Evidence Table 1: Description of study characteristics for articles addressing Question 1

Study	Targeted Healthcare Providers/Levels of Training/ Number of Providers	Study Design [a]	Study Setting	Clinical Areas	Objectives	Summary of Quality Assessment [b]				
						Rep	Bias	Inter	Out	Analy
PREVENTION, ADULT										
Adult, General Prevention										
Gemson, 1995	Physician Resident/fellow, Professional n=254	CCT	Hospital Outpatient	Tobacco, Cancer, Immunization, Obesity, Exercise counselling	To test the effectiveness of a multifaceted physician prevention education program using prototype materials from "Put Prevention into Practice Program" and didactic nursing.	●	●	●	◒	◒
McDonald, 1984	Physician, nurse clinicians Resident/fellow, Professional n=126	RCT	Hospital Outpatient	Cancer, Immunization, Obesity	To determine the effect of the reminder system on physician's use of individual actions and to find improvements in patient outcomes that may result from the computer reminders.	◒	●	◒	◒	○
Turner, 1989	Physician Resident/fellow n=34	CCT	Hospital Outpatient	Cancer, Immunization	To determine if two different interventions (computer record/reminder for physician and preventive status questionnaire for patients) would influence the rate of preventive services.	●	●	●	◒	●

Evidence Table 1: Description of study characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training/ Number of Providers	Study Design [a]	Study Setting	Clinical Areas	Objectives	Summary of Quality Assessment [b]				
						Rep	Bias	Inter	Out	Analy
Adult, Cancer Screening										
Burack, 1994	Nurse, Physician Professional n=25	RCT	Community Health Clinic, Hospital Outpatient, HMO	Cancer	To determine effectiveness of a patient and physician reminder system to increase use of screening mammography.	◒	◒	●	◒	◒
Burack, 1996	Physician Professional n=20	RCT	Group Practice, HMO	Cancer	To evaluate the overall effectiveness of the four combinations of patient/physician reminders on mammography screening.	●	●	●	◒	◒
Burack, 1997	Physician Professional n=not applicable	RCT	Community Health Clinic, HMO	Cancer	To evaluate the sustained effectiveness of a computerized reminder system in promoting mammography during a second year of continuing education.	○	●	●	●	○
Burack, 1998	Physician Professional n=20	RCT	Group Practice	Cancer	To evaluate the overall effectiveness of the combinations of patient and physician reminder interventions regarding pap smear use.	●	◒	●	◒	◒
Burack, 2003	Physician Professional n=20	RCT	Home/ Community, HMO	Cancer	To better understand the potential interaction among procedure reminders.	◒	●	●	●	○
Chambers, 1989	Physician Resident/fellow, Professional n=30	RCT	Hospital Outpatient	Cancer	To investigate the influence on mammogram ordering of a reminder bulletin or "ticker system" integrated with a microcomputerized system that links clinical encounters data and billing data.	●	●	●	●	●

Evidence Table 1: Description of study characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training/ Number of Providers	Study Design [a]	Study Setting	Clinical Areas	Objectives	Summary of Quality Assessment [b]				
						Rep	Bias	Inter	Out	Analy
Dietrich, 1998	Nurse, Physician, Office staff, Clinical directors Professional n=not specified	RCT	Community Health Clinic	Cancer	To test an intervention for increasing rates of cancer early-detection services in community/migrant health centers.	●	●	◒	●	●
Mandelblatt, 1993	Nurse, Physician Resident/fellow, Professional n=not specified	CCT	Hospital Outpatient	Cancer	To increase breast and cervical cancer screening among elderly black women of low socioeconomic status using public hospital primary care clinics.	◒	◒	●	◒	○
Manfredi, 1998	Physician Professional n=not specified	RCT	Group Practice, Solo Practice, HMO, Community of free standing clinics	Cancer	To evaluate a health maintenance organization-sponsored intervention to improve cancer screening in private physician practices serving low-income minority populations.	◒	◒	●	◒	◒
McCarthy, 1997	Nurse, Medical assistant Professional n=not specified	CCT	Hospital Outpatient	Cancer	(1) To develop new processes for offering mammography. (2) To determine whether protocols executed completely by non-physicians would increase mammography utilization.	◒	◒	●	●	●

Evidence Table 1: Description of study characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training/ Number of Providers	Study Design [a]	Study Setting	Clinical Areas	Objectives	Summary of Quality Assessment [b]				
						Rep	Bias	Inter	Out	Analy
Adult ,Tobacco Cessation										
Ahluwalia, 1999	Physician Resident/fellow n=45	CCT	Hospital Outpatient	Tobacco	To assess whether or not a smoking status stamp would change physician counseling patterns.	●	●	●	◒	●
Allen, 1998	Physician Resident/fellow n=158	RCT	Hospital Outpatient	Tobacco	To assess the effectiveness of physicians in training counseling for smoking cessation in African Americans.	●	●	●	◒	◒
Adult, Cholesterol										
Keyserling, 1997	Physician, Nurse practitioners, Physician assistants Professional n=42	RCT	Community Health Clinic	Hypercholesterolemia	To assess the effectiveness of a cholesterol-lowering intervention designed to facilitate the management of hypercholesterolemia by primary care clinicians.	●	●	◒	◒	◒
PREVENTION, CHILDREN										
Health Behavior Screening										
Schubiner, 1994	Physician Pre-professional training, Resident/fellow n=not specified	RCT	Community Health Clinic	Health behavior screening	To determine the effect of use of the Safe Times Questionnaire (STQ) on the length and nature of the psychosocial risk assessment, the degree of patient satisfaction, and the ability of physicians to identify adolescents at risk in the topic area covered by the STQ.	◒	●	●	●	○

Evidence Table 1: Description of study characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training/ Number of Providers	Study Design [a]	Study Setting	Clinical Areas	Objectives	Summary of Quality Assessment [b]				
						Rep	Bias	Inter	Out	Analy
Injury Prevention in Children										
Gielen, 2001	Physician Resident/fellow n=31	RCT	Hospital Outpatient	Injury prevention in children	To improve patients' safety practices for the prevention of burns, falls and poisoning among children aged 0 to 2 years living in low income inner-city neighborhoods.	◒	●	●	●	◒
Well Baby Care										
Hornberger, 1996	Physician Professional n=4	RCT	Hospital Outpatient	Well baby care	To determine the impact of remote simultaneous versus proximate consecutive interpretation on translation errors, provider and patient satisfaction, provider ratings of patient understanding, and accuracy of translation.	○	◒	●	◒	◒
MENTAL HEALTH										
Alcohol										
Burge, 1997	Physician Resident/fellow n=not specified	RCT	Hospital Outpatient	Alcohol abuse	To examine the effect of two primary care interventions for alcohol abuse on outpatients (1) drinking patterns, (2) psychosocial problems, and (3) blood test results over a period of 18 months.	●	●	●	●	◒

Evidence Table 1: Description of study characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training/ Number of Providers	Study Design [a]	Study Setting	Clinical Areas	Objectives	Summary of Quality Assessment [b]				
						Rep	Bias	Inter	Out	Analy
Depression										
Callahan, 1994	Physician Professional n=103	RCT	Group Practice	Care coordination, Major depression	To assess the effect of a multi-faceted physician targeted intervention to improve the recognition and treatment of depression in primary care among an elderly population with co-morbidities.	◒	●	●	◒	●
Miranda, 2003	Nurse, Physician, Nurse practitioner Professional n=181	RCT	Group Practice, HMO Primary Care Practice	Major depression	To determine if quality improvement, practice initiated interventions for depressed primary care clinics can improve care across groups and improve health and employment outcomes among ethnic minorities over those of whites.	◒	◒	◒	◒	○
OTHER CLINICAL AREAS										
Acute Respiratory Infections										
Harris, 2003	Physician, Nurse practitioner Professional n=42	CCT	Hospital Outpatient	Prescribing for acute respiratory tract infections	To decrease unnecessary antibiotic use for acute respiratory tract infections in adults in a point of service health care setting.	●	◒	●	◒	●

Evidence Table 1: Description of study characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training/ Number of Providers	Study Design [a]	Study Setting	Clinical Areas	Objectives	Summary of Quality Assessment [b]				
						Rep	Bias	Inter	Out	Analy
Asthma										
Evans, 1997	Nurse, Physician, Clerical staff, Laboratory technicians, Public health assistants Professional n=134	RCT	Community Health Clinic	Asthma	To determine if training of professional and support staff (in intervention clinics) would (1) increase the number of children diagnosed with asthma and receiving continuing care and (2) improve quality of care by increasing staff use of new pharmacologic and educational treatment methods.	●	●	●	◒	◒
Chronic renal disease										
Harris, 1998	Physician Resident/fellow, Professional n=not applicable	RCT	Hospital Outpatient	Care coordination, Renal disease	To assess whether a comprehensive multidisciplinary program for chronic renal insufficiency patients slow the decline of renal function.	●	●	●	◒	◒
Emergency Systems										
Kellermann, 1993	Firefighters Professional n=40	CCT	Home/Community	Emergency first response	(1) To determine if first responder defibrillation can improve rates of cardiac resuscitation and survival in urban EMS system served by paramedics. (2) To determine if rapid pre-hospital defibrillation can compensate for delayed notification of EMS or lack of bystander CPR. (3) To determine if station characteristics can be used to identify optimal locations of automated external defibrillators.	◒	◒	●	◒	○

Evidence Table 1: Description of study characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training/ Number of Providers	Study Design [a]	Study Setting	Clinical Areas	Objectives	Summary of Quality Assessment [b]				
						Rep	Bias	Inter	Out	Analy
End of Life										
Dexter, 1998	Physician Resident/fellow, Professional n=147	RCT	Hospital Outpatient	End of Life	Determine effect of computer-generated reminders to physicians on frequency of advance directive discussions between patients and their primary care givers.	●	●	●	●	●

[a] CCT= controlled clinical trial; RCT= randomized controlled trial

[a] assessments of methodological strengths and weaknesses in 5 domains, as categorized by following symbols:

● = quality score of 80% or above

◒ = quality score of 50 to 79%

○ = quality score of less than 50%

Domains:

Rep = representativeness of targeted healthcare providers and/or patients

Bias = potential for bias and confounding

Inter = description of interventions

Out = assessment of outcomes

Analy = analytic approach

Evidence Table 2: Description of intervention characteristics for articles addressing Question 1

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Group	Patient Race/Ethnicity	Interventions	Educational Methods	Patient Interventions
PREVENTION, ADULT							
Adult, General Prevention							
Gemson, 1995	Physician Resident/fellow, Professional	CCT	Control n=471	93% African American, 5% Hispanic	No Interventions		
			Intervention n=529	92% African American, 5% Hispanic	Education, pads of prevention prescription forms	Written Material, AV material, Lecture	
McDonald, 1984	Physician, nurse clinicians Resident/fellow, Professional	RCT	Control n=not specified		No Interventions		
			Intervention n=not specified		Tracking/reminder system		
Turner, 1989	Physician Resident/fellow	CCT	Patient intervention n=86				Questionnaire of status of preventive services before primary care visit
			Physician and patient interventions n=64		Tracking/reminder system		Questionnaire of status of preventive services before primary care visit
			Physician intervention n=103		Tracking/reminder system		

Evidence Table 2: Description of intervention characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Group	Patient Race/Ethnicity	Interventions	Educational Methods	Patient Interventions
Adult, Cancer Screening							
Burack, 1994	Nurse, Physician Professional	RCT	Full intervention n=1382		Education, Tracking/reminder system	Lecture	Elimination of out-of-Pocket expenses for patients, post-card and telephone follow-up
			Limited intervention n=1343		Education	Lecture	Elimination of out-of-pocket expenses for patients
Burack, 1996	Physician Professional	RCT	Control n=596		No Interventions		
			Patient reminders n=592				Patient reminder letters
			Physician and patient reminders n=590		Tracking/reminder system		Patient reminder letters
			Physician reminders n=590		Tracking/reminder system		
Burack, 1997	Physician Professional	RCT	Full intervention n=1413		Education, Tracking/reminder system	Physician and staff orientation	
			Limited intervention n=1413		Education	Physician and staff orientation	

Evidence Table 2: Description of intervention characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Group	Patient Race/Ethnicity	Interventions	Educational Methods	Patient Interventions
Burack, 1998	Physician Professional	RCT	Control n=964		No Interventions		
			Patient reminders n=964				Patient reminder letters
			Physician and patient reminder n=960		Tracking/reminder system		Patient reminder letters
			Physician reminders n=960		Tracking/reminder system		
Burack, 2003	Physician Professional	RCT	Mammogram only reminder group n=1228		Tracking/reminder system		Patient reminder letter
			Pap smear and mammogram reminder group n=1243		Tracking/reminder system		Patient reminder letter
Chambers, 1989	Physician Resident/fellow, Professional	RCT	Control n=623	31% White	No Interventions		
			Intervention n=639	28% White	Tracking/reminder system		

Evidence Table 2: Description of intervention characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Group	Patient Race/Ethnicity	Interventions	Educational Methods	Patient Interventions
Dietrich, 1998	Nurse, Physician, Office staff, Clinical directors Professional	RCT	Control n=1267	23% African American, 22% White, 26% Hispanic	No Interventions		
			Intervention n=1381	31% African American, 22% White, 22% Hispanic	Education, Tracking/reminder system, preventive care flow sheets, advice to center leaders, external chart identifiers	Written Material, provider workshops	Patient-held health diaries, patient education materials
Mandelblatt, 1993	Nurse, Physician Resident/fellow, Professional	CCT	Control n=not specified	82% African American, 15% White, 2% Hispanic	Tracking/reminder system		
			Intervention n=not specified	93% African American, 1% White, 1% Hispanic	Screening offered directly to patient by nurse practitioner		Patient counseling and screening offered directly to patient by nurse practitioner
Manfredi, 1998	Physician Professional	RCT	Control n=42230		Flow sheets supplied but not actively encouraged		
			Intervention n=52392		Education, Tracking/reminder system, Audit & Feedback, incorporation of cancer screening in guidelines and into HMO quality assurance procedures	Written Material, on-site training of staff and 2 follow-up assistant visits CME seminar for physicians, NCI screening guidelines	Health maintenance cards with letter of explanation from HMO

