local physician-led programs affect the community's media advertising habits regarding cigarettes and alcohol?
	Can physician-sponsored, youth-assisted programs in health promotion significantly improve community young adult (18-35) health habits?
	What specific techniques will work best for children to impact parental smoking behavior?
	Where do seventh and eighth graders purchase/obtain cigarettes, alcohol, drugs?
	What is the marginal cost and impact on health status of providing COPC services to a defined population? The cost will vary by reimbursement mechanism and would be expected to differ among practices based on fee-for-service, caption, etc.
	What are the marketing implications of COPC? For example, does COPC in a fee-for-service practice generate additional revenues by targeting risk groups and providing necessary services to high-risk individuals who would not otherwise receive them? Conversely, does COPC have an effect of simply providing more services to low-risk individuals while leaving high-risk individuals unserved?
	How accurately can specific individuals at increased risk be identified within a target population?
13.	**Family Systems and Family Dynamics**
	Is there a change in rate of utilization of health care resources by members of the family during that period of time with greater stress as contrasted to a previous or later stage of development in the family?
	Is there an increase in number of problems identified or seriousness of problems identified in various family members during a period of great family stress?
	Is there a change in internal family function and stress between family members during a time of stress as contrasted to an earlier or later period?
	What is the impact on family homeostasis when one family member attempts a major lifestyle change in order to alter his/her health risk (e.g., smoking cessation, weight loss, exercise)?
	Which family characteristics are associated with good functional outcomes when a family member suffers a major illness (such as MI, arthritis, stroke, hip fracture)?
✓	Can individual's functional outcomes or compliance be improved by interventions (such as education, counseling, advice) directed toward other family members or to the family as a group?
	Which family characteristics are associated with compliance (or noncompliance) with physician advice?
	What are the characteristics or resources of families whose members are able to cope with major stressful life events without developing illness or symptoms?

✓	Can adverse health effects of stressful life events be prevented by interventions for families currently experiencing major life changes?
	Are there identifiable family interaction patters that are associated with increased susceptibility of individual family members to "stress-related" illnesses?
	Are there identifiable patterns of symptoms or health problems presented to family physicians by family members of an alcoholic?
14.	**The Value of Continuity of Care**
	What is the typical continuity one can expect in a family practice group?
	Does continuity of primary care lead to increased recognition of alcohol, drug abuse, or mental health disorders?
✓	Does continuity improve detection, adherence to medical treatment, knowledge level of your favorite chronic disease?
	Does continuity increase hospitalization rate or overall costs in general (non-VA) populations?
	To what extent is continuity of care a function of the patient, the individual physician, and the clinical setting?
✓	There is no difference in clinical results, patient satisfaction, and costs of care between patients treated "with continuity" and patients treated "without continuity."
15.	**Behavioral Medicine**
	Patients with common problems, such as headache and low back pain, who receive four sessions each of 30-minute counseling by their physicians on a weekly basis have fewer disability, pain and/or bed days than do patients who receive no counseling. Patients and/or practices should be randomized.
16.	**Screening for Asymptomatic Disease (Secondary Prevention)**
✓	Does the use of a well-constructed computerized program reduce utilization during the management of patients with a condition, e.g., Pap smears, which qualifies by Frame and Carlson screening criteria?
	Will 50-55-year-old asymptomatic adults agree to baseline and every two-to-three-year follow-up flexible sigmoidoscopy?
	What percent of young men have had a physician encourage/teach testicular self-exam? What percent of these young men do it?
	What is the effect of an organized health maintenance guide sheet on the health/disease screening behavior of a residency family practice program?
	What outreach methods will assist in optimizing an office physician's health screening process (i.e., send cards, provide clear handout pamphlets, increase educational materials in the waiting room and exam room, etc.)?
	The recommendation to pursue mammography by a personal physician known to the patient, plus total cost of readily available mammography of $40.00, is sufficient to achieve equal to or greater than 50% compliance with ACS recommendations for mammography.
	There is no difference in the rates of CIS and invasive cervical cancer in women screened by Pap smears at three-year intervals and women screened by Pap smears at less than or equal to one-year intervals.
	Tonometry does more harm than good.
✓	Compliance with ACS recommendations for screening for colon cancer has no impact on mortality from colon cancer.
	Does knowledge of a family history of disease or problem improve the level of surveillance in case finding for that problem?

