TREATING TOBACCO DEPENDENCE IN HOSPITALIZED PATIENTS

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Disclosures

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Question 1

- Do you work with smokers in the hospital?
  - 1 – Yes, all or most of my time
  - 2 – Yes, some of my time
  - 3 – No

Question 2

- Do you work with smokers who were recently discharged from a hospital?
  - 1 – Yes, all or most of my time
  - 2 – Yes, some of my time
  - 3 – No

HOSPITALIZATION

"Window of opportunity" for smoking cessation

- Smoke-free hospitals require temporary tobacco abstinence
- Illness motivates smokers to try to quit
- Hospitalized smokers are accessible for treatment
- Interventions starting in the hospital help smokers to stay quit after discharge

What is the evidence?

QUESTIONS

- Is tobacco treatment effective when it is offered to hospitalized smokers?
- Does the patient's admitting diagnosis matter?
- What types of interventions work?
  - Counseling
  - Medications

Early Evidence

Smokers Hospitalized for Myocardial Infarction

Author	Interventions	Cessation Rate		
		Control		Intervention
Taylor *(1991)*	RN counseling at bedside for 1 hr + 5 calls over 3 mo after d/c	32%	*	61%

Taylor, Ann Intern Med 1991

* p<.05

Next Steps

- 1991: Clinical trial shows efficacy in MI patients
- 1993: Cost effectiveness analysis
  - More cost-effective than other secondary cardiac prevention interventions
  - *Editorial: "An idea whose time has come"*

Question 3

- Does your hospital offer smoking cessation counseling to inpatients admitted for CVD?
  - 1 - Yes – routinely
  - 2 - Yes – sporadically
  - 3 - No
  - 4 - Don’t know or not applicable to me

RESULTS

- 50 trials in 13 countries *(1990-2011)*
- **Stop-smoking advice or counseling** *(all 50)*
  - Contact in hospital: 5 - 120 minutes
  - Follow-up support after discharge *(42)*
    - Duration: 1 week - 6 months
    - Telephone (29), in person (9), both (2), IVR (1)
- **Counseling + pharmacotherapy** *(12 studies)*
  - Drug + counseling vs. counseling only

INTENSITY OF COUNSELING INTERVENTIONS

Intensity level	Duration of counseling in the hospital	Duration of support after discharge
1	≤ 15 min	None
2	> 15 min	None
3	Any	≤ 1 mo
4	Any	> 1 mo

SYSTEMATIC REVIEW

All hospital-initiated smoking interventions

	In-hospital counseling	Support after d/c	# trials	**Risk Ratio**	95% CI
1	≤ 15 min	None	1	1.14	0.82-1.59
2	> 15 min	None	9	**1.10**	0.96-1.25
3	Any	≤ 1 mo	6	1.07	0.93-1.28
4	**Any**	**> 1 mo**	**25**	**1.37**	**1.27-1.48**

DOES DIAGNOSIS MATTER?

Admission Diagnosis	# of Trials	Risk Ratio	95% CI
All diagnoses	12	1.26	1.12-1.42
Cardiovascular disease	14	1.42	1.29-1.56

- Impact of intervention does not differ by diagnosis
- Absolute cessation rates are higher for CVD

SHOULD PHARMACOTHERAPY BE ADDED TO COUNSELING?

Medication	Patients	# of Trials	**Risk Ratio**	95% CI
NRT	**Noncardiac**	**6**	**1.54**	**1.34-1.79**
Bupropion	Cardiac	3	1.04	0.75-1.45
Varenicline	Any	2	1.29	0.75-1.76

HOSPITALIZED SMOKERS

Meta-analysis of Intervention Trials

(Rigotti NA, Clair C, Munafo MR, Stead L. Cochrane Library 2012)

- Bedside counseling followed by telephone support for at least one month after discharge increases smoking cessation rates by 40%
- It is effective regardless of the reason for admission
- It is not effective without continued support after discharge
- Starting NRT in hospital increases quit rates by 50% (and relieves nicotine withdrawal symptoms)