Evidence Table 2: Description of intervention characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Group	Patient Race/Ethnicity	Interventions	Educational Methods	Patient Interventions
McCarthy, 1997	Nurse, Medical assistant Professional	CCT	Control (Clinic A) n=2560	79% African American, 18% White	No Interventions		
			Control (Clinic B) n=2124	73% African American, 24% White	No Interventions		
			Intervention n=1250	82% African American, 15% White	Education, Nurses and medical assistants screened all patients to ensure mammography was up to date and then initiated referrals for patients not up to date	Flow diagram for mammogram screening	
Adult, Tobacco Cessation							
Ahluwalia, 1999	Physician Resident/fellow	CCT	Control n=not specified	100% African American	No Interventions		
			Intervention n=not specified	100% African American	Tracking/reminder system, smoking stamp which physicians needed to mark as never, former, or current		
Allen, 1998	Physician Resident/fellow	RCT	Control n=571	100% African American	No Interventions		
			Intervention n=515	100% African American	Education, Reward Incentive, summary sheet of patient's smoking history on outside of medical record	Written Material, AV material, Lecture, review of videotapes of counseling sessions, didactic sessions, role play	Written material given to patients about smoking cessation

Evidence Table 2: Description of intervention characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Group	Patient Race/Ethnicity	Interventions	Educational Methods	Patient Interventions
Adult, Cholesterol							
Keyserling, 1997	Physician, Nurse practitioners, Physician assistants Professional	RCT	Control n=188	40% African American, 47% White, 12% American Indian/Native Alaskan	No Interventions		
			Intervention n=184	39% African American, 50% White, 11% American Indian/Native Alaskan	Education, Tracking/reminder system, nutritionist completed summary on each referred patient which was mailed to clinician, letter to clinician urging drug treatment in all patients who have not responded to diet therapy after 7 months	Written Material, Lecture	Patient education materials
PREVENTION, CHILDREN							
Health Behavior Screening							
Schubiner, 1994	Physician Pre-professional training, Resident/fellow	RCT	Control (Interview) n=not specified		Education	Written Material, Lecture	
			Intervention (STQ) n=not specified		Education, provision of Safe Times Questionnaire completed by patient	Written Material, Lecture	

Evidence Table 2: Description of intervention characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Group	Patient Race/Ethnicity	Interventions	Educational Methods	Patient Interventions
Injury Prevention in Children							
Gielen, 2001	Physician Resident/fellow	RCT	Control n=76		Education	Written Material, Lecture	
			Intervention n=120		Education	Written Material, Lecture, 5 additional hours of experiential learning	
Well Baby Care							
Hornberger, 1996	Physician Professional	RCT	Proximate consecutive translation n=not specified	100% Hispanic	Proximate consecutive translation of patient and physician statements by an interpreter in the examination room		
			Remote simultaneous translation n=not specified	100% Hispanic	Remote simultaneous translation of patient and physician statements by interpreter in another location		

Evidence Table 2: Description of intervention characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Group	Patient Race/Ethnicity	Interventions	Educational Methods	Patient Interventions
MENTAL HEALTH							
Alcohol							
Burge, 1997	Physician Resident/fellow	RCT	Control n=not specified	100% Hispanic	No Interventions		
			Patient intervention n=not specified	100% Hispanic			Psychoeducation (9 hours)
			Physician and patient intervention n=not specified	100% Hispanic	Education, Tracking/reminder system, Standing Orders/protocols/guidelines/algorithms	Written Material, Lecture (8 hours)	Psychoeducation (9 hours)
			Physician intervention n=not specified	100% Hispanic	Education, Tracking/reminder system, Standing Orders/protocols/guidelines/algorithms	Written Material, lecture (8 hours)	
Depression							
Callahan, 1994	Physician Professional	RCT	Control n=100	53% African American	Education	Lecture	
			Intervention n=75	50% African American	Education, Standing Orders/protocols/guidelines/algorithms, 3 additional primary care visits scheduled with depressed patients	Written Material, Lecture, instruction in use of materials	

Evidence Table 2: Description of intervention characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Group	Patient Race/Ethnicity	Interventions	Educational Methods	Patient Interventions
Miranda, 2003	Nurse, Physician, nurse practitioner Professional	RCT	Behavioral therapists n=not specified		Education, in kind resources to support costs	Written Material, Lecture, Small Group, Academic Detailing	Nurse used culturally tailored written materials and videotapes to activate depressed patients to engage in treatment and psychotherapist provided individual and group Cognitive Behavioral Therapy for 8-12 sessions
			Control n=not specified			Written Material, (national practice guidelines)	
			Nurse follow-up n=not specified		Education, in kind resources to support costs	Written Material, Lecture, Small Group, Academic Detailing	Nurse used culturally tailored written materials and videotapes to activate depressed patients to engage in treatment and then nurses provided follow-up assessments for 6 to 12 months

Evidence Table 2: Description of intervention characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Group	Patient Race/Ethnicity	Interventions	Educational Methods	Patient Interventions
OTHER CLINICAL AREAS							
Acute Respiratory Infections							
Harris, 2003	Physician, nurse practitioners Professional	CCT	Baseline control group n=671	16% African American, 39% White, 42% Hispanic	No Interventions		
			Full intervention n=393	9% African American, 35% White, 41% Hispanic	Education, Standing Orders/protocols/guidelines/algorithms, posters for acute respiratory infection treatment guidelines in exam rooms	Written Material, Computer-based material, Lecture	Posters in exam rooms, computerized education in waiting room for patients
			Limited intervention n=805	12% African American, 37% White, 48% Hispanic	Education, Standing Orders/protocols/guidelines/algorithms, posters for acute respiratory infection treatment guidelines in exam rooms	Written Material, Lecture	Posters in exam rooms

Evidence Table 2: Description of intervention characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Group	Patient Race/Ethnicity	Interventions	Educational Methods	Patient Interventions
Asthma							
Evans, 1997	Nurse, Physician, Clerical staff, Laboratory technicians, Public health assistants Professional	RCT	Control n=not specified	46% African American, 34% Hispanic	Standing Orders/protocols/guidelines/algorithms, access to new medicines through increased distribution to clinics		
			Intervention n=not specified	44% African American, 33% Hispanic	Education, Standing Orders/protocols/guidelines/algorithms, access to new medicines through increased distribution to clinics 1) monthly visits by nurse-educator to clinic to help solve problems, 2) consultation (telephone) available with "expert" physician	Written Material, AV material, Lecture, Small Group, interactive exercise, performance of skit, clinical observation of "expert" physicians	
Chronic renal disease							
Harris, 1998	Physician Resident/fellow, Professional	RCT	Control n=231	80% African American	No Interventions		
			Intervention n=206	81% African American	Letter to primary care physician including summary of actions taken by consultant nephrologist, suggestions for future care, and summary of clinic visit		Consultation with nephrologist

Evidence Table 2: Description of intervention characteristics for articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Group	Patient Race/Ethnicity	Interventions	Educational Methods	Patient Interventions
Emergency systems							
Kellermann, 1993	Firefighters Professional	CCT	Cardiopulmonary resuscitation control n=432	59% African American	No Interventions		
			Automated external defibrillators n=447	60% African American	Education	Simulated cardiac arrest scenario ("mega code" exercise)	
End of life							
Dexter, 1998	Physician Resident/fellow, Professional	RCT	Control n=253	60% African American, 39% White	Education	Written Material, Lecture, Face-to-face meetings	
			Instruction and Proxy Intervention n=277	56% African American, 44% White	Education, Tracking/reminder system	Written Material, Lecture, Face-to-face meetings	
			Instruction Directive n=219	56% African American, 44% White	Education, Tracking/reminder system	Written Material, Lecture, Face-to-face meetings	
			Proxy Directive n=260	49% African American, 51% White	Education, Tracking/reminder system	Written Material, Lecture, Face-to-face meetings	

Evidence Table 3: Results from articles addressing Question 1

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
PREVENTION, ADULT								
Adult, General Prevention								
Gemson, 1995	Physician Resident/fellow, Professional	CCT	Quality of Providers	Breast self examination counseling	Patient report	Changes in breast self-exam counseling rates received by patients pre and post intervention time period: intervention + 0.12 (p<0.01); control -0.06 (p=0.25).	not available	significant improvement
			Quality of Providers	Nutrition and weight control counseling	Patient report	Changes in nutrition and weight control counseling rates received by patients pre and post intervention time period: intervention +0.11 (p=0.02); control -0.05 (p=0.27).	not available	significant improvement
			Quality of Providers	Prevention knowledge	Provider written test	The overall change in physician knowledge of prevention was significantly greater for the intervention [+2.67 (SD 3.96)] compared to control [+1.58 (SD 3.43)] (p=0.03).	significant improvement	not available
			Quality of Providers	Exercise counseling	Provider self report	Positive change in physician exercise counseling practices comparing intervention to control (p<0.01).	significant improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Quality of Providers	Nutrition and weight control counseling	Provider self report	Positive change in physician nutrition and weight control counseling practices comparing intervention to control (p<0.01).	significant improvement	not available
			Quality of Providers	Smoking cessation counseling	Patient report	Change in receipt of smoking cessation counseling rates pre and post intervention time period: intervention +0.03 (p=0.08), control +0.01 (p=0.4).	not available	improvement
			Quality of Providers	Breast cancer screening	Provider self report	Positive change in physician breast cancer screening practices comparing intervention to control (p=0.01).	significant improvement	not available
			Quality of Providers	Smoking cessation counseling	Provider self report	Positive change in physician smoking cessation counseling practices comparing intervention to control (p<0.01).	significant improvement	not available
			Quality of Providers	Exercise counseling	Patient report	Changes in exercise counseling rates received by patients pre and post intervention time period: intervention + 0.07 (p<0.01); control + 0.03 (p=0.14).	not available	significant improvement

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
McDonald, 1984	Physician, nurse clinicians Resident/fellow, Professional	RCT	Health Status	Blood pressure, weight, serum glucose, serum hemoglobin, serum potassium, and blood urea nitrogen	Medical record review	No significant differences between patients assigned to intervention group physicians and control physicians.	no improvement	not available
			Utilization	Hospitalizations and emergency room visits for patients eligible for pneumococal or influenza vaccines	Review of admission logs	Patients cared for by intervention group physicians had fewer hospitalizations and emergency room visits in the years influenza occurred (p<0.02).	significant improvement	not available
			Utilization	Overall number of hospitalizations, emergency room visits, or clinic visits	Review of admission logs	No significant overall differences between patients assigned to intervention group physicians and control physicians.	no improvement	not available
			Appropriateness of Care	Physician response to computerized reminders	Computer record review	49% of physicians responded to computerized reminders in intervention group compared to 29% in control group (p<0.001).	significant improvement	not available
			Appropriateness of Care	Physician response to computerized reminders regarding preventive care	Computer record review	Physicians in intervention group were 2 to 4 times more likely to apply preventive care to their eligible patients than were control group physicians (p<0.005).	significant improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
Turner, 1989	Physician Resident/fellow	CCT	Appropriateness of Care	Guaiac test rates	Medical record review	Guaiac test rates increased from 34.1% to 50% in the physician-reminder group (p<0.05), increased from 32.6% to 42.5% (p=ns) in the patient-reminder group, and increased from 29.7% to 46.1% (p<0.05) in the combined intervention group.	not available	significant improvement
			Appropriateness of Care	Rectal exam rates	Medical record review	Rectal exam rates increased from 10.4% to 52.6% in the physician-reminder group (p<0.05), increased from 32.3% to 46.9% (p<0.05) in the patient-reminder group, and increased from 34.1% to 57.1% (p<0.05) in the combined intervention group.	not available	significant improvement
			Appropriateness of Care	Pap smear rates	Medical record review	Pap smear rates increased from 20.3% to 33.1% in the physician-reminder group (p=ns), decreased from 29.4% to 27.5% (p=ns) in the patient-reminder group, and increased from 20.5% to 40% (p=ns) in the combined intervention group.	not available	no improvement

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Appropriateness of Care	Breast exam rates	Medical record review	Breast exam rates increased from 37.5% to 53.5% in the physician-reminder group (p<0.05), increased from 41.2% to 53.6% (p<0.05) in the patient-reminder group, and increased from 38.3% to 47.8% (p=ns) in the combined intervention group.	not available	significant improvement
			Appropriateness of Care	Mammogram rates	Medical record review	Mammogram rates increased from 14.3% to 15% in the physician-reminder group (p=ns), increased from 15% to 46.6% (p<0.05) in the patient-reminder group, and increased from 0% to 4.8% (p=ns) in the combined intervention group.	not available	significant improvement
			Appropriateness of Care	Tetanus immunization rates	Medical record review	No change reported in any group.	not available	no improvement
Adult, Cancer Screening								
Burack, 1994	Nurse, Physician Professional	RCT	Appropriateness of Care	Mammogram appointment	Mammogram appointment rates	At each site, full intervention status was associated with significant increase in mammogram appointment rates with absolute increase from 13% to 29% compared to limited intervention.	significant improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Appropriateness of Care	Overall use of mammography	Mammogram appointment completion rates	Compared to limited intervention, full intervention was associated with a significant increase in the mammography rate at each of the sites.	significant improvement	not available
			Appropriateness of Care	Completion of first mammogram appointment	Completed mammogram appointments	No differences in completion of first mammography appointment between full intervention groups.	not available	not available
Burack, 1996	Physician Professional	RCT	Utilization	Primary care visit rates in 1 year	Administrative data	No significant relation between interventions and primary care visitation.	no improvement	not available
			Appropriateness of Care	Mammography screening rates (completion in study year)	Administrative data	Mammography rates were higher for the two groups of women assigned to the physician reminder intervention, but only at one of two HMO sites. No significant difference for patient intervention.	improvement	improvement
Burack, 1997	Physician Professional	RCT	Appropriateness of Care	Annual mammography rates	Medical record review; computerized administrative records	At the end of year 2, mammography rates were 44% for full intervention versus 28% for limited intervention at the health department (OR: 1.84, 95% CI:1.40, 2.40) and 45% for full versus 46% for limited at the health maintenance organization (OR: 1.06, 95% CI: 0.08, 1.42).	significant improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
Burack, 1998	Physician Professional	RCT	Appropriateness of Care	Completion of pap smear	Reports of pap-smear results	Women who received the patient and physician reminders together had 1.23 times the odds of completing pap smear screening (95% CI, 1.01, 1.50) than women who received neither intervention. The pap smear rates for women in the patient only or physician only intervention were not significantly different than the pap smear rates for women who received neither intervention.	significant improvement	not available
			Utilization	Primary care visits	Administrative data	No significant association of intervention.	no improvement	not available
Burack, 2003	Physician Professional	RCT	Appropriateness of Care	Completing pap smear	Medical record review	Combined reminder treatment associated with increased likelihood of pap smear (30% versus 23%, p=0.007) OR 1.39.	significant improvement	not available
			Appropriateness of Care	Completing mammogram	Medical record review	No difference between combined reminder treatment and mammogram only reminder (39% versus 40%).	no improvement	not available
			Utilization	Visits to gynecology	Medical record review	Combined reminder treatment associated with increased rate of visits (34% versus 29%, p=0.001).	significant improvement	not available
			Utilization	Visits to primary care physician	Medical record review	No difference between groups.	no improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
Chambers, 1989	Physician Resident/fellow, Professional	RCT	Appropriateness of Care	Mammography rates	Medical record review	At the end of the study period, 27% of the experimental group were up-to-date as compared with 21% of the control group (p=0.011).	significant improvement	not available
Dietrich, 1998	Nurse, Physician, Office staff, Clinical directors Professional	RCT	Appropriateness of Care	Mammography rates in females over 50	Medical record review	Both interventions and control groups showed increased rates, 58% to 65% in the intervention group (p=0.008) versus 59% to 64% in the control group (p=0.02).	no improvement	improvement
			Appropriateness of Care	Oral cavity exam	Medical record review	Both intervention and control groups showed significantly increased rates, 67% to 78% in the intervention group versus 73% to 83% in the control group (p<0.001).	no improvement	significant improvement
			Appropriateness of Care	Rates of clinical breast exams in all females	Medical record review	Both intervention and control groups showed increased rates, 50% to 63% in the intervention group versus 55% to 59% in the control group (significant in both groups).	no improvement	significant improvement
			Appropriateness of Care	Rates of pap test in all females	Medical record review	Intervention showed no change in rates, changing from 52% to 55%, while the control group increased rates from 43% to 62% (p<0.01)	no improvement	improvement