	What strategy is most effective in increasing elderly patients participation in health maintenance/monitoring, e.g., taking stool hemoccults at home? This question also relates to cost-effectiveness and preventive medicine.
	Among postmenopausal women who are Caucasian, fair-haired, and of slight build or stature, the prevalence pf osteoporosis, as determined by "screening" is ? compared to a prevalence of ? among postmenopausal Caucasian women who are dark-haired and of heavy build or stature.
17.	**The Quality of Care**
	Does the practice organization (HMO, multi-specialty group, single specialty group, partnership, solo) affect the quality of care for particular high morbidity/mortality diseases for which we do/do not have effective treatments?
	Does the maintenance of hospital privileges for the care of acute MIs affect the quality of care (as measured above) for MI risk factors (high blood pressure, smoking, cholesterol intake, obesity, etc.)?
	Do physician/patient social congruence factors (similar age, sex, race, income, etc.) affect quality of care (as measured above)?
18.	**The Value of Coordinated Care**
✓	Does coordination of primary care lead to increased recognition of alcohol, drug abuse, or mental health disorders?
	Does coordination of care improve detection, adherence to medical treatment, knowledge level of your favorite chronic disease?
	Does coordination of care decrease hospitalization rate or overall costs in general (non-VA) populations?
	Does formal coordination of care (meetings, conferences, paper exchange, etc.) with local social service agencies (VNA, WIC, Family Planning, etc.) improve early detection, treatment, adherence to treatment, reduction in institutionalization and costs for patients?
✓	What is the relationship between continuity of physician and coordination of care?
	How can we develop reliable methods of measuring coordination of care?
	What is the impact of computerized, concurrent feedback on the coordination of care?
	How might an "enlightened" patient play a role in coordinating their own care?
	Utilization of medical services by "selecting high-utilizing patients" can be reduced by 50% by requiring that all services be rendered or authorized by a designated, personal physician.
19.	**Compliance**
	What approaches can sustain long-term adherence to demanding regimes for chronic disease treatment
20.	**Death and Dying/Terminal Care — no questions**
21.	**Uses of Computers in Medicine**
	Use of computers to identify high-risk individuals (for a given health problem or adverse health event) from a defined population.
	Use of computers to support the diagnostic function in primary care by providing probabilities of serious illness given common signs and symptoms.
	Use of computers to manage potential drug interactions within the active patients of a practice.
	Can the values and preferences of individual patients be reliably captured and added to data bases used by computerized "expert systems"?
22.	**Ethics — no questions**
23.	**The Value of Comprehensive Care**

	Does comprehensive care lead to increased recognition of alcohol, drug abuse, or mental health disorders?
	Does comprehensiveness of care improve detection, adherence to medical treatment, knowledge level of your favorite chronic disease?
	Does comprehensive care decrease hospitalization rate or overall costs in general (non-VA) populations?
	Does comprehensive care lead to less adverse drug reactions?
	Does comprehensive care lead to decreased visit rates over time?
	Does having a physician who provides comprehensive, continuous care compared to any other system result in lower incidence of the primary causes of death, e.g. accidents, heart disease, etc.?
24.	**Patient Satisfaction**
	Is there a difference in patient satisfaction/clinic visits/phone calls/etc. of first-time mothers who have a family doctor compared to those who use an obstetrician and pediatrician for their primary care?
25.	**Experimental Trials of New Drugs — no questions**
26.	**Resident Education — no questions**
27.	**Individual Patient Education**
	Bibliography (i.e., the use of pamphlets, short instructional booklets, etc.) in addition to usual treatment reduces the number of disability, pain and/or bed days during the month following its prescription compared to usual treatment for common problems, such as headache and low back pain. Should be randomized.
28.	**Chemical Dependency — no questions**
29.	**Environmental Health Studies — no questions**
30.	**Community Health Education— see #12, Community Oriented Primary Care**
31.	**Comparisons of Family Medicine with Other Specialties — no questions**
32.	**School Health Education—see #12, Community Oriented Primary Care**
33.	**Practice Management — no questions**
34.	**Undergraduate Education — no questions**
35.	**Continuing Medical Education— no questions**
36.	**Marketing Family Medicine to Medical Students— no questions**