What Really Prompted US Hospitals to Address Tobacco

NATIONAL HOSPITAL QUALITY MEASURES

Among patients who

- Smoked in past 12 months AND
- Diagnosis = MI or CHF or pneumonia

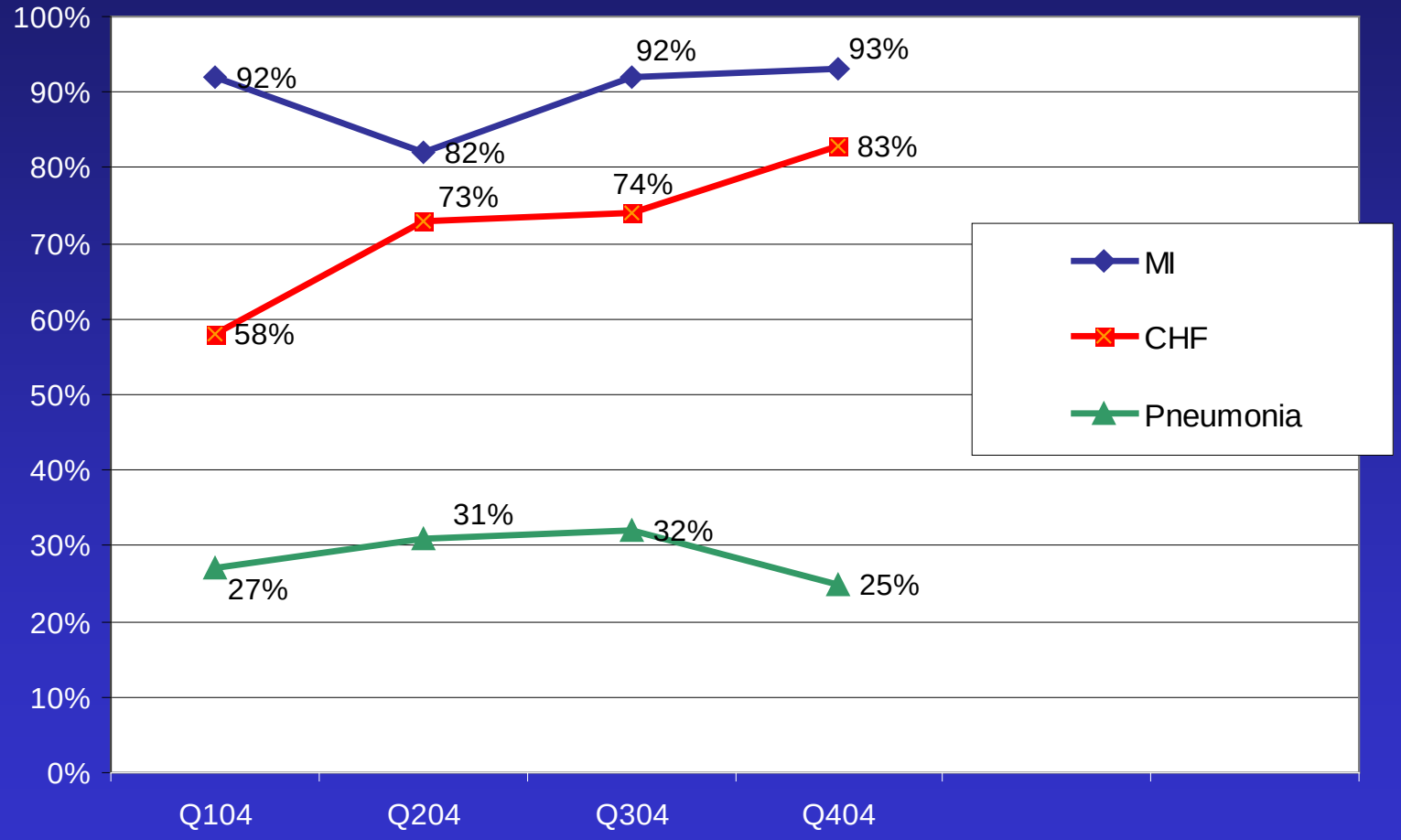
Does the chart document that smoking cessation advice, counseling or medication was offered during hospital stay?

- *Data are publicly reported*
- *CEOs have ego at risk (and in future $$ at risk?)*

Call to Action

MGH Scores on NHQM Tobacco Measure

2004



Challenges for Translating Research to Practice

- How do we identify patients' smoking status rapidly after admission?
- Who provides the counseling?
  - Train all staff nurses?
  - Set up a Tobacco Consult Service?
- How do we sustain the intervention after the smokers leaves the hospital?

Question 4

- Does your hospital routinely identify the smoking status of every patient admitted?
  - 1. Yes – in electronic record or system
  - 2. Yes – on paper record
  - 3. No
  - 4. Don’t know or not applicable to me

Question 5

- Who has the task of counseling hospitalized smokers at your hospital?
  - 1. Nurses or staff on each unit
  - 2. Dedicated hospital smoking counselor
  - 3. Both
  - 4. Neither
  - 5. Don’t know or not applicable to me

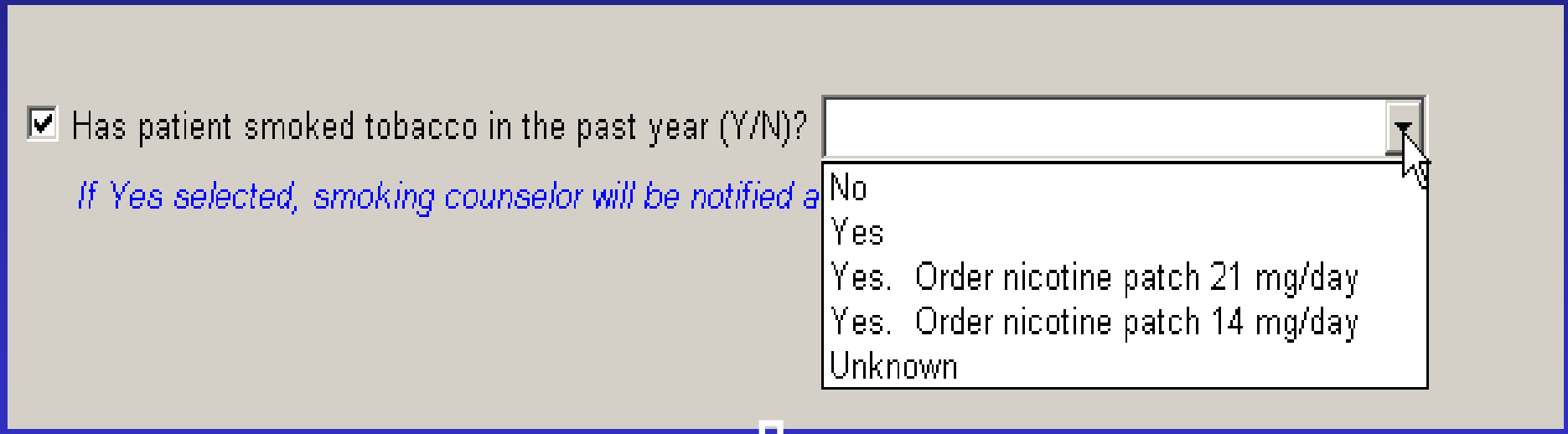
MGH SYSTEM for Inpatients

- **Step 1: Identify smoking status on admission**
- **Step 2: Brief intervention** *(care unit)*
- **Step 3: Extended intervention** *(dedicated counselor)*
- **Step 4: Link to post-discharge care**

