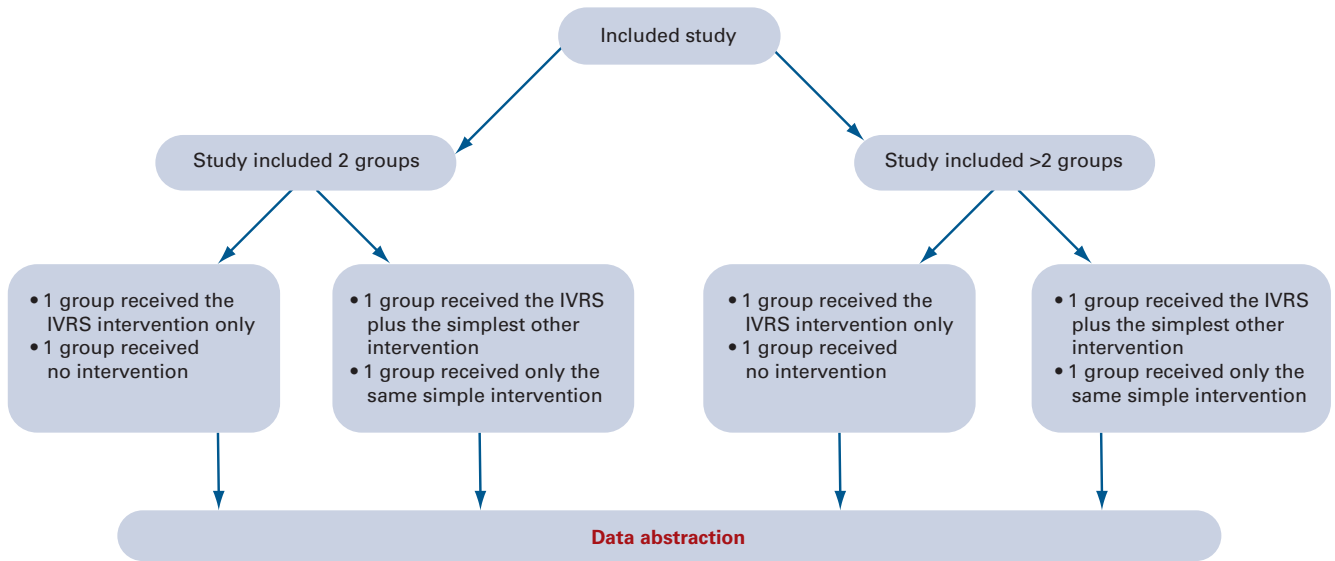


■ **eAppendix A. MEDLINE Search Strategy^a**

1	interactive.mp. (17,531)
2	voice.mp. (17,265)
3	response.mp. (1,214,837)
4	1 and 2 and 3 (152)
5	calling.mp. (3305)
6	system.mp. (1,338,466)
7	5 and 6 (424)
8	telephony.mp. (95)
9	telecommunications.mp. (3402)
10	voice.mp. (17,265)
11	9 and 10 (92)
12	automated.mp. (51,492)
13	telephone.mp. (27,463)
14	12 and 13 (253)
15	communication.mp. (147,233)
16	10 and 15 (1203)
17	4 or 7 or 8 or 11 or 14 or 16 (2099)

^aThe database was last searched on April 15, 2008.

■ eAppendix B. Flow Diagram of Data Abstraction



IVRS indicates interactive voice response system

■ **eAppendix C. Descriptions of Studies**

Study	Year	Design	Setting	Study Population		
				Total No.	Mean Age, y	Female, %
Behavior modification						
Immunization						
LeBaron ²⁶	2004	RCT	Community	3050	0.8 (median) ^b	51
Franzini ³⁴	2000	RCT	Pediatric clinic	1138	1 ^b	NR
Lieu ³³	1998	RCT	HMO	648	1.7 ^b	NR
Tanke ³⁰	1997	RCT	Community	701	NR	NR
Alemi ⁵⁸	1996	CCT	Pediatric clinic	204	22.9	100
Linkins ²⁹	1994	RCT	Community	8002	NR	48
Tanke ⁵⁵	1994	CCT	Community	2008	19 (median) ^b	46
Stehr-Green ³¹	1993	RCT	Community	222	0.8 ^b	48
Leirei ⁵⁴	1989	CCT	Community	257	NR	NR
Healthy lifestyle						
King ⁴⁹	2007	RCT	Community	218	60	70
Goulis ⁴⁸	2004	RCT	Community	122	44	88
Dubbert ⁴⁴	2002	RCT	Veterans Affairs	212	69	1
Delichatsios ³⁸ & Pinto ⁵³	2001	RCT	Community	298	46	72
Jarvis ³⁵	1997	RCT	Community	52	67	66
Smoking cessation						
Brendryen ⁵²	2008	RCT	Community	396	36	50
Reid ³⁹	2007	RCT	Cardiac care unit	99	54	68
Ershoff ²³	1999	RCT	HMO	332	29.4	100