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Appropriateness of Care	Fecal occult blood test	Medical record review	Both intervention and control groups increased rates, 9% to 19% in the intervention group versus 7% to 19% in the control group (not significant in either group).	no improvement	improvement
			Appropriateness of Care	Digital rectal exam	Medical record review	Both intervention and control groups showed increased rates, 35% to 41% in the intervention group (not significant) versus 34% to 49% in the control group (p=0.03).	no improvement	improvement
			Quality of Providers	Rates of breast self-exam advice in all females	Medical record review	Both interventions and control groups showed increased rates, 4% to 13% in the intervention group (p<0.001) versus 3% to 8% in the control group (not significant). Intervention showed a greater increase than control (p=0.009).	significant improvement	significant improvement
			Appropriateness of Care	Sigmoidoscopy	Medical record review	Neither intervention or control arm increased rates, 3% to 3% in the intervention group versus 2% to 2% in the control group.	no improvement	no improvement
Mandelblatt, 1993	Nurse, Physician Resident/fellow, Professional	CCT	Appropriateness of Care	Mammography screening rates	Medical record review	Significant increase in the mammography screening rate in intervention 18% to 40% versus control 18% to 18% (p<0.01).	significant improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Appropriateness of Care	Pap test screening rates	Medical record review	Significant increase in the pap test screening rate in the intervention 17% to 57% versus the control 12% to 18% (p<0.01).	significant improvement	not available
Manfredi, 1998	Physician Professional	RCT	Appropriateness of Care	Rates of pap smears among eligible patients of HMO/not of HMO	Medical record review	Rates increase in HMO patients only from 55.7% at baseline to 59.7% post-intervention but decrease in control group from 56.1% to 48.2% (not statistically significant).	significant improvement	not available
			Appropriateness of Care	Rates of clinical breast exams (CBE) among eligible patients of HMO/not of HMO	Medical record review	No effect of intervention in HMO patients/positive effect of intervention among non-HMO patients with rates increasing from 26.6 to 36.5% in intervention clinics and decreasing in control clinics (p<0.05).	significant improvement	not available
			Appropriateness of Care	Rates of fecal occult blood testing (FOBT) among eligible patients of HMO/not of HMO	Medical record review	Rates increased in both groups of patients. For HMO patients, rates increased from 3.2% to 12.5% in the intervention clinics with decrease in control clinics (p<0.05). In non-HMO patients, rates increased from 4.5% to 5.2% in intervention clinics while de	significant improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Appropriateness of Care	Rates of mammograms among eligible patients of HMO/not of HMO	Medical record review	No effect of intervention in either group of patients.	no improvement	not available
McCarthy, 1997	Nurse, Medical assistant Professional	CCT	Appropriateness of Care	Mammography screening rates	Computerized audit of billing records	Prior to the intervention, the proportion of visits in which women were up-to-date was 68% in the intervention clinic and 66% in each control clinic. At the end of evaluation, there was an absolute increase of 9% in the intervention group (95% CI 2-16%) while one control clinic had an absolute increase of 1% (95%. CI:-5, 7%) and the other has an absolute decrease of 2% (95%. CI: - 3, 5%).	not available	significant improvement
Adult ,Tobacco Cessation								
Ahluwalia, 1999	Physician Resident/fellow	CCT	Quality of Providers	Smoking cessation counseling by provider; ASK if patient smokes cigarettes or any other form of tobacco	Patient report	Odds ratio of "ASK" between intervention and control: if smokes cigarettes 3.97 (2.87, 5.49); if uses other tobacco products 1.40 (0.91, 2.18).	significant improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Quality of Providers	Smoking cessation counseling by provider; ASSIST how or when to quit smoking	Patient report	Odds ratio of "ASSIST" between intervention and control groups: how to quit 1.60 (0.78, 3.31); set a date 0.74 (0.16, 3.34).	improvement	not available
			Quality of Providers	Smoking cessation counseling by provider; ADVISE to quit smoking	Patient report	Odds ratio of "ADVISE" between intervention and control groups 1.75 (1.29, 2.35).	significant improvement	not available
			Quality of Providers	Smoking cessation counseling by provider; ARRANGE follow-up or refer to specialist	Patient report	Odds ratio of "ARRANGE" between intervention and control 1.97 (1.20, 3.24).	significant improvement	not available
Allen, 1998	Physician Resident/fellow	RCT	Quality of Providers	Protocol adherence	Patient report	Only 16% of the control group patients compared to nearly 70% of the intervention patients reported that their physician urged them to quit smoking.	improvement	not available
			Patient Adherence	3 month quit rate	Patient report	6.1% for intervention group versus 5.2% for control group (p=not specified).	no improvement	not available
			Patient Adherence	12 month quit rate	Saliva cotinine tests	3.2% for intervention group versus 2.8% for control group, (p=not specified).	no improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Patient Adherence	12 month quit rate	Patient report	8.4% for intervention group versus 10.6% for control group (not significant).	no improvement	not available
			Patient Adherence	3 month quit rate	Saliva cotinine tests	2% for intervention group versus 1.8% for control group (not significant).	no improvement	not available
Adult, Cholesterol								
Keyserling, 1997	Physician, Nurse practitioners, Physician assistants Professional	RCT	Health Status	Difference in total cholesterol among participants not on lipid lowering therapy at one year	Blood tests	Average reduction of 0.14 mmol/L (5.3 mg/dL) greater in intervention group (p=0.01).	significant improvement	not available
			Quality of Providers	Clinician dietary counseling behavior	Medical record review	Cholesterol mentioned in progress note for 10% of intervention patients and 30% of control patients on first routine follow-up (statistical significance not assessed).	no improvement	not available
			Appropriateness of Care	Referral for dietary counseling	Medical record review	9% of control group patients compared to 2% of intervention patients referred for dietary counseling (statistical significance not assessed).	no improvementno t available	
			Appropriateness of Care	Number patients taking lipid lowering medication	Medical record review	8% of intervention patients compared to 15% of control group patients were taking lipid-lowering medication on	no improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
						follow-up (p=0.05).		

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Health Status	Difference in total cholesterol among all study participants at one year	Blood tests	Averaged over 1 year follow-up, the total cholesterol reduction in the intervention group was 0.08 mmol/L (3.0 mg/dL) greater than in control group (p=0.09).	improvement	not available
			Patient Adherence	Dietary habits	Patient report, dietary risk assessment	Sustained decrease in both groups with average reduction in the intervention group significantly more than for the control group (p>0.001).	significant improvement	not available
			Health Status	Difference in LDL among all study participants at one year	Blood tests	Average reduction 0.10 mmol/L (3.7 mg/dL) greater in intervention group (p=0.08).	improvement	not available
PREVENTION, CHILDREN								
Health Behavior Screening								
Schubiner, 1994	Physician Pre-professional training, Resident/fellow	RCT	Quality of Providers	Total time of interview	Videotaped encounters	Physicians in intervention group had shorter visits than physicians in the control group.	improvement	not available
			Quality of Providers	Accuracy of physician assessment of patient need for interventions in each "Safe	Compared to "gold standard" of psychologist interview	Physicians in the intervention group had higher agreement with psychologist ratings in identification of subjects at risk for depression and family conflicts than the physicians	improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
				Times" topic area		in the control group.		
			Patient Satisfaction	Patient satisfaction	Medical Interview Satisfaction Scale	No difference in satisfaction between groups.	no improvement	not available
			Quality of Providers	Time spent making assessment versus counseling in each area	Videotaped encounters	Physicians in intervention group spent less time in assessment rather than counseling in each of the "Safe Times" areas (p<0.05).	significant improvement	not available
			Quality of Providers	Total time spent in each of the "Safe Times" topics	Videotaped encounters	Physicians in intervention group spent less time discussing each of the specific "Safe Times" topics.	improvement	not available
			Quality of Providers	Time spent discussing "Safe Times" topics	Videotaped encounters	Physicians in intervention group spent less time discussing all "Safe Times" topics.	improvement	not available
Injury Prevention in Children								
Gielen, 2001	Physician Resident/fellow	RCT	Patient Adherence	Safety practices	Self report and home-observation	Groups did not differ.no improvement	not available	
			Efficacy of Treatment	Parental knowledge and beliefs regarding injury prevention	Follow-up interview	Groups did not differ.	no improvement	not available
			Patient Satisfaction	Satisfaction	Patient report	Patients in the intervention group rated the help they received with safety topics	significant improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
						significantly higher than patients in the control group (p=0.01).		

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Quality of Providers	Injury prevention counseling	Audiotape analysis	Mention of safety strategies was higher in intervention group (9.4 +/- 6.8) than control group (3.7 +/- 3.2).	improvement	not available
Well Baby Care								
Hornberger, 1996	Physician Professional	RCT	Quality of Providers	Adequacy of interpretation	Audiotape analysis	The remote simultaneous translation group had a 13% lower rate of inaccurately interpreted mother utterance per visit than the proximate consecutive service (most were omissions).	improvement	not available
			Quality of Providers	Number of questions asked by mother	Audiotape analysis	Significantly more questions were asked by mothers in the remote simultaneous translation than with the proximate consecutive translation service (no p-values given).	improvement	not available
			Quality of Providers	Provider preference for type of intervention	Provider self report	Providers preferred remote simultaneous translation to proximate consecutive translation.	improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Utilization	Duration of encounter	Audiotape analysis	No significant difference between intervention and control.	no improvement	not available
			Quality of Providers	Number of explanations by mother	Audiotape analysis	The number of mother explanations per visit was 22% more in the remote simultaneous translation group than in the proximate consecutive translation group visits.	improvement	not available
			Quality of Providers	Number of explanations by physicians	Audiotape analysis	The number of physician explanations per visit was 18% more in the remote simultaneous translation group than in the proximate consecutive translation group visits.	improvement	not available
			Patient Satisfaction	Patient preference for type of intervention	Patient self report	All 17 mothers who experienced both types of translation and who responded to the survey preferred remote simultaneous translation.	improvement	not available
			Quality of Providers	Patient-physician eye-to-eye contact	Provider self-report	Physician reported that eye-to-eye contact was improved in remote simultaneous translation group.	improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
MENTAL HEALTH								
Alcohol								
Burge, 1997	Physician Resident/fellow	RCT	Health Status	Addiction Severity Index (ASI) Family Score	Interview; medical record review	Decreased over time in all groups (p=0.000), but decrease more significant for physician intervention group at 12 months (p=0.003).	significant improvement	significant improvement
			Health Status	Addiction Severity Index (ASI) Employment Score	Interview; medical record review	No change over time in any group (not significant) at 12 months.	no improvement	no improvement
			Health Status	Addiction Severity Index (ASI) Alcohol score	Interview; medical record review	Decreased over time in all groups (p=0.000). No difference between groups at 12 months.	no improvement	significant improvement
			Health Status	Drinks per week	Interview; medical record review	Decreased over time for all groups (p=0.000). No difference between groups at 12 months.	no improvement	significant improvement
			Health Status	Addiction Severity Index (ASI) Medical Score	Interview; medical record review	Decreased over time in all groups (p=0.000) at 12 months.	no improvement	significant improvement
			Health Status	Mean Corpuscular Volume (MCV)	Blood test	Decreased over time in all groups (p=0.000). No difference between groups at 12 months.	no improvement	significant improvement