MGH SYSTEM for Inpatients

- **Step 1: Identify smoking status on admission**

Computerized admission order set (MDs, RNs)



⇩

Generates electronic list of smokers
sent to the Tobacco Treatment Service

MGH SYSTEM for Inpatients

- **Step 1: Identify smoking status on admission**

  in an electronic database

- **Step 2: Brief intervention** (care unit)

  MD, RN give advice to quit, order NRT
  Booklet put on every bed by housekeeping

Single (F+1)

Resources

Quit Smoking Programs

Brigham and Women's/Faulkner Hospital	617-732-8983
Dana-Farber Cancer Institute	617-632-2099
Massachusetts General Hospital	617-726-7443
MGH Community Health Associates *(Charlestown, Everett, Revere)*	781-485-6210
Newton-Wellesley Hospital	617-243-6566
North Shore Medical Center	978-741-4151

Telephone Support

Massachusetts Smokers' Helpline
1-800-TRY-TO-STOP
1-800-8DEJALO (En Español/ Em Português)
1-800-TDD-1477 (Hearing impaired)

National Quitline
1-800-QUIT-NOW

Internet Websites

www.trytostop.org
www.quitnet.com
www.smokefree.gov

Form #84772 (5/06)

Fold

A Guide For

Hospital Patients Who Smoke*

* Or use other forms of tobacco

PARTNERS HEALTHCARE

BRIGHAM AND WOMEN'S HOSPITAL
NSMC NORTH SHORE MEDICAL CENTER
FAULKNER HOSPITAL
MASSACHUSETTS GENERAL HOSPITAL
NEWTON-WELLESLEY HOSPITAL
DANA-FARBER CANCER INSTITUTE

Now is a good time to quit smoking

If you smoke, it takes longer to recover from illness and surgery.

When you smoke…

- Your heart rate and blood pressure go up
- Your heart has to work harder
- Your wounds heal more slowly
- Your lungs get more congested
- Your chance of a heart attack, stroke, or cancer goes up

Since hospitals are smoke-free, being in the hospital is a great time to quit!

What do I do if I want to quit smoking?

Don't wait. Ask for help today. A nurse, doctor, smoking counselor, or therapist can give you information and medicine to help you quit and stay off tobacco.

The support you need to help you quit has never been closer!

What if I don't want to quit smoking?

Because you can't smoke in the hospital, using the nicotine patch, gum or other product can help with nicotine withdrawal symptoms and make you more comfortable. Ask your doctor or nurse if you want to try any of these products.

PARTNERS HealthCare

What happens when I can't smoke?

You may have symptoms of withdrawal from nicotine, the addictive drug in tobacco. It is easy to confuse these feelings with worries or stress about being in the hospital.

Nicotine withdrawal can cause:

- Cravings for cigarettes
- Depressed mood
- Increased appetite
- Irritability, frustration, anger
- Anxiety
- Trouble sleeping
- Restlessness

These symptoms are signs that your body is getting used to life without nicotine. They can start a few hours after smoking the last cigarette. They peak 2 to 3 days after quitting and decrease over time. They usually last only a few weeks, but every person is different.

How can I relieve cravings to smoke?

▶ You can relieve cravings and discomfort by using one of these products in the hospital.

- Nicotine gum
- Nicotine patch
- Nicotine inhaler
- Nicotine lozenges

These products will:

- Make you more comfortable - even if you <u>don't</u> plan to quit smoking
- Double your chance of success, if you try to quit.

Talk to your doctor or nurse about how to get them.

▶ These things (the 4 D's) can also help you to manage a craving. They can be done anywhere, anytime.

- Take <u>D</u>eep breaths
- <u>D</u>elay & wait out the craving
- <u>D</u>istract yourself
- <u>D</u>rink water

MGH SYSTEM for Inpatients

- **Step 1: Identify smoking status on admission**
  in an electronic database
- **Step 2: Brief intervention** (care unit)
  MD, RN give advice to quit, order NRT
  Booklet put on every bed by housekeeping
- **Step 3: Extended intervention** (smoking counselor)
  Assess nicotine withdrawal relief, desire to quit
  Encourage and help to make a quit plan