Note: An official list of attendees at this convening was not found in the Curtis G. Hames A original question list includes initials after each question. Initials include: CB, CS, GF, KW, LB, LC, LG, MG, MW, PF, PN. We hypothesize that these initials represent the researcher who codified the question. To identify these individuals, we consulted the list of classic articles at the AAFP Foundation Center for the History of Family Medicine Research, sentinel publications,[7,8] the list of attendees of the "1988 Convocation" we found in the Curtis G. Hames, Sr., Papers 1943-1999 and personal communication with Larry A. Green, MD, who was present at the 1985 Hames Consortium. From this information, we hypothesize that the question writers were: Carole J. Bland, PhD; C. Kent Smith, MD; Eugene S. Farley, Jr., MD; Kerr L. White, MD; Lorne Becker, MD; Larry Culpepper, MD; Larry A. Green, MD; Michael Gordon, PhD; Maurice Wood, MD; Paul S. Frame, MD; and Paul A. Nutting, MD.

Appendix B

Search Strategy and Coding Process

Step 0. Set a timer for one hour.

Step 1. If case has two questions – indicated by two full phrases with question marks, split into two lines. Insert a new row and cut and paste the second question. Copy the Hames Question number exactly. For question number, create new numbers indicated by decimals, eg, 42 would become 42.1 and 42.2.

Step 3. Copy question into ChatGPT 3.5 as follows: "In one paragraph, what is the answer to the following question: QUESTION?"

Step 3. Copy ChatGPT response into code sheet in Column D. Read the ChatGPT response to think about any new perspective about the question itself or any potential search terms.

Step 4. Identify red-highlighted words in question and enter as Title/Abstract fields with ANDs at https://pubmed.ncbi.nlm.nih.gov/advanced/

Step 5. In spreadsheet enter number of total results in Column I

Step 6. Limit results to Meta-analysis and Systematic Review; limit to English only; limit to published since 1969. Limit to Abstract text availability.

Step 7. Enter number of limited results in Column J

Step 8. Order results by Best Match. [Limit to 50 Best Matched titles]

Step 9. Check titles to verify they address the question.

Step 10. Select the 10 titles that address the question.

If less than 10 titles with the meta-analyses and systematic review filters on...

1. select all the meta-analyses and systematic reviews
2. remove the meta-analyses and systematic reviews filters to identify additional titles up to 10 total.

Step 11. Save 10 titles to clipboard. [Save these clipboards as individual txt files in case we have questions about them later.]

If you still don't have 10 titles, move on to MeSH search. If you already have 10 relevant titles, skip to abstract review.

Step 12. Go to https://www.ncbi.nlm.nih.gov/mesh/ and search the question key words. Most questions will have 2-3 keywords.

Step 13. Identify the MeSH term most like the keywords and enter in Columns K,L,M

Step 14. Search PubMed for articles that use the MeSH terms.

Step 15. In spreadsheet enter number of total results in Column N

Step 16. Limit results to Meta-analysis and Systematic Review; limit to English only; limit to published since 1969. Limit to Abstract text availability.

Step 17. Enter number of limited results in Column O

If you had 10 titles from Manifest Search, skip to abstract review.

Step 18. Order results by Best Match. [Limit to 50 Best Matched titles]

Step 19. Check titles to verify they address the question.

Step 20. Select the titles (up to 10 total when added to the manifest search) that address the question.

> If you don't reach 10 titles with the meta-analyses and systematic review filters on...

1. select all the meta-analyses and systematic reviews
2. remove the meta-analyses and systematic reviews filters to identify additional titles up to 10 total.

Step 21. Save up to 10 titles to clipboard. [Save these clipboards as individual txt files in case we have questions about them later.]

Step 22. Review abstracts of each title. Paste the PubMed http link into appropriate column, PubMedresult1…

Step 23. *Document if the abstract is published in a Family Medicine Journal.*

> *Code 1 = Family, 0 = any other.*

Step 24. If the abstract demonstrates evidence that is related to the question, type 1 in the evidence column, A.1…

> If you are left unsure, then we are bias toward it not being answered. Type 0 if it is not answered. This is not an appraisal of completeness or comprehensiveness, but relatedness.

Step 25... Repeat for 10 most related titles.

Step 26. Think critically about the 10 abstracts and rate the overall question. Enter response in Column AT

> *As a primary care physician who is asking this question for your own practice, did you find a helpful answer to the question?*
>
> *1-not at all answered, 2- somewhat answered (building blocks are there), 3- mostly answered, 4-fully answered – will implement in practice*

Step 27. Enter the time you spent on the search in Column AU