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Health Status	Liver enzymes (SGot, SGPt, GGT)	Blood test	No difference between groups at 12 months. SGoT decreased over time (p=0.000) in all groups.	no improvement	significant improvement
Depression								
Callahan, 1994	Physician Professional	RCT	Appropriateness of Care	Percentage of patients with depression diagnosis recorded at 6 months	Medical record review	32.3% (intervention) versus 12.1% (control) (p=0.002).	significant improvement	not available
			Appropriateness of Care	Percentage of patients with newly-prescribed antidepressant at 6 months	Medical record review	26.0% (intervention) versus 8.0% (control) (p=0.01).	significant improvement	not available
			Appropriateness of Care	Percentage of patients referred to psychiatry at 6 months	Medical record review	13.7% (intervention) versus 12.1% (control) (no significant differences).	no improvement	not available
			Health Status	Depression	Hamilton Depression Scale	Both groups showed statistically significant improvement in depression at 6 months (no significant difference between groups).	no improvement	not available
			Appropriateness of Care	Percentage of patients in whom drug associated with depression was discontinued	Medical record review	22.0% (intervention) versus 23.0% (control) (no significant difference).	no improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
Miranda, 2003	Nurse, Physician, nurse practitioner Professional	RCT	Health Status	Depression	Composite International Diagnostic Interview (CIDI)	At 6 and 12 months, patients in both intervention groups were less likely than patients in control group to meet criteria for probable depressive disorder (39.9% versus 49.9%, p=0.001). In subgroup analysis only African American and Latino patients were significantly less likely to screen positive for depression, whereas the difference was not significant for white patients.	significant improvement	not available
			Appropriateness of Care	Appropriate depression care	Not specified	At 6 and 12 months, all patients (African American, Latino, and white) in both intervention groups were more likely than controls to receive counseling or to receive anti-depressant medications (50.9% versus 39.7%, p<0.001).	significant improvement	not available
			Health Status	Employment	Telephone and mailed survey	At 6 and 12 months, there were no improvements for African American or Latino patients in employment rates, however, there were improvements for white patients.	no improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
OTHER CLINICAL AREAS								
Acute Respiratory Infections								
Harris, 2003	Physician, nurse practitioners Professional	CCT	Appropriateness of Care	Antibiotic prescription rates for acute bronchitis	Medical record review	The proportion of patients with acute bronchitis decreased from 58% in the baseline period to 30% and 24% among patients exposed to the limited and full interventions (p<0.001 for intervention groups versus baseline). No differences between groups.	no improvement	significant improvement
			Appropriateness of Care	Antibiotic prescription rates for non-specific upper respiratory tract infections	Medical record review	Antibiotic prescriptions for nonspecific upper respiratory tract infections decreased from 14% to 3% and 1% in the limited and full intervention groups (p<0.001 for intervention groups versus baseline). No difference between limited and full intervention groups.	no improvement	significant improvement

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
Asthma								
Evans, 1997	Nurse, Physician, Clerical staff, Laboratory technicians, Public health assistants Professional	RCT	Appropriateness of Care	Patient education by physician and nurse	Patient report	Patient reported education by physicians was 71% for intervention versus 58% for control patients (p<0.01), and by nurses was 61% for intervention versus 41% for control patients (p<0.05).	significant improvement	not available
			Utilization	Continuity of care	Average number of visits made by children with asthma per year	Average number of visits made by children with asthma increased in intervention clinics from baseline through both follow-up periods (2.15 in 1992 versus 2.42 in 1993 versus 1.41 in 1991, p<0.001) and remained the same in control clinics.	not available	significant improvement
			Appropriateness of Care	Use of appropriate medicines	Proportion of patients with asthma who had each type of medication dispensed	In the intervention clinics, a higher proportion of patients with asthma compared to controls were given inhaled anti-inflammatory medication (17 versus 3, p<0.001), spacers devices (28 versus 3, p<0.001), and anti-inflammatory meds (68 versus 50, p<0.05).	significant improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Utilization	Continuity of care	Proportion of patients treated for asthma in 1 year who returned for treatment the next year	Percent of patients with asthma in year 1 who returned in year 2 increased in intervention clinics 16% to 32% (p<.0002) and decreased slightly in control clinics 14% to 12% (not significant).	not available	significant improvement
			Appropriateness of Care	Identification/ treatment of asthma patients	Number of asthmatic patients per 1000 clinic patients	Intervention clinics doubled (p<.001) rate at which they identified asthma patients with no change in control clinics during both 1st and 2nd follow-up years.	not available	significant improvement
Chronic Renal Disease								
Harris, 1998	Physician Resident/fellow, Professional	RCT	Utilization	All outpatient clinic visits (years 3-5 after enrollment)	Medical record review	Intervention group patients had significantly more outpatient clinic visits overall than did control group patients, 26 versus 18 (p<0.001).	significant improvement	not available
			Health Status	Blood pressure (years 3-5 after enrollment)	Medical record review	No significant differences in systolic and diastolic blood pressures between groups.	no improvement	not available
			Utilization	Emergency department visits (years 3-5 after enrollment)	Medical record review	No significant difference in emergency department visits between groups.	no improvement	not available
			Utilization	Hospitalizations (years 3-5 after enrollment)	Medical record review	No significant difference in number of hospitalizations between groups.	no improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Appropriateness of Care	Calcium channel blocker use (years 3-5 after enrollment)	Medical record review	Patients in the intervention group were more likely to be on a calcium channel blocker than were patients in control group, 49% versus 35% (p=0.003).	no improvement	not available
			Utilization	Ophthalmology clinic visits (years 3-5 after enrollment)	Medical record review	Patients in the intervention group had a greater number of ophthalmology appointments than did patients in the control group, 1.8 versus 1.2 (p=0.07).	improvement	not available
			Health Status	Cumulative 5 year mortality	Death certificate from Indiana State Department of Health, hospital death summaries, discharge status reports, autopsy reports	No significant difference in intervention (29%) versus control (33%) group in cumulative 5 year mortality.	no improvement	not available
			Health Status	Change in renal function (years 3-5 after enrollment)	Medical record review	Intervention group patients had lower creatinine clearance than did control group patients, 30 versus 34 (p=0.10).	no improvement	not available
Emergency Systems								
Kellermann, 1993	Firefighters Professional	CCT	Health Status	Neurological deficits	Physician/nurse report	Neurological outcomes for survivors of both groups were similar.	no improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Health Status	Survival to hospital discharge	Hospital report	Patients treated by automated external defibrillator equipped responders were no more likely to survive to hospital discharge.	no improvement	not available
			Health Status	Survival to hospital admission	Written report	Patients treated by automated external defibrillator equipped responders were no more likely to survive to hospital admission.	no improvement	not available
End of Life								
Dexter, 1998	Physician Resident/fellow, Professional	RCT	Patient Adherence	Completion of either Instruction or Proxy Directive	Patients complete either Directive	The percentage of patients who completed either directive was 15% in the instruction and proxy group, 7% in the instruction group, 3% in the proxy group, and 4% in the control group.	improvement	not available
			Quality of Providers	Discussion of advance directives	Patient report	Compared with control, dissemination of advanced directives had OR of 7.7 (3.4 to 18) in instruction and proxy group; 4.4 (2.1 to 9.4) in instruction group; and 2.5 (1.1 to 5.5) in proxy group.	significant improvement	not available

Evidence Table 3: Results from articles addressing Question 1 (continued)

Study	Targeted Healthcare Providers/Levels of Training	Study Design	Outcome Type	Outcome	How Measured	Intervention Effect	Summary	
							Between-Group Summary	Within-Group Summary
			Quality of Providers	Initiation of discussion	Patient report	Discussions initiated by physician in 86% of instances in instruction and proxy group, 77% in instruction group, 43% in proxy group, and 38% in control group.	improvement	not available
			Patient Adherence	Completion of Proxy Directive	Completion of form by patient	The percentage of patients who complete a Proxy Directive was 8% in the instruction and proxy group, 4% in the instruction group, 1% in the proxy group, and 2% in the control group.	improvement	not available
			Patient Adherence	Completed Instruction Directive	Completion of form by patient	The percentage of patients who completed an instruction directive in the instruction and proxy group was 15%, 7% in instruction group, 2% in proxy group, and 2% in control group.	improvement	not available

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
PHYSICIAN					
Beagan, 2003, Canada	Language, Specific cultural content	Not Specified	Clinical experiences, Lectures, Standardized patient, Small group	1 afternoon each week held over 2 years	To develop physicians who are sensitive to the ethnic, cultural, and gender diversity of the community.
					To develop students skills to address critical issues in the doctor-patient relationship including cross-cultural healthcare.
Copeman, 1989, Australia	Racism, Doctor-patient interactions, Language, Specific cultural content	Other specific culture: Aboriginal	Case scenarios, Clinical experiences, Discussion (group), Interviewing members, Presentations	Not Specified	To be aware and reassess any prejudices, stereotypes, and judgmental attitudes towards Aboriginal or ethnic minorities.
					To practice overcoming difficulties in communicating with persons of different cultures and languages.
					To be aware of difficulties in communicating with different cultures.
					To understand how sociocultural backgrounds affect health.
					To learn basic facts about Aboriginal and migrant health, their social, and cultural backgrounds.
Crandall, 2003, U. S.	General concepts of culture, Racism, Specific cultural content, Socioeconomic status (SES)	Not Specified	Audio/Visual, Case scenarios, Demonstration/role, Interviewing members, Lectures, Problem based, Readings, Role play	20 2-3 hour sessions held over 1 year	To help students become more culturally competent by moving towards conscious incompetence, and in some instances to conscious competence.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
Culhane-Pera, 1997, U. S.	General concepts of culture, Doctor-patient interactions, Language, Specific cultural content	Hispanic	Audio/Visual, Clinical experiences, Discussion (group), Drill/practice exercise, Lectures, Literature, Presentations, Role play	3 1-day sessions	To define culture and factors influencing culture of different population groups.
					To describe beliefs, values, behaviors, and health practices of ethnic groups.
					To be aware of own cultural beliefs, values, and practices and respect patients' and families' behaviors and values as pertinent to their medical problems.
					To appreciate the heterogeneity of patients, providers, and the clinical encounter.
					To inquire about beliefs, practices, and values of patients and family.
					To obtain medical history considering cultural information.
					To perform physical exam that is adjusted to the patient's cultural desires. To work with interpreters.
					To consider cultural information in making diagnostic and therapeutic plans.
					To be aware of sociocultural factors.
Dogra, 2001,U. K.	General concepts of culture	Not Specified	Brainstorming, Case scenarios, Drill/practice exercise, Lectures, Self study, Small group	2 hours sessions in one week	To evaluate students' own attitudes and perceptions of different groups within society.
					To demonstrate respect for patients and colleagues that encompasses without prejudice, diversity of background and opportunity, language, culture, and way of life.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
					To assess both the positive and negative impact of students' attitudes on their future practices as doctors.
					To apply the principles the students have learned from the exercises to other similar situations.
					To recognize the limitations of students' knowledge and seek appropriate advice with respect to students' understanding of another person's perspective.
					To describe at least two cultures different from your own.
					To outline the current legislation that exists to prevent discrimination.
					To respect the differences that exist between different groups of people.
Douglas, 1994, U. S.	General concepts of culture, Doctor-patient interactions, Language, Specific cultural content, Access issues	Asian/Pacific Islander, Hispanic	Audio/Visual, Clinical experiences, Discussion (group), , Readings, Self study	Not Specified	To learn about the errors that can occur with use of translators.
					To teach physicians about themselves (self awareness of culture/language).
					To deliver culturally sensitive healthcare.
					To address need of minority community.
Dowell, 2001, New Zealand	General concepts of culture, Specific cultural content	Other specific culture: Maori	Culture immersion	one week full-time	To increase awareness of importance of cultural issues.
					To encourage students to adopt broad public health approaches in assessing the health needs of defined communities.
Drouin, 2003, Canada	Language	Other specific culture: Francophone Canadian	Observation and feedback, Standardized patient	15 < 2 hour sessions held over 2 years	To expose students to clinical scenarios that reflect the primary care practice of francophone physicians and to introduce them to cultural aspects of healthcare.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
					To give students the opportunity to learn clinical skills efficiently outside the tertiary care centers where instruction in French was rarely possible.
Farnill, 1997, Australia	Language	Other specific culture: non-English speaking	Discussion (group), Interviewing members, Small group	16 < 2-hour sessions held over 7 months	To interview people of non-English speaking backgrounds.
					To develop students' basic skills in interviewing.
					To increase student sensitivity to multicultural issues.
Godkin, 2001, U. S.	General concepts of culture, Language, Specific cultural content, Socioeconomic status (SES)	Asian/Pacific Islander, Hispanic	Culture immersion, Interviewing members, Language lessons, Lectures, Community service	30 half-day sessions over 1 year plus 6 weeks full time	To develop sensitivity through first-hand experiences when living in a new country.
					To develop abilities to speak the language of an immigrant, refugee, or undocumented population new to Massachusetts.
					To develop an understanding of the culture and health beliefs of the newcomer group and the problems that they face.
					To promote a career preference to serve underserved populations.
Godkin, 2003, U. S.	General concepts of culture, Specific cultural content	Asian/Pacific Islander, African American, Hispanic	Culture immersion	Not Specified	To improve language skills for pre-clinical students in a formal language program.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
Haq, 2000, U. S.	General concepts of culture, Specific cultural content	Asian/Pacific Islander, African American, Hispanic	Brainstorming, Case scenarios, Clinical experiences, Culture immersion, Discussion (group), Drill/practice exercise, Lectures, Conduction of community health activities, Role play	8-10 weeks full time	To learn about 23 vital areas of international health, including planning, sanitation, nutrition, etc.
Mao, 1988, U. S.	General concepts of culture, Doctor-patient interactions, Specific cultural content	Not Specified	Audio/Visual, Discussion (group), Role play, Small group	1 4-hour session held once only	To improve ability to provide medical care appropriate to patients ethnic and sociocultural backgrounds.
					To use LEARN (Listen, Explain, Acknowledge, Recommend, Negotiate) model as a framework for resolving physician-patient conflicts.
					To acknowledge that ethnic and sociocultural differences between a physician and a patient can influence the type of medical care given.
					To understand ethnic differences between patients and students.
Marvel, 1993, U. S.	General concepts of culture, Doctor-patient interactions	Not Specified	Audio/Visual, Case scenarios, Interviewing members, Readings, Role play, Small group	16 sessions held over 4 weeks	To understand basic family systems concepts.
					To understand how one's own cultural and family background influences the doctor-patient relationship.
					To conduct a family conference.
					To identify developmental tasks in the family life cycle.
					To identify cultural factors that affect health care.
					To recognize the family role in chemical dependency.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
Mazor, 2002, U. S.	Language, Specific cultural content	Hispanic	Case scenarios, Language lessons	2-hour sessions held weekly for 10 weeks	To improve understanding of Hispanic cultural beliefs.
					To improve ability in taking medical history in Spanish.
					To determine whether a course in medical Spanish for Pediatric Emergency department physicians is associated with an increase in patient satisfaction for Spanish-speaking-only families.
Nora, 1994, U. S.	Language, Specific cultural content, Access issues	Hispanic	Clinical experiences, Culture immersion, Demonstration/role, Discussion (group), Language lessons, Lectures, Presentations, Readings, Small group	30 2-hour sessions plus 8 days full time	To learn about demographic, geographic, and cultural differences between Hispanics and Anglo-Americans and implications for health care.
					To teach medical terminology and physician-patient conversation.
					To explore issues of health care in a developing Hispanic country.
					To improve ability to understand health issues and communicate them to Spanish-speaking patients.
Rubenstein, 1992, U. S.	General concepts of culture, Specific cultural content	Asian/Pacific Islander	Case scenarios, Discussion (group), Interviewing members, Lectures, Presentations, Small group	1 4-hour session held once only	To describe the effect of non-conventional health beliefs in doctor-patient relationship.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
					To identify resources for learning more about these beliefs.
					To recognize how pervasive such beliefs are in our society.
					To interview a person about his/her health beliefs and practices.
Sinnott, 2001, Australia	General concepts of culture, Specific cultural content	Other specific culture: Aboriginal	Lectures, Readings	1 < 2-hour session held once only	To be aware of the role of indigenous hospital liaison officers.
Tang, 2002, U. S.	Not Specified	Not Specified	Case scenarios, Lectures, Role play, Self reflection, Small group	sessions held over four years	To prepare students to negotiate sociocultural issues that will emerge in their clinical experiences.
					To increase the knowledge about sociocultural factors in medical students future patient care.
					To increase understanding of the relationships among sociocultural background, health, and medicine.
NURSE					
Alpers, 1996, U. S.	General concepts of culture, Specific cultural content	Asian/Pacific Islander, African American, Hispanic	Home visits, Not Specified	Not Specified	To improve skill specific transcultural tasks.
					To increase knowledge of specific cultural patterns.
					To increase knowledge of general transcultural concepts.
					To improve confidence and competence in providing care to minorities (African Americans, Latino-Hispanics, Southeast Asians).
Barton, 1992, U. S.	General concepts of culture, Specific cultural content	Hispanic	Clinical experiences, Culture immersion	Not Specified	To explore the extent to which student discovery learning occurs when the teaching model includes clinical experience involving transcultural health care.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
Berman, 1998, U. S.	General concepts of culture, Specific cultural content	Asian/Pacific Islander, African American, Hispanic	Audio/Visual, Case scenarios, Lectures, Readings, Small group	3 one-day sessions plus 1 two-day session	To identify beliefs, sources of information, and access of minority/underserved populations.
					To increase cultural sensitivity.
					To identify appropriate nursing interventions for minorities.
					To identify cancer-related needs in different minorities.
					To identify barriers to adequate cancer nursing care for minority/underserved populations.
Blackford, 2002, Australia	General concepts of culture, Specific cultural content, Gender roles and sexuality	Other specific culture: non-English speaking	Discussion (group), Interviewing members	< 2-hour sessions held every two weeks for 7 months	To examine health professionals own Anglo-Australian culture and its impact on other ethnic communities.
Bond, 1994, U. S.	General concepts of culture, Language, Specific cultural content	Hispanic	Culture immersion, Language lessons, Literature, Presentations, Readings, Self reflection, Small group	Not Specified	To allow the student to compare observations to what is reported in the literature.
					To gain exposure to the Spanish language.
					To explore Mexican culture.
					To increase knowledge of Mexican health care beliefs.
					To acknowledge the challenges presented in planning and delivering culturally sensitive and competent care within health care work settings.
					To experience the Mexican culture by beginning to learn the language, living with people, sharing food and customs, and ultimately gaining insight into behavior.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
Campinha-Bacote, 1996, U. S.	General concepts of culture	Not Specified	Audio/Visual, Drill/practice exercise, Lectures, Experimental exercises	4 < 2-hour sessions	To increase cultural awareness and knowledge of nurses.
					To improve the cultural skills of nurses.
Felder, 1990, U. S.	General concepts of culture, Doctor-patient interactions, Specific cultural content	African American	Not Specified	Not Specified	To test for any significant difference between baccalaureate and associate degree nursing students' cultural knowledge and attitudes towards black American clients.
					To test for any significant difference of cultural knowledge of black Americans among baccalaureate and associate degree seniors and freshmen.
					To test for any significant difference in the attitudes of baccalaureate and associate degree seniors and freshmen where programs have provided similar training experiences.
Flavin, 1997, U. S.	Doctor-patient interactions, Specific cultural content	Asian/Pacific Islander	Audio/Visual, Case scenarios, Discussion (group), Presentations, Role play	< 2-hour sessions held weekly for 3 weeks	To provide culturally relevant quality care to clients from cultures different from nurses' own.
Frank-Stromborg, 1987, U. S.	Specific cultural content	African American	Demonstration/role, Discussion (group), Lectures, , Role play	1 day session held once only	To identify cancer risks at the individual and community level.
					To describe nursing role in prevention/detection of cancers in black Americans.
					To integrate what was learned into clinical practice.
					To explore nurses' own feelings toward cancer.
					To palpate simulated prostate and gynecological malignancies.
					To increase cancer prevention/detection activities among Black Americans.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
Frisch, 1990, U. S.	General concepts of culture, Specific cultural content	Hispanic	Culture immersion	6 weeks full-time	To assess the change in students' thinking maturity over time.
					To assess the level of cognition of undergraduate students.
					To examine whether exposure to diversity challenged established views and brought measurable cognitive change.
Hadwiger, 1999, U. S.	Doctor-patient interactions, Language, Specific cultural content	African American, American Indian/Alaska Native, Hispanic, Other specific culture	Case scenarios	4 sessions	To learn about the cultural background of another group, particularly healthcare practices, communication styles, and specific health-problems.
					To have the nursing student reflect on how his/her beliefs and assumptions differs from the patient.
					To negotiate a plan of care without resorting to ethnocentric attitudes or stereotypes.
Haloburdo, 1998, U. S.	General concepts of culture, Specific cultural content	Hispanic	Clinical experiences, Culture immersion, Lectures	Not Specified	Not specified.
Inglis, 2000, Asia; Australia	Doctor-patient interactions, Specific cultural content	Asian/Pacific Islander	Lectures, Visits to local hospitals and health centers, Field trip	3 weeks full time	To improve knowledge about the Nepalese people and their health system.
					To improve behaviors directed towards the Nepalese people.
					To improve students' attitudes and beliefs about the Nepalese people.
Jeffreys, 1999, U. S.	General concepts of culture, Specific cultural content	Not Specified	Clinical experiences, Discussion (group), Lectures, Written assignments, Readings	Not Specified	To systematically conduct basic cultural assessment.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
					To discover importance of culturally competent care.
					To identify similarities and differences among individuals from cultural groups.
					To distinguished between varying levels of acculturation.
Jeffreys, 2002, U. S.	General concepts of culture, Doctor-patient interactions, Access issues	Not Specified	Audio/Visual, Discussion (group), Lectures, Readings, Role play, Small group	Not Specified	To identify strategies to integrate cultural health assessment.
					To discuss impact of healthcare policy on diverse populations.
					To identify ethical, legal, and moral dimensions of interventions from transcultural perspective.
					To identify role of provider in culturally competent care.
					To discuss application of transcultural care.
					To discuss theories of culture.
					To discuss future directions and challenge of transcultural care.
					To discuss issues in diversity and healthcare in relation to culturally competent clinical practice.
					To critically appraise selected theories/research.
Lasch, 2000, U. S.	Specific cultural content	Not Specified	Clinical experiences, Discussion (group), Lectures, Presentations	1 1-day sessions held once only	To improve cancer pain knowledge hands-on experience.
					To improve attitudes relating to cancer pain among nurses of patients from 11 different ethnic groups.
					To improve knowledge about cancer pain among nurses of patients from 11 different ethnic