MGH SYSTEM for Inpatients

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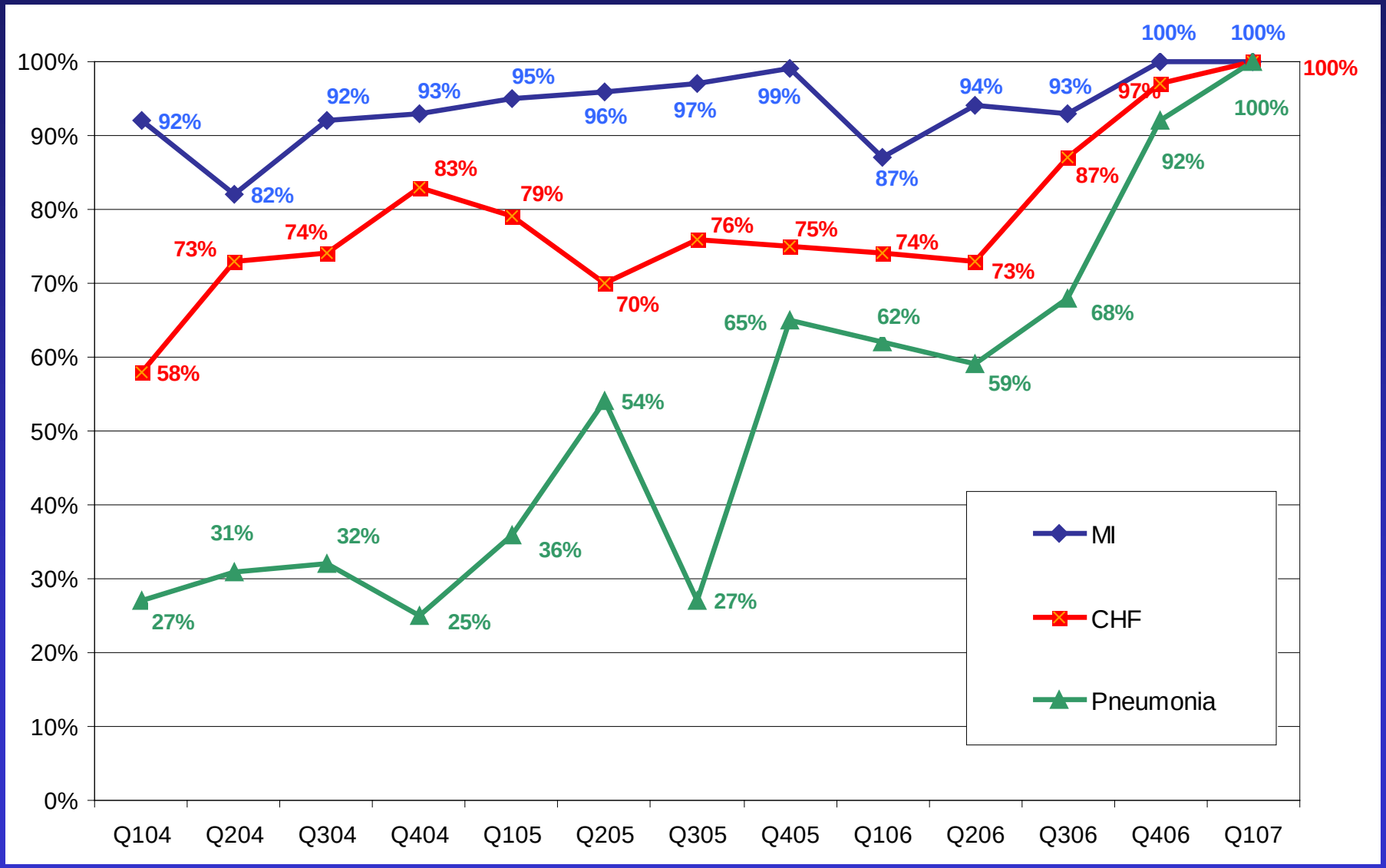
  Assess nicotine withdrawal relief, desire to quit
  Encourage and help to make a quit plan
- **Step 4: Link to post-discharge care**
  Refer to Quitline for counseling
  Put medication on discharge medication list

NHQM Tobacco Measure

MGH Scores: Q1 2004 – Q1 2007



So What?

- We improved a visible measure of care process

- Did we improve outcomes?

  Telephone survey of smokers seen
  - 2 weeks after discharge
  - 3 months after discharge

SMOKING CESSATION OUTCOMES

January - June 2007 *(n=553)*

n=365 (66%) reached for follow up

Outcome	All Patients *(n=553, missing = smoker)*	
Quit for past week		
2 weeks after discharge	**24%**	
3 months after discharge	**18%**	

CURRENT CHALLENGES

Hospitalized smokers

- **Sustaining treatment after discharge**
  - Counseling support
  - Medication use
- **Translating evidence into routine care**

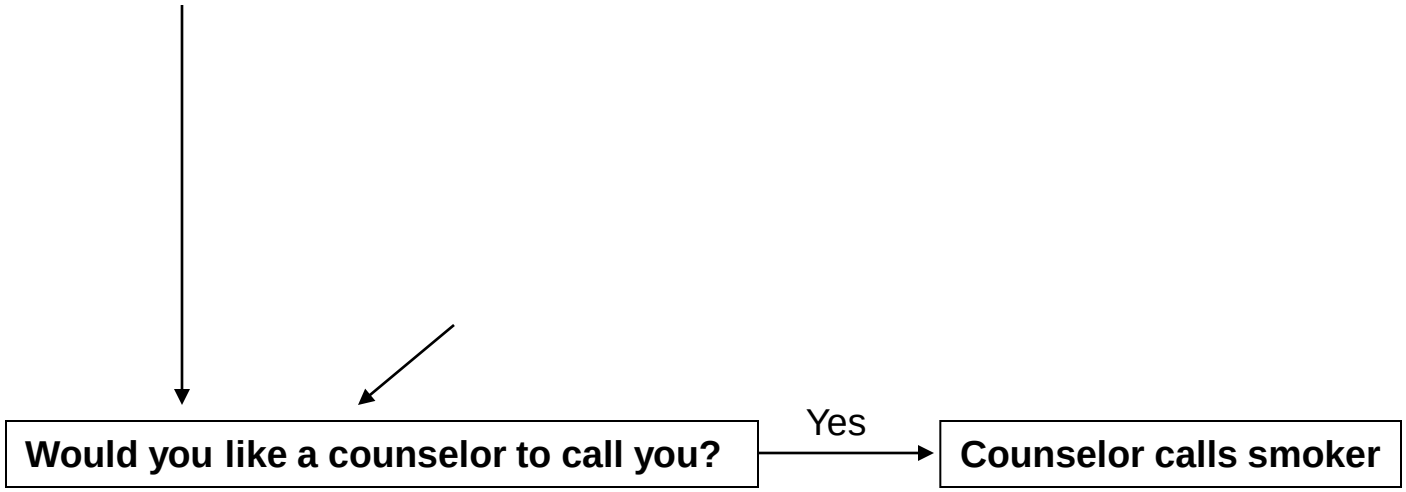
Sustaining Treatment after Discharge:
Counseling support