Interactive Voice Response Systems

Purpose	IVRS Intervention		Outcome Type				Study Quality
	Call Initiation ^a	Contact Frequency	CE	DC	PA	QoL	
Delivered immunization reminders	IVRS	Once, 7 days before required immunization			X		High
Delivered immunization reminders	IVRS	Once, 7 days before required immunization			X		Moderate
Delivered immunization reminders	IVRS	Once, 1-7 days before required immunization			X		Moderate
Delivered immunization reminders	IVRS	Once, 1 day before required immunization			X		Moderate
Delivered immunization reminders	IVRS/ participant	Once, 2 days before required immunization		X	X		Moderate
Delivered immunization reminders	IVRS	Once, 7 days before required immunization			X		High
Delivered immunization reminders	IVRS	Once, 1 day before required immunization			X		Moderate
Delivered immunization reminders	IVRS	Once, 1 day before required immunization			X		Moderate
Delivered immunization reminders	IVRS	Once, 7 days before required immunization			X		Low
Assessed physical activity; reinforced goals	IVRS	Twice a week then monthly for 12 months			X		Moderate
Assessed physical activity; collected blood pressure and weight ^c	Participant	3 times a week for 6 months		X		X	Moderate
Reinforced physical activity ^c	IVRS	10 calls at random for 10 months			X		Low
Arm 1: assessed eating behavior and nutrition knowledge; reinforced behavioral and maintenance skills Arm 2: promoted moderate-intensity physical activity	Participant	Weekly for 6 months		X			Low
Assessed physical activity; provided encouragement	IVRS/ participant	Weekly for 3 months			X		Moderate
Assessed smoking behavior, readiness to quit, and use of other forms of cessation support ^c	IVRS/ participant	Daily for 8 weeks then twice a week for the rest of the study (54 weeks in total)			X		Moderate
Assessed smoking behavior, readiness to quit, and use of other forms of cessation support	IVRS	Day 3, 14, and 30 following hospital discharge			X		Low
Assessed smoking behavior and readiness to quit; administered interactive exercises	Participant	Dictated by the participant for 1 month			X		Moderate

(Continued)

■ **eAppendix C. Descriptions of Studies (Continued)**

Study	Year	Design	Setting	Study Population		
				Total No.	Mean Age, y	Female, %
Substance abuse treatment						
Helzer ²¹	2008	RCT	Community	338	46	36
Mundt ⁴²	2006	RCT	Alcoholism clinic	59	42	46
Alemi ⁵⁹	1996	CCT	Community	53	29.3	100
Alemi ⁵⁰	1996	RCT	Community	179	27	100
Appointment adherence						
Feldstein ⁴¹	2006	RCT	HMO	961	59	53
Maxwell ²⁸	2001	RCT	Women's health clinic	2034	29	NR
Immunization/appointment reminder						
Dini ⁵⁶	1995	CCT	Community	517	NR	NR
Screening for cervical cancer						
Corkrey ⁴³	2005	RCT	Community	75,532	NR	100
Chronic disease management						
Diabetes						
Bellazzj ⁵⁷	2003	CCT	Community	129	38.9	36
Piette ²⁴	2001	RCT	Community	272	60	71
Piette ³²	2000	RCT	Community	248	54	47
Heart failure						
Capomolla ⁴⁷	2004	RCT	Heart failure unit	133	57	12
Stricklin ⁴⁵	2000	RCT	Home care company	37	NR	NR
Heidenreich ⁶⁰	1999	CCT	Community	68	73	47
Mental illness						
Stuart ²⁷	2003	RCT	Community	647	NR	NR
Greist ²²	2002	RCT	Community	218	39	42
Nakagawa ⁶¹	2000	CCT	Community	41	28.3	46