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
					groups.
					To increase durability of attitudes related to cancer pain via hands-on-experience.
Lindquist, 1984, U. K.	Specific cultural content	Not Specified	Culture immersion, Discussion (group), Lectures	sessions held daily for 4 weeks	To learn about another culture and health care delivery system.
Lockhart, 1997, U. S.	General concepts of culture, Access issues	African American, American Indian/Alaska Native, Hispanic, Other specific culture	Drill/practice exercise, Lectures, Simulations; Field experience; Self assessment	Not Specified	To explore ways to promote knowledge development of and the profession's involvement in transcultural nursing.
					To investigate cultural diversity as it relates to the nursing program.
					To examine select healthcare delivery and acceptance issues related to an individual's background.
					To examine specific concepts and principles in transcultural health care system.
					To explore the evaluation of transcultural nursing as a specialty area.
Napholz, 1999, U. S.	General concepts of culture, Language, Specific cultural content	African American	Clinical experiences, Presentations, Small group	3 2-hour sessions	To increase cultural sensitivity.
					To apply change strategies.
					To formulate culturally relevant care plans.
					To discuss openly racial and ethnic differences.
					To adapt to clients' interactive style and language.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
Oneha, 1998, U. S.	General concepts of culture	Asian/Pacific Islander	Case scenarios, Clinical experiences, Discussion (group), Problem based, Small group	sessions held weekly	To identify the role of nurses in multi professional team.
					To solve culturally sensitive group problems.
					To adjust activities to benefit the community.
					To identify the impact of culture on nursing care.
					To accept the controls, constraints, and ambiguity in community based practice.
Rolls, 1997, Australia	General concepts of culture	Asian/Pacific Islander	Culture immersion, Discussion (group), Readings	4 2-hour sessions plus 4 weeks full time	To develop an understanding of the forces influencing international health care services.
					To create awareness and change attitudes towards different cultures.
Rooda, 1993, U. S.	General concepts of culture, Specific cultural content	Asian/Pacific Islander, African American, Hispanic	Discussion (group), Drill/practice exercise, Lectures, Reflection, Small group	1 1-day session held once only	To learn how the culture of various ethnic groups affects their healthcare practices.
					To develop a sequence of learning to be used for increasing cultural awareness.
Ryan, 2000, U. S.	General concepts of culture	Not Specified	Culture immersion	Not Specified	No stated objectives.
Ryan, 2002, U. S.	General concepts of culture, Language, Specific cultural content	Asian/Pacific Islander, African American, Other specific culture	Case scenarios, Discussion (group), Web page	Not Specified	To learn new ways of communicating and facilitating dialogue about culture.
					To gain insight into both one's own and others' cultural beliefs.
					To gain insight into social orientation.
					To identify health behaviors unique to a culture.
					To increase knowledge about health practices in another country.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
					To discuss nursing interventions for case study.
					To increase awareness of culture in healthcare and the environmental influences in cultural heritage.
Scisney-Matlock, 2000, U. S.	General concepts of culture	Not Specified	Lectures, Web pages; Written and verbal presentations, Small group	Not Specified	To increase exposure to information and activities devoted to understanding other racial/ethnic groups.
					To increase knowledge of diversity.
Smith, 2001, U. S.	General concepts of culture, Specific cultural content	Not Specified	Case scenarios, Demonstration/role, Lectures, Simulations	1 session held once only	To improve confidence in performing specific transcultural skills.
					To improve confidence in knowledge of cultural patterns within different groups.
					To improve knowledge of cultural concepts (culturally specific health and illness concerns, values, and family orientation issues).
St Clair, 1999, U. S.	General concepts of culture, Doctor-patient interactions	African American	Culture immersion	2-3 weeks full time	To change nursing students' self-efficacy and cultural perceptions.
					To determine if there are changes in the nurse-patient relationship as a result of these cultural immersions.
					To improve cultural sensitivity.
					To change nursing students' ethnocentrism.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
Underwood, 1999, U. S.	Specific cultural content	African American	Case scenarios, Demonstration/role, Lectures, Outreach with national prevention organization	Not Specified	To identify common attitudes of African Americans towards cancer.
					To describe nurses' role in cancer prevention and early detection.
					To describe procedures for performing screening examinations for 5 common cancers.
					To conduct NCI breast self exam or smoking cessation program.
					To identify factors which facilitate and impede cancer prevention in the African American community.
					To identify individuals at increased risk for 5 common cancers.
					To design a community-based cancer prevention program including: development, implementation, and evaluation.
Underwood, 2002, U. S.	Specific cultural content	African American	Lectures, Presentations, Role play, Small group	Not Specified	To discuss the nurse education role in prevention and early detection and strategies to enhance understanding of burden of cancer experienced by African Americans.
					To identify etiological factors associated with 5 common cancers among African Americans.
					To describe signs and symptoms associated with 5 common cancers in the African American population.
					To describe incidence mortality and survival of breast, cervical, prostrate, colorectal, and lung cancer in African Americans.
					To teach programs related to breast health, smoking cessation, and smoking prevention.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
					To discuss recommended cancer screening procedures and diagnostic examination for 5 common cancers in African Americans.
					To provide nurse educators with information and resources on the prevention and control of cancer in African Americans.
					To propose a strategy for educating students to promote health screening and early detection for African Americans in the community or practice setting.
					To describe procedures for accessing state-of-the-art cancer information on the Internet and World-Wide Web.
					To identify common attitudes of African Americans towards cancer, cancer prevention, early detection, and cancer cure.
					To identify established organizations with cancer control as a major objective.
					To identify factors which facilitate or impede cancer prevention and early detection.
Warner, 2002, U. S.	General concepts of culture, Specific cultural content	American Indian/Alaska Native	Culture immersion	Not Specified	To "broaden horizons".