- **Interactive Voice Response** (IVR) calls
  - *Proactive calls at set schedule*
  - *Efficient (many calls can be made at any time)*
  - *Low cost per call*

IVR calls can

- *Remind the patient to stay quit*
- *Encourage adherence with medication*
- *Offer optional call from a counselor to the smoker*
- *Assess outcomes*

Example of IVR Call Script (Day 14)



Sustaining Treatment after Discharge:
Medication Use

- Remove barriers to starting drug immediately
- Remove barriers to using full course

  - *A free 30-day supply*
  - *Given to the patient at discharge*
  - *Any approved medication allowed*
  - *Refillable for total of 90 days of treatment*

Helping HAND Study

Improving tobacco treatment delivery after discharge

(NIH grant: RC1 HL099668)

- Randomized controlled trial at MGH
- All smokers receive counseling in hospital
- Standard care vs extended care

Extended Care

5 calls (3, 14, 30, 60, 90 days) made to patient
Offered call from counselor at each contact
90 days of free medication

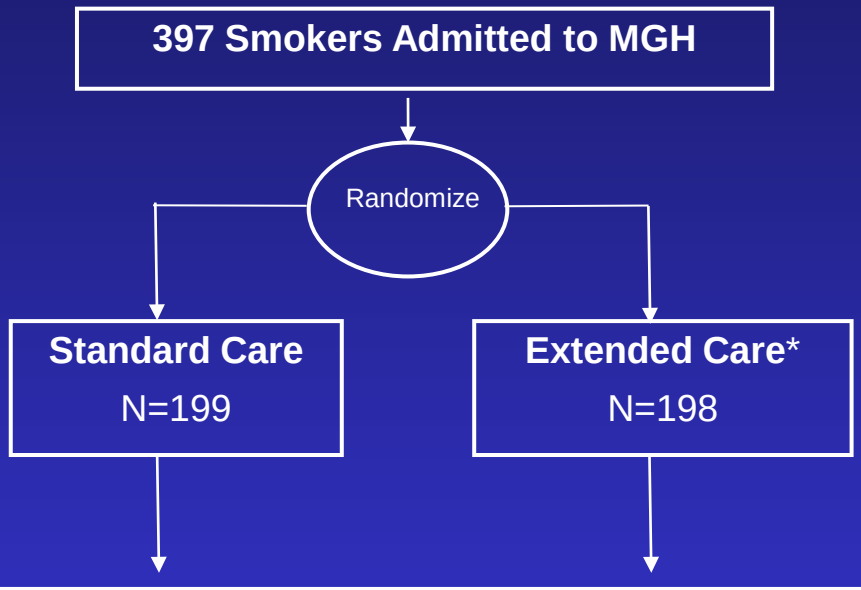
Standard Care

Medication is recommended
Smoker is given telephone number for free quitline

Helping HAND Study

Improving tobacco treatment delivery after discharge

(RC1 HL099668)



Outcomes assessed at 1, 3 and 6-month follow-up

- Tobacco abstinence at 6 mo (*primary outcome*), *1 mo, 3 mo*
- Use of tobacco treatment *(counseling or medication)*
- Cost effectiveness *(cost/quit)*
- Hospital readmission rate

Baseline Characteristics

	Control	Intervention
	N=199	N=198
Demographics		
▪ Age (mean yr)	51.2	53.9
▪ Sex (% male)	45.7	51.5
▪ Race		
▪ White (%)	83.4	78.8
▪ Black (%)	5.0	4.0
▪ Hispanic (%)	5.5	5.6
▪ Education		
<=High school/GED	52.8	50.0

Baseline Characteristics

	Control	Intervention
	N=199	N=198
Tobacco use		
▪ Years smoked	16.9	17.4
▪ %smoke w/in 30 min	74.4	80.8
Past 30 days		
▪ Cigarettes/day	16.9	17.4
▪ %Other tobacco product	2.5	3.5
▪ %Electronic cigarette	6.0	5.6
▪ %Marijuana	16.1	13.6

Baseline Characteristics

	Control N=199	Intervention N=198
Med use in hospital (%)		
▪ NRT	60.2	64.8
▪ Varenicline	3.6	1.5
▪ Bupropion	1.5	1.0

Helping HAND Study

Improving tobacco treatment delivery after discharge

(RC1 HL099668)