Interactive Voice Response Systems

Purpose	IVRS Intervention		Outcome Type				Study Quality
	Call Initiation ^a	Contact Frequency	CE	DC	PA	QoL	
Assessed alcohol consumption and reasons for drinking or not drinking	Participant	Daily for 6 months		X			Moderate
Assessed alcohol consumption and reasons for drinking or not drinking	Participant	Daily for 6 months			X		Low
Provided general information; participants could leave messages and receive them from other study participants	Participant	Dictated by the participant for 4 months		X	X	X	Moderate
Delivered follow-up calls and motivational messages ^c	Participant	Dictated by the participant for 6 months		X			Moderate
Delivered laboratory monitoring reminders	IVRS	Once, 1 day before laboratory tests			X		High
Delivered appointment reminders	IVRS	Once, 1 day before required appointment			X		Moderate
Delivered immunization/appointment reminders	IVRS	Once, 1 day before required immunization/appointment			X		Moderate
Determined screening status; provided general information	IVRS	Once			X		Moderate
Collected therapy changes and relayed information to the physician ^c	IVRS/ participant	Dictated by the participant for 6 months		X			Moderate
Assessed disease symptoms and self-care behavior	IVRS	Twice a month for 12 months		X	X		High
Assessed disease symptoms and self-care behavior; collected self-monitored blood glucose readings	IVRS	Twice a week for 12 months		X	X		High
Assessed disease symptoms; collected vital signs ^c	Participant	Daily for 10 months	X				Moderate
Assessed disease symptoms	IVRS	Daily for 2 months			X		Moderate
Assessed disease symptoms; collected systolic and diastolic blood pressure, pulse, weight ^c	Participant	Daily for 7 months	X				Moderate
Assessed medication adherence ^c	Participant	Daily for 2 weeks then weekly for 10 weeks			X		Moderate
Assessed disease symptoms; administered behavior therapy	Participant	Dictated by the participant for 10 weeks		X		X	Moderate
Administered self-assessment and treatment modules	Participant	Dictated by the participant for 3 weeks			X	X	Low

(Continued)

■ **eAppendix C. Descriptions of Studies (Continued)**

Study	Year	Design	Setting	Study Population		
				Total No.	Mean Age, y	Female, %
Dyslipidemia						
Hyman ⁴⁶	1998	RCT	Community	123	56.7	75
Hyman ³⁷	1996	RCT	Community	115	48	75
Asthma						
Vollmer ⁴⁰	2006	RCT	HMO	6948	52	65
Chronic pain						
Naylor ⁵¹	2008	RCT	Pain clinic	51	46	86
Hypertension						
Friedman ³⁶	1996	RCT	Community	267	76	77
Sleep apnea						
DeMolles ²⁵	2004	RCT	Home care company	30	46	NR

CCT indicates controlled clinical trial; CE, clinical end point; Community, community practice; DC, measure of disease control; IVRS, interactive voice response system; NR, not reported; PA, process adherence; QoL, quality of life; RCT, randomized controlled trial.

^aEither the IVRS was programmed to call the participants (IVRS), or participants were instructed to call the toll-free IVRS (participant).

^bThe reported age represents the age of the patients being immunized, not the age of the parent/guardian who received the IVRS call. The age of the parent/guardian was not reported in this study.

^cThe IVRS was part of a multifaceted intervention.

Interactive Voice Response Systems

Purpose	IVRS Intervention		Outcome Type				Study Quality
	Call Initiation ^a	Contact Frequency	CE	DC	PA	QoL	
Assessed knowledge of cholesterol levels; provided feedback on how to control cholesterol ^c	IVRS/ participant	Weekly for 6 months		X			High
Assessed eating behavior and nutrition knowledge; reinforced behavioral and maintenance skills	IVRS/ participant	Twice a month for 6 months		X			High
Assessed level of asthma control and medication adherence; collected information regarding recent emergency department visits and hospital care	IVRS	Once every 5 months for 15 months	X	X	X		Low
Assessed pain-related symptoms, medication use, and behaviors; reviewed pain management techniques ^c	Participant	Daily for 4 months		X		X	Moderate
Assessed disease symptoms and medication adherence; collected self-monitored blood glucose readings	Participant	Weekly for 6 months		X	X		Moderate
Assessed disease symptoms and therapy adherence	Participant	Weekly for 2 months		X	X		Moderate