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
Wendler, 2002, U. S.	General concepts of culture, Specific cultural content	African American, American Indian/Alaska Native, Hispanic, Other specific culture	Interviewing members, internet learning, cultural enrichment activities, Small group	Not Specified	To evaluate the impact of culture on health, illness, and wellness.
					To analyze the theoretical and conceptual approaches underlying cultural congruency/competency.
					To evaluate health patterns of different ethnic groups: African-American, Hispanic, Asian, and Native American.
					To synthesize the scholarly literature to facilitate healthcare planning, implementation, and/or evaluations that are culturally competent.
					To examine the interrelationships among a pluralistic society, the culturally diverse group within the society, and the health/illness status and beliefs of the group members, with a specific focus on the peoples of the African-American, Hispanic, Asian, and Native American cultures.
Williamson, 1996, U. S.	General concepts of culture	Not Specified	Audio/Visual, Clinical experiences, Culture immersion, Discussion (group), Interviewing members, Presentations, Readings	sessions held weekly	To increase the students' knowledge of ethnic groups.
					To increase students' ability to care for ethnic groups.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
OTHER PROVIDERS/ MIXED GROUPS					
Nurse, Physician, Receptionists, Volunteers, Business office staff					
Gallagher Thompson, 2000, U. S.	Doctor-patient interactions, Specific cultural content, Access issues	Hispanic	Audio/Visual, Discussion (group), Lectures,	1 session held once only	To increase knowledge about Hispanic Alzheimer's patients and their families.
					To increase general knowledge about Alzheimer's disease.
					To increase knowledge of Hispanic beliefs about dementia.
					To increase referrals of Hispanic Alzheimer's patients and their families to the appropriate specialized services about Alzheimer's disease.
Nurse, Physician, Social workers, Nurse's aides, Receptionists, Clerks					
Gany, 1996, U. S.	Language, Specific cultural content	Asian/Pacific Islander, African American, Hispanic	Discussion (group), Personal experiences, Role play	4 sessions	To learn about expectations and behaviors of immigrant groups concerning pregnancy, birth, well-baby care, contraceptive use, and folk remedies.
					To learn about immigrant epidemiology, management of disease and other health issues, the impact of immigration, and use of folk medicine.
					To discern between health beliefs that are beneficial or neutral to the child and well-being of the mother and those that are harmful.
					To bridge differences between the Western biomedical system and alternative healthcare systems.
					To learn about the impact of migration in family dynamics and interaction, and the increased possibility of family violence.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
					To become aware of own interview style and learn effective communication strategies in the bilingual medical interview.
Nurse, Pharmacist					
Chevannes, 2002, U. K.	General concepts of culture	Not Specified	Audio/Visual, Case scenarios, Clinical experiences, Discussion (group), Lectures, Presentations	Not Specified	To develop skills (i.e. history taking) to meet the health needs of ethnic minorities.
					To change practice as a result of training.
					To improve culture knowledge of ethnic minority patients and their health care needs.
Nurse, Pharmacist, Physician, Occupational Therapy, Physical Therapy, Health administration					
Erkel, 1995, U. S.	Specific cultural content	African American	Audio/Visual, Case scenarios, Clinical experiences, Culture immersion, Literature, Presentations, Readings, Role play	5 weeks full time	To develop culturally sensitive health professionals able to function within interdisciplinary team in rural setting.
Nurse, Pharmacist, Physician, Any staff with direct patient contact					
Way, 2002, U. S.	General concepts of culture	Not Specified	Not Specified	1 sessions held once only	To enhance recognition and understanding of other cultures.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
Community health worker, Undergraduate student					
Bengiamin, 1999, U. S.	General concepts of culture, Specific cultural content, Access issues	Asian/Pacific Islander, American Indian/Alaska Native, Hispanic, Other specific culture	Audio/Visual, Discussion (group), Literature, Presentations	Not Specified	To explore one's own cultural background.
					To increase knowledge of student perception of transcultural nursing.
					To facilitate cultural awareness from a holistic care perspective.
					To develop a sense of cultural awareness.
					To cultivate skills that allow students to understand and analyze cultural differences.
Community health worker, Church nurse guild members and other interested community organizations					
Briscoe, 1999, U. S.	Access issues	African American	Case scenarios, Discussion (group), Lectures, Readings, Role play	1 2-hour session held once only	To instruct organization members on strategies for maximizing medical encounters.
					To identify strategies to overcome practical obstacles to quality of care, utilization (e.g., manage child care, transportation).
					To develop a plan for overcoming attitudinal obstacles to health care utilization, especially diabetes screening.
					To describe and implement a plan for promoting sources of high quality diabetes care within the organization.
					To implement a plan for identifying sources of high quality diabetes care in their communities.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
Social workers					
Browne, 2002, U. S.	General concepts of culture	Not Specified	Case scenarios, Clinical experiences, Drill/practice exercise, Lectures	Not Specified	To incorporate knowledge of diverse cultural, norms, issues, and values in the assessments of and interventions with culturally diverse age groups.
					To provide a greater emphasis on interdisciplinary team work and cultural competence.
					To increase knowledge of diverse cultural norms, issues, and values.
					To increase awareness of diverse cultural norms, issues, and values.
Psychologists					
Hansen, 2002, U. S.	General concepts of culture, Doctor-patient interactions, Language, Specific cultural content	Not Specified	Discussion (group), Writing cultural autobiography, Readings, Self study	2 1-day sessions	To develop cultural awareness.
					To self assess one's multicultural competence.
					To establish rapport and convey empathy in culturally sensitive manner.
					To explain results in a culturally sensitive contextual manner.
					To modify assessment tools and conclusions appropriately for use with identified group.
					To know how to assess variables of special relevance to identified groups.
					To understand culture-specific assessment procedures and tools.
					To ascertain effects of therapist-client language differences.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
Tomlinson-Clarke, 2000, U. S.	General concepts of culture, Racism, Specific cultural content	Other specific culture: Aboriginal	Discussion (group), Use of "critical incidents" to develop skills, Readings	15 sessions held weekly	To understand people within a socio-cultural context; addressing race, oppression, and ethnicity. Familiarity with current research in multicultural field.
					To discuss culture, identity, appreciation of one's own culture and biases.
					To use critical incidents to develop multicultural communication skills.
Mental health professionals					
Stumphauzer, 1983, U. S.	General concepts of culture, Access issues	Asian/Pacific Islander	Case scenarios, Discussion (group), Readings	2-hour sessions held weekly for 10 weeks	No stated objectives.
Occupational therapy					
Velde, 2001, U. S.	Specific cultural content	African American	Clinical experiences, Culture immersion, Interviewing members, Literature, Presentations, Self reflection, Small group	20-28 hours total	To know about cultural differences between Tillery community members and students/faculty.
					To note personal awareness of cultural differences between Tillery community members and students.
					To study effects of cultural differences on behavior of Tillery community members and students/faculty.

Evidence Table 4: Description of study characteristics for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Categorization of Curriculum Content		Training Methods	Contact Time	Training Objectives
	Cultural Concepts	Specific Cultures			
Counselors					
Wade, 1991, U. S.	Specific cultural content	African American	Discussion (group), Role play	4 hours total	To increase knowledge necessary to understand and to respond to attitudes that low-income black women bring to counseling.
					To increase cultural sensitivity.
					To increase self-awareness necessary to understand and to respond to attitudes that low-income black women bring to counseling.
					To increase skills necessary to understand and to respond to attitudes that low-income black women bring to counseling.

Evidence Table 5: Description of study quality for articles addressing Question 2, sorted by targeted healthcare provider(s)

Study	Study Design	Summary of Quality Assessment [a]					Selected Aspects of Quality					
		Rep	Bias	Inter	Out	Analy	Comparison Group?	Complete Description?	Blinding?	Objective Strategy?	Numbers/ Reasons for Non-inclusion?	Complete Statistical Analysis?
PHYSICIAN												
Beagan, 2003	Post-test only with external control	◒	◒	○	○	○	Y	N	N	N	N	N
Copeman, 1982	Pre-/post-test	◒	○	◒	◒	◒	N	N	N/A	Y	N	N
Crandall, 2003	Pre-/post-test	●	○	◒	◒	◒	N	N	N/A	Y	Y	Y
Culhane-Pera, 1997	Pre-/post-test	◒	○	●	◒	○	N	Y	N/A	N	N	N
Dogra, 2001	Pre-/post-test	◒	○	●	◒	◒	N	Y	N/A	Y	Y	N
Douglas, 1994	Post-test only	◒	○	◒	○	○	N	N	N/A	N	N	N
Dowell, 2001	Post-test only	◒	○	●	○	○	N	Y	N/A	N	N	N
Drouin, 2003	Post-test only	◒	○	●	○	○	N	Y	N	N	N	N
Farnill, 1997	Pre-/post-test	●	○	●	◒	◒	N	Y	N/A	Y	N	Y
Godkin, 2001	Concurrent controlled trial (CCT)	●	○	●	◒	○	Y	Y	N	Y	Y	N
Godkin, 2003	Concurrent controlled trial (CCT)	●	◒	◒	◒	◒	Y	N	N	N	N	Y
Haq, 2002	Pre-/post-test	◒	○	◒	◒	○	N	Y	N/A	N	N	N
Mao, 1988	Pre-/post-test	○	○	●	◒	○	N	Y	N	N	N	N
Marvel, 1993	Post-test only	○	○	◒	○	○	N	N	N/A	N	N	N

Evidence Table 5: Description of study quality for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Study Design	Summary of Quality Assessment [a]					Selected Aspects of Quality					
		Rep	Bias	Inter	Out	Analy	Comparison Group?	Complete Description?	Blinding?	Objective Strategy?	Numbers/ Reasons for Non-inclusion?	Complete Statistical Analysis?
Mazor, 2002	Pre-/post-test	◒	○	●	◒	○	N	Y	N/A	Y	N	Y
Nora, 1994	Pre-/post-test with external control	○	○	◒	◒	○	N	Y	N	Y	Y	N
Rubenstein, 1992	Pre-/post-test	◒	○	◒	◒	○	N	N	N/A	Y	N	N
Sinnott, 2001	Post-test only	◒	○	◒	○	○	N	N	N	N	N	N
Tang, 2002	Pre-/post-test	●	○	●	◒	◒	N	Y	N/A	N	N	Y
NURSE												
Alpers, 1996	Concurrent controlled trial (CCT)	○	○	◒	◒	◒	Y	N	N	Y	N	N
Barton, 1992	Post-test only	◒	●	●	◒	◒	N	N	N/A	N	Y	N/A
Berman, 1998	Post-test only	○	○	◒	◒	○	N	Y	N/A	N	N	N
Blackford, 2002	Qualitative	○	○	◒	○	○	N	N	N/A	N	N	N
Bond, 1994	Post-test only	◒	○	◒	○	○	N	N	N/A	N	N	N
Campinha-Bacote, 1996	Post-test only	◒	○	●	○	○	N	N	N/A	N	N	N
Felder, 1990	Post-test only	●	○	◒	◒	◒	N	N	N	Y	N	Y
Flavin, 1997	Pre-/post-test	◒	◒	◒	◒	◒	N	N	N/A	Y	Y	N
Frank-Stromborg, 1987	Pre-/post-test	○	○	●	◒	○	N	Y	N/A	Y	Y	Y

Evidence Table 5: Description of study quality for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Study Design	Summary of Quality Assessment [a]					Selected Aspects of Quality					
		Rep	Bias	Inter	Out	Analy	Comparison Group?	Complete Description?	Blinding?	Objective Strategy?	Numbers/ Reasons for Non-inclusion?	Complete Statistical Analysis?
Frisch, 1990	Concurrent controlled trial (CCT)	●	◒	○	◒	○	Y	N	Y	Y	N	N
Hadwiger, 1999	Post-test only	○	○	○	◒	○	N	Y	N/A	N	N	N
Haloburdo, 1998	Qualitative	◒	○	◒	○	○	N	N	N/A	N	Y	N/A
Inglis, 2000	pre-/post-test with external control	○	○	◒	○	○	N	Y	Y	Y	N	N
Jeffreys, 1999	Pre-/post-test	◒	●	◒	◒	○	N	N	N/A	Y	N	N
Jeffreys, 2002	Post-test only	◒	○	◒	◒	○	N	N	N/A	N	N	N/A
Lasch, 2000	Randomized controlled trial (RCT)	○	○	●	○	○	Y	Y	N	Y	N	N
Lindquist, 1984	Post-test only	○	○	◒	○	○	N	N	N	N	N	N
Lockhart, 1997	Post-test only	○	○	◒	○	○	N	N	N/A	N	N	N
Napholz, 1999	Concurrent controlled trial (CCT)	●	◒	◒	●	◒	Y	N	N	Y	N	Y
Oneha, 1998	Post-test only	◒	○	○	○	○	N	N	N/A	N	N	N
Rolls, 1997	Post-test only	○	○	◒	○	○	N	N	N/A	N	Y	N
Rooda, 1993	Post-test only	○	○	○	○	○	N	N	N/A	N	N	N/A
Ryan, 2002	Post-test only	◒	○	◒	○	○	N	Y	N/A	N	N	N
Ryan, 2000	Qualitative	◒	○	○	○	○	N	N	N/A	N	N	N/A

Evidence Table 5: Description of study quality for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Study Design	Summary of Quality Assessment [a]					Selected Aspects of Quality					
		Rep	Bias	Inter	Out	Analy	Comparison Group?	Complete Description?	Blinding?	Objective Strategy?	Numbers/ Reasons for Non-inclusion?	Complete Statistical Analysis?
Scisney-Matlock, 2000	Concurrent controlled trial (CCT)	●	●	◒	◒	●	Y	Y	N	Y	N	Y
Smith, 2001	Concurrent controlled trial (CCT)	○	○	●	○	○	Y	N	N	Y	Y	Y
St Clair, 1999	Concurrent controlled trial (CCT)	◒	◒	◒	●	◒	Y	N	N	Y	N	N
Underwood, 1999	Pre-/post-test	○	○	◒	◒	○	N	Y	N/A	N	N	N
Underwood, 2002	Post-test only	○	○	◒	◒	○	N	N	N/A	N	Y	N
Warner, 2002	Post-test only	○	○	◒	○	○	N	N	N/A	N	N	N
Wendler, 2002	Post-test only	●	○	●	◒	◒	N	N	N/A	N	N	N
Williamson, 1996	Pre-/post-test	○	○	◒	◒	◒	N	N	N/A	Y	N	Y
OTHER PROVIDERS/ MIXED GROUPS												
Nurse, Physician, Receptionists, Volunteers, Business office staff												
Gallagher Thompson, 2000	Pre-/post-test	◒	○	◒	◒	○	N	N	N/A	Y	N	N
Nurse, Physician, Social workers, Nurse's aides, Receptionists, Clerks												
Gany, 1996	Pre-/post-test	○	○	◒	◒	○	N	N	N/A	Y	N	Y

Evidence Table 5: Description of study quality for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Study Design	Summary of Quality Assessment [a]					Selected Aspects of Quality					
		Rep	Bias	Inter	Out	Analy	Comparison Group?	Complete Description?	Blinding?	Objective Strategy?	Numbers/ Reasons for Non-inclusion?	Complete Statistical Analysis?
Nurse, Pharmacist												
Chevannes, 2002	Post-test only	○	○	◒	○	○	N	N	N/A	N	Y	N/A
Nurse, Pharmacist, Occupational therapy, Physical therapy, Health administration												
Erkel, 1995	Pre-/post-test	○	○	◒	◒	○	N	N	N/A	N	N	N
Nurse, Pharmacist, Physician, Any staff with direct patient contact												
Way, 2002	Pre-/post-test	○	○	○	◒	○	N	N	N/A	Y	N	Y
Community health worker, Undergraduate students												
Bengiamin, 1999	Qualitative	◒	○	◒	◒	○	N	N	N/A	N	Y	N/A
Community health worker, Church nurse guild members and other interested community organizations												
Briscoe, 1999	Post-test only	○	○	◒	○	○	N	N	N/A	N	N	N
Social workers												
Browne, 2002	Post-test only	○	○	◒	○	○	N	N	N/A	N	N	N
Psychologists												
Hansen, 2002	Post-test only with external control	○	○	●	◒	○	N	Y	N	Y	N	Y
Tomlinson-Clarke, 2000	Post-test only	○	○	◒	○	○	N	N	N/A	N	N	N