Use of Treatment

- 65% of IVR calls are answered

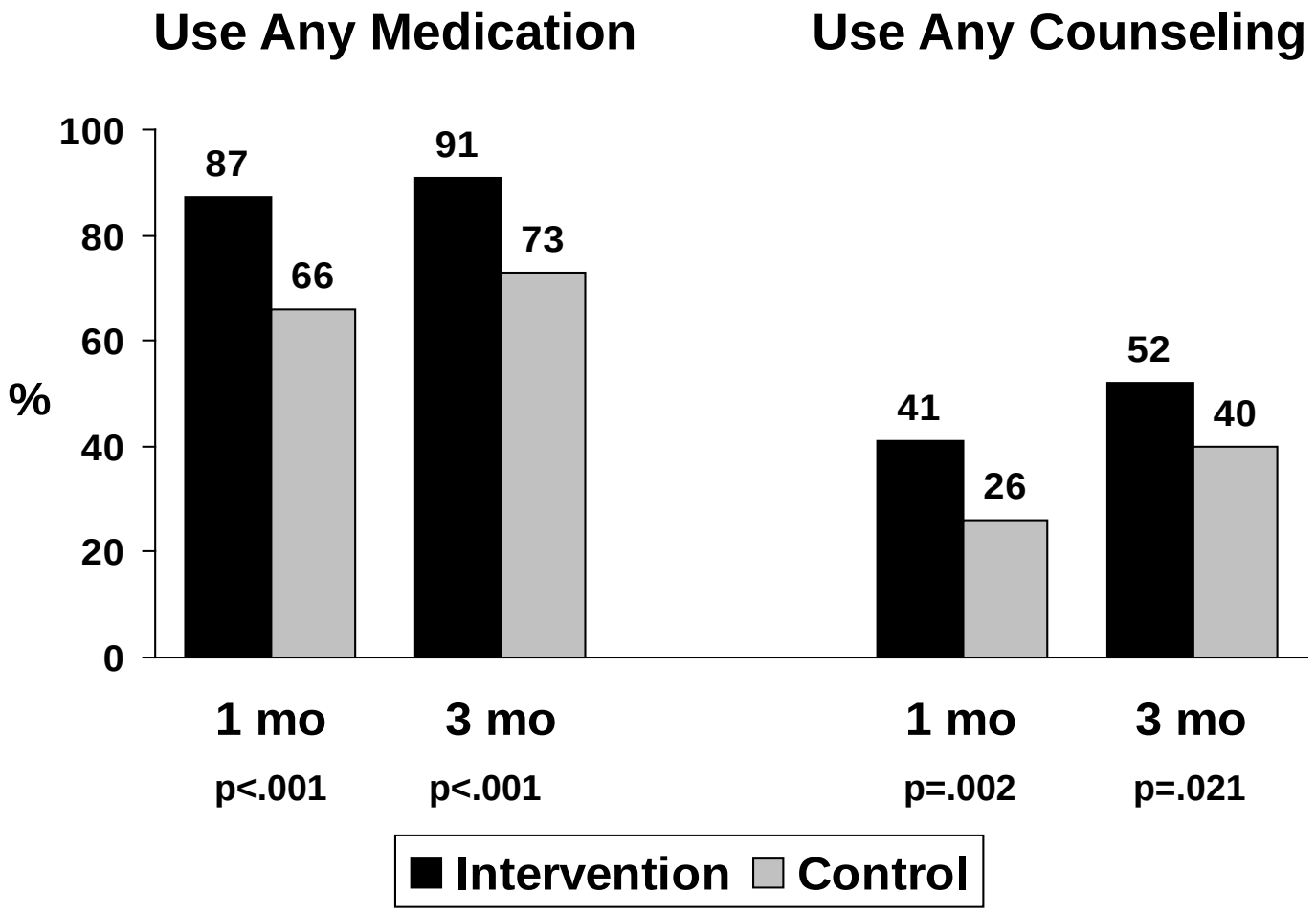
  High level of patient satisfaction with IVR calls