Evidence Table 5: Description of study quality for articles addressing Question 2, sorted by targeted healthcare provider(s) (continued)

Study	Study Design	Summary of Quality Assessment [a]					Selected Aspects of Quality					
		Rep	Bias	Inter	Out	Analy	Comparison Group?	Complete Description?	Blinding?	Objective Strategy?	Numbers/ Reasons for Non-inclusion?	Complete Statistical Analysis?
Mental health professionals												
Stumphauzer, 1983	Pre-/post-test	○	○	◒	◒	○	N	Y	N/A	Y	N	N
Occupational therapy												
Velde, 2001	Qualitative	○	○	◒	○	○	N	N	N/A	N	N	N
Counselors												
Wade, 1991	Randomized controlled trial (RCT)	●	●	◒	●	◒	Y	N	Y	Y	Y	Y

[a] assessments of methodological strengths and weaknesses in 5 domains, as categorized by the following symbols:
● = quality score of 80% or above
◒ = quality score of 50 to 79%
○ = quality score of less than 50%
Domains:
Rep = representativeness of targeted healthcare providers and/or patients
Bias = potential for bias and confounding
Inter = description of interventions
Out = assessment of outcomes
Analy = analytic approach

Evidence Table 6: Results from articles addressing Question 2, sorted by targeted healthcare providers(s)

Study	Evaluation Methods	Outcomes
PHYSICIAN		
Beagan, 2003	Individuals interviews, questionnaires	There were no differences in the percent of students who thought various characteristics of patients (for example appearance, English ability, social class, race, gender, culture) affected their treatments.
		There were no differences in the percent of students who thought physicians' social and cultural characteristics affected their medical practice.
		There were no differences in the percent of students who thought their own social and cultural factors affected their medical school experience.
Copeman, 1989	Self-assessment forms, Written exam	A 2-item test of knowledge showed significant improvement on one item measuring knowledge of cardiovascular disease but no improvement on the item measuring mental illness among Aboriginals.
		After the intervention, only 20% felt "quite competent" to interview a non English speaking patient through an interpreter and 76% thought they could "probably manage".
		After the curriculum, medical students were less likely to agree, 1) that migrants take away jobs from other Australians ($p<0.01$) and 2) that restrictions should be placed on the Aboriginal to protect him from his own lack of responsibility ($p<0.05$) and medical students were significantly more likely to agree 1) that the cause of Aboriginal poor health is disposition from their land ($p<0.01$) and 2) that in general Aborigines are pretty much all alike ($p<0.05$).
Crandall, 2003	Written exam, The multicultural assessment questionnaire	Statistically significant improvement of the 4 items of the skills sub-scale occurred after the course ($p=0.000$).
		Statistically significant improvement on the 6 items of the knowledge sub-scale occurred after the course ($p=0.000$).
		Statistically significant improvement of the 6 items of the attitudes sub-scale occurred after the course ($p=0.000$).
Culhane-Pera, 1997	Group interviews, Observer questionnaire, Participant ratings, Self-assessment forms	Average scores on a 4-item attitudinal self-assessment improved from 3.93 to 4.1, though this change was not statistically significant.
		Average scores on a 6-item self-assessment of skills (related to incorporating cultural issues into clinical care) improved from 3.33 to 3.96 ($p=0.000$).
		Residents self-assessments of their level of cultural competence significantly increased between initial and final evaluations.
		Although faculty's initial assessment of resident's level of cultural competence did not correlate well with residents' own assessment $r=0.092$), final competence level assessment did $r=0.507$, $p<0.05$).

Evidence Table 6: Results from articles addressing Question 2, sorted by targeted healthcare providers(s) (continued)

Study	Evaluation Methods	Outcomes
		Average scores on a 6-item knowledge self-assessment of general cultural issues improved from 2.87 to 3.47 (p=0.000).
		Participants ranked the entire curriculum of 4.33/5 for importance and 4.26/5 for quality.
Dogra, 2001	Self-assessment forms, Written exam	There was no statistical difference in responses to case scenarios before and following training.
		After the intervention, students had significantly different responses on 8 out of 25 attitudinal items about cultural issues, (p<0.05).
Douglas, 1994	Patient rating, Self-assessment forms	Participants in the curriculum developed a keener appreciation of their own culture and that of their patients.
		In a follow-up survey of patients, the majority felt that evaluation in the ethnogeriatric clinic was helpful and that they had benefitted from the assessment approach.
Dowell, 2001	Participant ratings, Written exam	Students were able to successfully identify the health needs of a population.
		Forming an attachment with Maori people resulted in students finding they actually cared about them.
		Students rated the course highly.
Drouin, 2003	Participant ratings	Students rated the communication encounters positively in terms of quality and relevance of the scenarios, realism of role-playing, usefulness of feedback by patient and supervising clinician, and perception concerning acquisition of new communication skills.
Farnill, 1997	Patient rating, Self-assessment forms, Video/Audiotape	Students reported significantly more competence on all self-assessment dimensions (p<0.001) related to interviewing patients of non-English speaking patients.
		Community volunteers reported positive experiences being interviewed by the students.
		Blinded psychologist rating of video showed students to be significantly more competent in interviewing a non-English-speaking patient in the post-intervention video over pre-intervention video (p<0.01).
Godkin, 2001	Self-assessment forms, Written exam	Students in the intervention group showed significant improvements in self-assessed knowledge of cultural beliefs, practices, and health needs on 8 out of 9 items.
		Students in the intervention group showed significant improvements on 7 out of 20 cultural competence items, and had significantly better cultural competence attitudes than students who did not participate in the intervention.
Godkin, 2003	Self-assessment forms	Compared to students who did not elect to travel internationally, students who traveled were significantly more interested in an international component in career, interested in working with underserved, recognizing need to know another language and recognizing need to know a patient's financial constraints.

Evidence Table 6: Results from articles addressing Question 2, sorted by targeted healthcare providers(s) (continued)

Study	Evaluation Methods	Outcomes
		After traveling to another country, preclinical medical students were more likely (than before they had traveled) to report (on a scale from 1 to 5) that they had an interest in an international component to their career (4.37 compared to 4.06, p<0.001), that they had an interest in an international component to their career (3.97 compared to 3.67, p<0.01), that there is a need to understand cultural differences (4.43 compared to 4.16, p<0.01), that there is a need to know another language (4.51 compared to 4.15, p<0.001), and that there was a need to be an advocate for the whole community (4.14 compared to 3.91, P=0.03).
		After traveling to another country, medical students in their clinical years were more likely (than before they had traveled) to report (on a scale from 1 to 5) that there was a need to understand cultural differences (4.51 compared to 4.23, p<0.001), that they were enthusiastic about being a physician (4.17 compared to 3.86, p+0.03), ant that they had a sense of idealism in the role of physician (3.65 compared to 3.16, p<0.001), but were less likely to report a need to work collaboratively with other professionals (3.93 compared to 4.19, p=0.02) and that they had awareness of their future role as physicians (4.14 compared to 4.35, p=0.04).
Haq, 2000	Essays, Participant ratings, Self-assessment forms, Open-ended questions	96% would recommend international health experiences to other students.
		Participants experienced significant positive changes in attitude towards communication and community health issues ($p \leq 0.03$) between the pre and post-test.
		83% of participants said the experiences changed how they would practice medicine.
		Participants gained significant positive improvements on each of 10 self-assessed clinical skills between the pre and post-test (p=0.001).
Mao, 1988	Participant ratings	In 1986, 94% approved the use of student discussion leaders, 85% enjoyed the videotapes, and 49% found the role playing exercises helpful.
		In 1986 and 1987, 70% of students found that the workshop achieved its objectives and 10% wanted more specific cultural information.
		In 1986 and 1987 a few students commented that the workshop should explore racial and gender issues in more depth.
		1985 showed some "significant" improvement in making treatment choices in three case studies (paired t-tests).
		There was significant improvement on 3 of 9 attitudes measured.
Marvel, 1993	Participant ratings	The curriculum received an average score of 7.1 out of 10 (range: 5.4 - 8.0) on usefulness of rotation objectives to current practice.
		All respondents recommended to continue the rotation in the curriculum.

Evidence Table 6: Results from articles addressing Question 2, sorted by targeted healthcare providers(s) (continued)

Study	Evaluation Methods	Outcomes
Mazor, 2002	Performance audits, Patient rating, Self-assessment forms	Families in the post-intervention period were more likely to strongly agree that "the physician was concerned about my child" (OR 2.1, [1.0-4.2]) than families in the pre-intervention period.
		Families in the post-intervention period were more likely to strongly agree that "the physician listened to what I said" (OR 2.9, [1.4-5.9]) than families in the pre-intervention period.
		Families in the post-intervention were more likely to strongly agree that "the physician made me feel comfortable" (OR 2.6, [1.1-4.4]) than families in the pre-intervention period.
		Physicians used a professional interpreter less often in the post-intervention period (55% versus 29%, odds ratio 0.34, [0.16-0.71]).
		Physicians scored higher on measures of data gathering without the use of an interpreter (17.2 pre-test versus 22.4 post-test, p=0.01).
		All but one of the physicians in the post-intervention period expressed increased confidence in addressing various emergency department chief complaints in Spanish.
		Families in the post-intervention period were more likely to strongly agree that "the physician was respectful" (OR 3.0, [1.4-6.5]) than families in the pre-intervention period.
Nora, 1994	Group interviews, Participant ratings, Written exam	Spanish language proficiency went from 60% pre-test to 75% post-test.
		Using the misanthropy scale (which indicates openness to those not like oneself), there were no significant differences between intervention and control post course but there was a trend towards increased acceptance of others in the intervention group.
		Students reported liking the opportunity to meet Mexicans and traditional healers.
		Students were positive about their experience in Mexico; one reported that it exceeded their expectations. In comments six months later, four of the eight students who went to Mexico described the experience as life-changing.
		Cultural knowledge of Hispanic health in the intervention group went from 40% precourse to 58% post course versus the control group 46% pre and 42% post (p=0.007).
Rubenstein, 1992	Participant ratings, Written exam	Participants developed increased knowledge of ways physicians ignorance of patient's health beliefs can adversely affect clinical encounter (on Likert scale out of 5 points: pre-test 3.3, post-test 4.6 (p<0.0001)).
		The curriculum scored a mean rating of 3.5 (0=lowest; 4=highest) in usefulness.
		Participants developed increased knowledge about available resources to learn about non-conventional health beliefs (pre-test 3.8, post test 4.9 (p<0.0001)).
Sinnott, 2001	Individuals interviews, Self-assessment forms	Interviews with 14 indigenous hospital liaison officers indicated that the program was perceived as beneficial by 100% of those interviewed.
Tang, 2002	Self-assessment forms	After the intervention, the students reported increased understanding of the importance of incorporating sociocultural factors into patient care (p<0.01).

Evidence Table 6: Results from articles addressing Question 2, sorted by targeted healthcare providers(s) (continued)

Study	Evaluation Methods	Outcomes
		After the intervention, the students reported significantly increased understanding of the impact of sociocultural issues on the patient-physician relationship and on patients' health (p<0.001).
		After the intervention, the students reported significantly greater understanding of the relationship among sociocultural issues, health, and medicine (p<0.001).
NURSE		
Alpers, 1996	Self-assessment forms, Bernol and Froman Cultural Self-Efficacy Scale	Intervention group has a greater confidence/competence in providing care to African-American and Hispanic clients.
		Control group felt more confidence/competence in entering ethnically distinct community, and understanding Asian folk health practices than did the group who had received class content on culturalism.
Barton, 1992	Weekly journal entries	Students gained an understanding of both differences and similarities between their own culture and that of the migrant farm workers.
		Reflections on gaining awareness of the particular lifestyles of another culture were related to being able to observe and absorb ordinary events.
		Students experienced growth by developing respect for the migrant community.
		Students were incensed at inadequacies of the health care delivery system, and the insensitive and sometimes prejudicial treatment they saw their clients experience.
Berman, 1998	Self-assessment forms	Between 44-91% of participants (depending on type of workshop attended) believed that, as a result of their participation in the program, they had 1) increased patient compliance, 2) shared knowledge with other providers, and 3) optimized use of existing resources.
Blackford, 2002	Qualitative evaluation of group process	The process deepened nurses understanding of and insight into cultural biases regarding: 1 feminist expectations of gender roles, 2 gender equality, 3 patriarchy, 4 distinction between equity and equality, and 5 cultural sensitivity in nursing practice.
Bond, 1994	Self-assessment forms	Students reported increased Spanish language skills.
		Students learned a variety of field methods for data collection for qualitative research.
		Students expressed surprise that health care, access, physical settings, and care modalities could be so different in a country bordering the U.S.
		Students reported a better understanding of the circumstances from which Mexican clients enter the U.S. health care system.
		Students learned a great deal about themselves, their beliefs, and their own values, coping styles, and resources.
		Students reported increased knowledge about Mexican American cultural practices.

Evidence Table 6: Results from articles addressing Question 2, sorted by targeted healthcare providers(s) (continued)

Study	Evaluation Methods	Outcomes
		Many students were surprised at the common bond they shared with women of their Mexican families.
Campinha-Bacote, 1996	Participant ratings	Approximately 90% of the participants rated the program as good to excellent.
Felder, 1990	Written exam	No significant difference between freshmen and seniors nursing students in either program in attitudes towards black American clients.
		Baccalaureate seniors scored significantly higher than freshmen on the cultural knowledge test of black American clients (p<0.001), however there were no differences in knowledge between freshmen and seniors in the associate degree program.
Flavin, 1997	Essays, Participant ratings, Written exam	The curriculum received good scores for design, relevancy of information, and meeting participant expectations.
		There were no significant changes in "learning scores" regarding knowledge of practices and values of four targeted cultures prior to and after the curriculum.
Frank-Stromborg, 1987	Self-assessment forms, Cancer Attitude Inventory (CAI); Pittsburgh Attitude Survey (PAS); Activities survey	Activities survey reported increased community activities in cancer prevention and early detection.
		Scores on the Pittsburgh Attitude Survey (PAS) self report measuring cancer attitudes improved from the pre-test (mean=81) to the post-test (mean=82, p<0.08).
		94% rated simulated practice with models as excellent to above average, 98% rated the speakers as excellent to above average, and 78% rated the program as excellent.
		Scores on the Cancer Attitude Inventory (CAI) improved from pre-test (mean=132) to the post-test (mean=139, p<0.001).
Frisch, 1990	Written exam, Measure of Epistemological Reflection (MER)	5 out of 9 students that increased their scores on the Measure of Epistemological Reflection (MER) went on exchange to Mexico.
		Seventy-one percent of the measured cognitive improvement seen in the senior class can be attributed to the Mexico program (p=0.018).
		The Mexico exchange students were 3.5 times as likely to improve show cognitive improvement as measured by the Measure of Epistemological Reflection (MER) than were students that did not participate.
Hadwiger,1999	Essays describing relationship with patient	The nursing students became more aware of how their own culture affects the nursing care they provide.
		Emphasis was placed on the establishment of trust in the cross-cultural relationship in post-intervention essays.
		Respect for the patient and the patient's culture was constantly shown in post-intervention essays.

Evidence Table 6: Results from articles addressing Question 2, sorted by targeted healthcare providers(s) (continued)

Study	Evaluation Methods	Outcomes
		Students were more likely to include the patient in exploring goals and interventions in post-intervention essays.
Haloburdo, 1998	Individuals interviews	Students reported increased cultural sensitivity (in both those traveling to developed and developing countries), a recognition of universal human characteristics, and increased self-confidence.
		Students identified an increased knowledge of sociopolitical resources influencing health care population based health programs, and international attitudes towards the U.S.
Inglis, 2000	Written exam	Students who participated in the intervention showed significant shifts on 8 out of 23 attitudinal items towards more understanding of cross-cultural issues, whereas students in the control group showed no change on any items.
Jeffreys, 1999	Self-assessment forms, Transcultural Self-Efficacy Tool	Practical (interviewing) subscale score on the Transcultural Self-Efficacy Tool increased between pre and post-test from 16 to 55% ($p<0.001$).
		Affective subscale scores on the Transcultural Self-Efficacy Tool increased between pre and post-test from 16 to 43% ($p<0.001$).
		Cognitive subscale scores on the Transcultural Self-Efficacy Tool increased between pre and post-test from 2 to 28% ($p<0.001$).
Jeffreys, 2002	Participant ratings	Several students suggested inclusion of more complementary and alternative medicine.
		Students reported learning the most from topics such as conceptual models, ethnopharmacology, multiple heritage individuals, and lesbian clients.
Lasch, 2000	Written exam	Nurses participating in both intervention programs (workshop only and enriched model) significantly changed pain management attitudes ($p=0.01$), and maintained this change at 1 year follow-up, whereas the control group had no change.
		Both intervention groups (workshop only and enriched model) significantly improved knowledge of cancer pain management over control group at post test and follow-up ($p<0.0001$).
Lindquist, 1984	Participant ratings	A great deal of personal and professional growth experienced by nursing students who participated.
Lockhart, 1997	Self-assessment forms	Participants reported positive long term influences on their ability to provide culturally sensitive nursing care.
Napholz, 1999	Self-assessment forms, Written exam, Ethnic Competency Skills Assessment (ECSA)	Both groups significantly increased scores Ethnic Competency Skills Assessment (ECSA), however the experimental group increased much higher than the control group.
Oneha, 1998	Participant ratings, Self-assessment forms	Students rated the curriculum as helpful in identifying and investigating issues and thinking critically and analytically.
		Students reported greater awareness of societal problems.
		Students reported a greater ability to solve real problems in this field.
		Students reported re-examination of their former attitudes.
Rolls, 1997	Individuals interviews, Qualitative analysis	Attitudes towards another culture, language, and religion changed to a level of acceptance and understanding.

Evidence Table 6: Results from articles addressing Question 2, sorted by targeted healthcare providers(s) (continued)

Study	Evaluation Methods	Outcomes
		Students reported increased self confidence.
Rooda, 1993	Essays, Feedback	Department directors who participated thought the issue of culture, ethnic identity, and healthcare was timely and that they could use what they learned to educate their staff.
Ryan, 2000	Group interviews	Students reported several strategies to use to "learn to care for clients in their world not mine": preparation activities, dependencies or group support, use of coping skills, learning to communicate differently, live and think differently.
		Students experienced personal and professional growth.
		Students reported increased awareness of need to communicate in culturally sensitive ways.
		Students report greater appreciation of the value of others.
Ryan, 2002	Self-assessment forms	Participants reported that they gained insight into own (69%) and others' (86%) cultural beliefs.
		Participants reported learning new ways of communicating (69%).
		Participants reported increased awareness of culture in healthcare (91%).
		Participants reported increased knowledge about health practices (89%).
Scisney-Matlock, 2000	Self-assessment forms, 5 selected items measured with Michigan Longitudinal Study Scales (MLSS)	Knowledge of diversity gained through course work was not statistically significant different between experimental group and control group.
		Intervention group showed statistically significant increase in activities devoted to understanding other racial/ethnic groups.
		Intervention group showed statistically significant increase in self-reported social interactions with peers of different race/ethnicities.
		Intervention group showed statistically significant increase in satisfaction with relevance of course work to their own ethnicity.
Smith, 2001	Self-assessment forms, Written exam, Cultural Self-Efficacy Scale (CSES)	Questionnaire measuring knowledge of cultural diversity taken in 3 phases showed significant increases over time ($p<0.001$) in the intervention group and no improvement in the control group.
		Cultural self-efficacy scale (CSES) taken in the 3 phases, showed significant improvements in self-efficacy ($p<0.001$) in the intervention group and no improvement in the control group.
St Clair, 1999	Essays, Self-assessment forms, Journal; Field notes; Cultural Self-Efficacy Scale (CSES)	Continual growth in cultural self-efficacy scores for students in international clinical exercises (mean score 3.7) over those who remained in the US (mean score 3.3) in the follow-up testing period ($p=0.007$).
		There was a statistically significant increase in cultural self-efficacy scores on the post-test in all students.
		Students developed sensitivity to being a minority through international experience.

Evidence Table 6: Results from articles addressing Question 2, sorted by targeted healthcare providers(s) (continued)

Study	Evaluation Methods	Outcomes
Underwood, 1999	Participant ratings, Self-assessment forms	Since completing the program, many participants have designed and implemented a number of innovative cancer prevention programs.
		Participants indicated more confidence in their ability to positively influence cancer prevention behaviors in practice and community.
		Participants indicated that the curriculum changed their attitudes towards nurses role in cancer prevention and early detection.
		Participants indicated increased knowledge of cancer prevention and early detection among African Americans.
Underwood, 2002	Self-assessment forms	Between 33% to 50% of participants reported that their knowledge had substantially increased on a wide range of items (N=50) concerning five common cancers among African Americans.
Warner, 2002	Group interviews	Students were able to identify common ground of human experiences.
		Students expressed frustration over intractable health problems.
		Students were able to contrast Navajo healing with Western ways.
Wendler, 2002	Essays, Participant ratings	Almost all students said they would recommend the course to others.
		Students rated the course process, activities, and outcomes highly.
Williamson, 1996	Group interviews, Self-assessment forms, Written exam, Cultural Self-Efficacy Scale	Attitudes about cultural patterns. Showed sustained improvements in African American [begin 2.77 (0.66), middle 3.31 (0.72), end 3.61 (0.65)], Hispanics [begin 2.58 (0.70), middle 3.31 (0.70), end 3.69 (0.71)], and SE Asians [begin 2.28 (0.69), middle 3.64 (0.69), end 3.35 (0.77)] ($p<0.001$).
		Students improved in transcultural skills (begin 3.29 (SD +/-0.69), middle 3.64 (SD +/-0.69), end 3.96 (SD +/-0.66) ($p<0.001$)).
		Participants improved their knowledge of cultural concepts (beginning 2.92 (+/- 0.74), middle 3.49 (+/- 0.70), end 3.68 (+/- 0.66) ($p<0.001$)).
OTHER PROVIDERS/ MIXED GROUPS		
Nurse, Physician, Receptionists, Volunteers, Business Office Staff		
Gallagher Thompson, 2000	Self-assessment forms, Written exam	Statistically significant increased referrals of Hispanic Alzheimer's patients and/or families to the appropriate specialized services about Alzheimer's disease ($p<0.005$).
		Statistically significant increase in participants knowledge of Hispanic beliefs about Alzheimer's disease ($p<0.05$).
		Statistically significant increase in participants general knowledge about Alzheimer's disease ($p<0.005$).

Evidence Table 6: Results from articles addressing Question 2, sorted by targeted healthcare providers(s) (continued)

Study	Evaluation Methods	Outcomes
Nurse, Physician, Social Workers, Nurse's Aides, Receptionists, Clerks		
Gany, 1996	Written exam	There was a significant attitude shift on 12 item exam in which the mean score was 33.76 on the pre-test compared to 35.68 on the post-test (p<0.003).
		There was a significant knowledge shift on 21 item scale exam about immigrant health in which students scored 15.8% correct in the pre-intervention period compared to 18.6% correct in the post-intervention period (p<0.0001).
Nurse, Pharmacist		
Chevannes, 2002	Self-assessment forms, Focus groups	After the intervention, 8/17 said that they were not able to bring about change in practice and 4/17 participants were able to identify areas of practice that had changed.
		Qualitative: "I have become more conscious of stereotyping."
		Participants reported a better understanding of the concepts of ethnicity and race, and community resources available.
		82% believed that training added to their knowledge.
		Participants reported the acquisition of confidence to engage with colleagues about different cultural values and practices.
Nurse, Pharmacist, Physician, Occupational Therapy, Physical Therapy, Health Administration		
Erkel, 1995	Participant ratings, Self-assessment forms	Interdisciplinary team interaction, exposure to new practice opportunities, and the community-oriented primary care project were the elements of the course that were most enjoyed by students.
		Participants gained an increased awareness to barriers to care for rural clients.
		Participants gained increased knowledge of rural, transcultural, and interdisciplinary issues; principles of case-management, patient focused care, and community oriented primary care.
		Course evaluations revealed that classroom and field trips met student expectations.
		72% of students reported that the practicum influenced them to consider practicing in a rural setting.
		Participants gained an appreciation for rural lifestyle.

Evidence Table 6: Results from articles addressing Question 2, sorted by targeted healthcare providers(s) (continued)

Study	Evaluation Methods	Outcomes
Nurse, Pharmacist, Physician, Any Staff with Direct Patient Contact		
Way, 2002	Participant ratings, Patient rating, Self-assessment forms	After the intervention there was an increased perception among patients of seeing staff members of their ethnicity (p=0.04) and of finding magazines/reading materials on ward that contained information of interest (p=0.04). There was also a significant increase in patients' reporting that staff would see them as individuals (p=0.06).
		There was a statistically significant increase in participants' perception that there were pictures on walls that may remind patients of family/friends (p=0.01), and that there were magazine/reading materials that contain information in which the patient may be interested (p=0.0001).
		58% of participants increased interest in learning patient and family background, and 59% of participants increased sensitivity to cultural competence.
		59% of participants increased awareness of special needs of recipients who do not speak English.
Community Health Workers, Undergraduate Students		
Bengiamin, 1999	Self-assessment forms, Open-ended questions	Students evidenced a greater awareness of the ever-changing and complex life stages across life's continuum through a transformational process of personal growth and emerging definition of culture.
		After the intervention students understood the significance of recognizing socioeconomic status as a culture of its own.
		Students gained the ability to view health care in a holistic manner.
Community Health Worker, Church Nurse Guild Members and Other Interested Community Organizations		
Briscoe, 1999	Self-assessment forms, Intent to take action form	At six months follow-up, 30% of nurse participants had fulfilled their intention compared to <10% of nurses in other groups.
		After the curriculum, participants reported that they intended to arrange for a community group to take a diabetes risk test (71%), distribute diabetes material at community health fairs or church services (67%), present African-American Program modules (59%), promote health foods at pot luck suppers (56%), and arrange cooking or exercise classes (38%).

Evidence Table 6: Results from articles addressing Question 2, sorted by targeted healthcare providers(s) (continued)

Study	Evaluation Methods	Outcomes
Social Workers		
Browne, 2002	Individuals interviews, Self-assessment forms	After the intervention, 100% felt competent about their role in an interdisciplinary team.
		After the intervention, 100% believed that their style of practice was culturally competent.
		After the intervention, 7 of 12 felt knowledgeable regarding elder abuse and the full range of social work interventions.
		After the intervention, 100% agreed that they understood normal aging.
		After the intervention, 11 of 12 agreed that they were knowledgeable about common ethical dilemmas, policy analysis, program evaluations, and resources development.
Psychologists		
Hansen, 2002	Written exam	Those who completed the program scored 88.3% on knowledge test, those who did not take the program (control) scored 75.3% ($p<0.001$).
Tomlinson-Clarke, 2000	Individuals interviews, Participant ratings	Overall students perceived textbooks and reading as helpful in gathering understanding of multicultural issues.
		Acquisition of multi-cultural knowledge was considered by participants to be useful and transferable in developing effective counseling interventions at 4 months follow-up.
		Critical incidents that involved students' interactions with one another were most frequently cited as enhancing learning.
Mental Health Professionals		
Stumphauzer, 1983	Observer questionnaire, Participant ratings, Written exam	Trainees ability to do behavioral analysis and treatment plan increased significantly ($p<0.01$) from the pre-intervention period to the post-intervention period.
		The course was seen by all trainees as having added "a greater deal" or "a considerable amount" to their knowledge base.
		There were significant increases on a 23-item test measuring knowledge of behavioral modification principles, from 38% correct on pre-test to 68% correct on post-test ($p<0.01$).
Occupational Therapy		
Velde, 2001	Interviews	Qualitative/quotes from students/faculty: student quote - "I feel that Tillery people would prefer to see our differences and respect them for those differences rather than act as if we are the same."
		Qualitative/quotes from students/faculty: faculty quote - "I respect and value the differences I see between

Evidence Table 6: Results from articles addressing Question 2, sorted by targeted healthcare providers(s) (continued)

Study	Evaluation Methods	Outcomes
		Tillery residents and myself."
Counselors		
Wade, 1991	Patient rating, Barrett-Lennard Relationship Intervention; Counselor Effectiveness Scale; Counselor Rating Form	Brief culture sensitivity training produced significant differences in client perceptions of counselors and the counseling process and was more important than racial pairing.
		Clients assigned to counselors in culture sensitivity training returned for more follow-ups (mean 2.88 versus 1.90).