- 50% request medication refills

  90% was NRT – usually combination NRT

Use of Treatment after Discharge

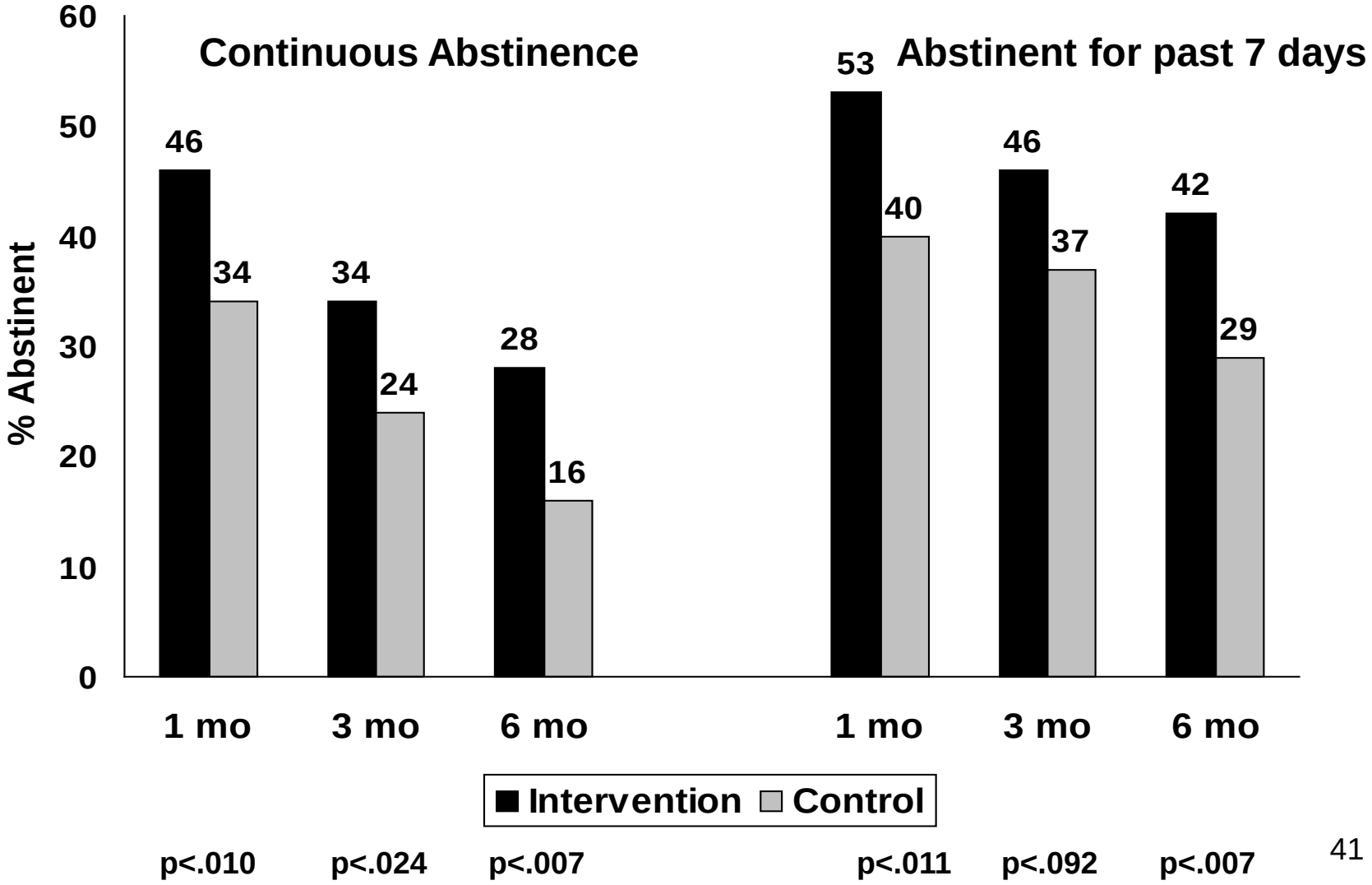
Helping HAND 1 Study



Tobacco Abstinence after Discharge

Helping HAND 1 Study

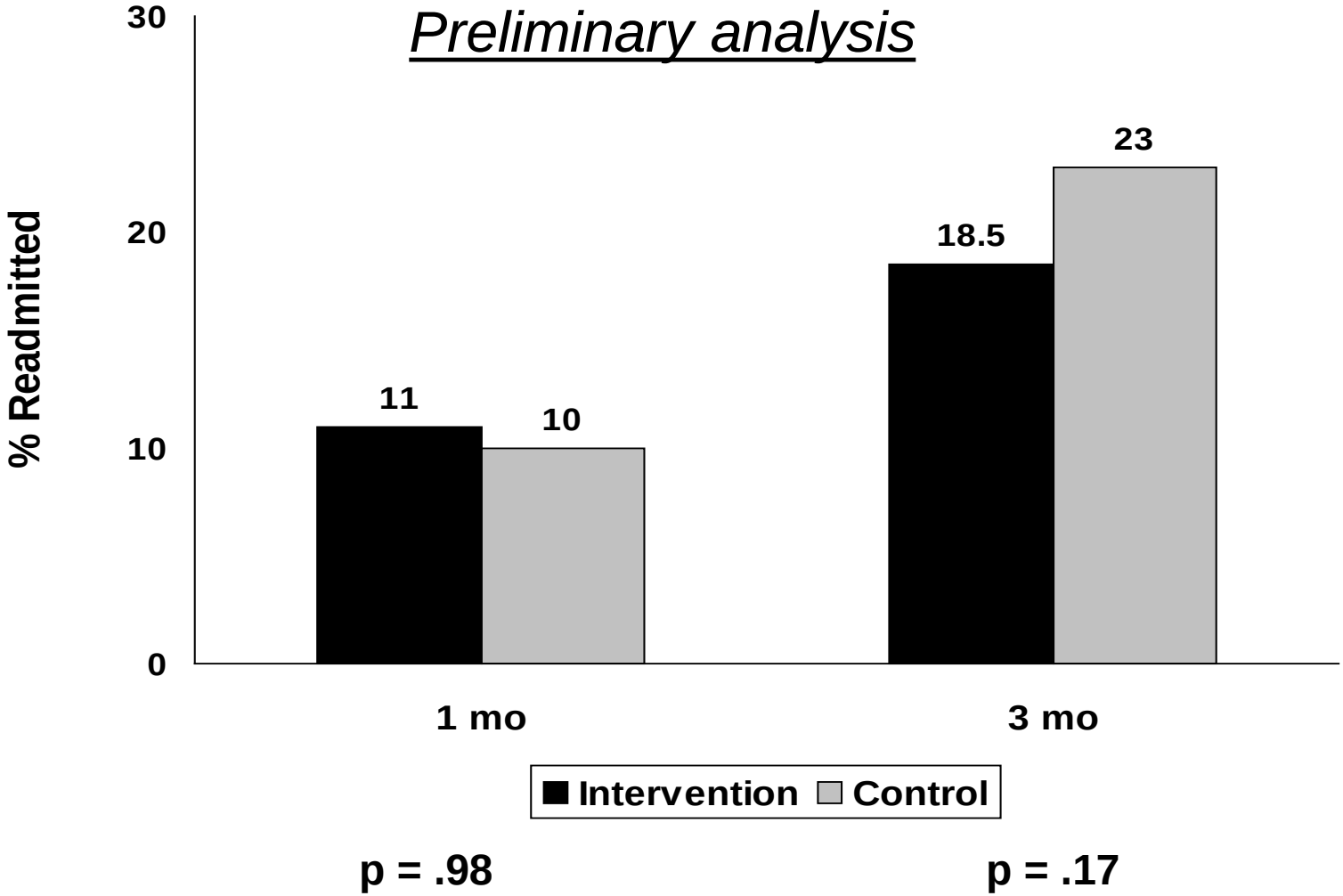
Self-report



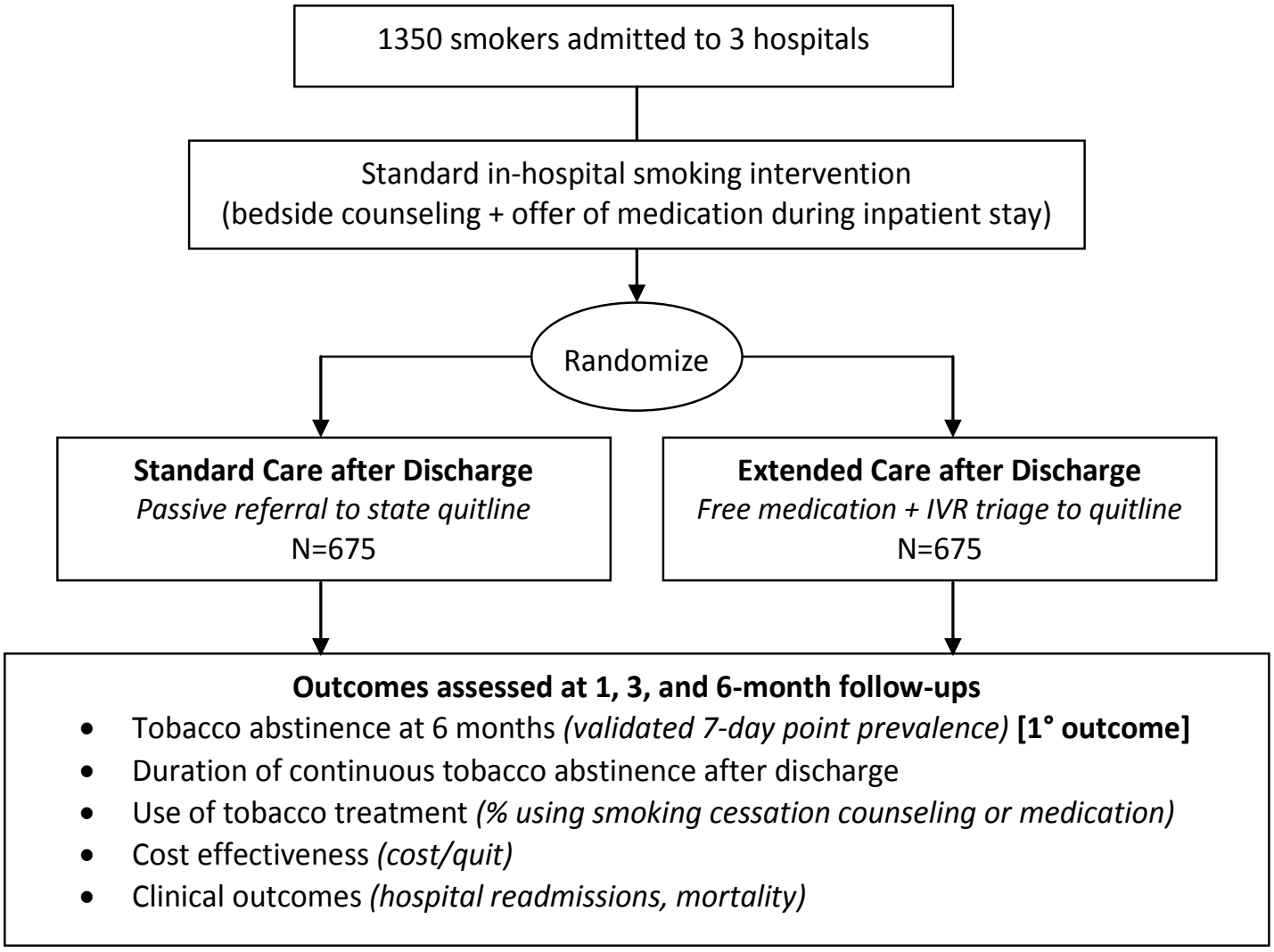
Hospital Readmissions

Helping HAND 1 Study

Preliminary analysis



Next Step – Helping Hand 2 Study (NHLBI R01 HLHL111821)



Innovations for Helping HAND 2

- **Streamline intervention delivery**
  - Warm transfer from IVR to Alere Quitline
- **Broaden eligibility criteria**
  - Include any patient who has plan to quit after discharge
  - All substance abuse allowed, except if admit for suicidal ideation
- **Replicate in other hospitals**
  - Community hospital (North Shore Med Ctr, Salem MA)
  - Academic center in another region (U. Pittsburgh / Hilary Tindle)
- **Larger sample** (n=1350)
  - More power to test effect on readmissions

CHART Consortium

Consortium of Hospitals to Advance Research in Tobacco

- 7 NIH-funded randomized controlled trials

  Fax referral to state quitline + free NRT

  Smoker enrolls in telephone quitline while in hospital, counseling starts in hospital and continues after

  Enrolled in web-based counseling for after discharge

  Train nursing staff to do the intervention

Clinical Goal: Pool results to test whether programs can reduce hospital readmission rates

CURRENT CHALLENGES
Hospitalized smokers

- **Sustaining treatment after discharge**
  - Counseling support
  - Medication use
- **Translating evidence into routine care**

2012 Joint Commission Tobacco Measures

Good news, bad news

- Apply to all hospital patients
- Require documentation of smoking status
- Require documentation of offer of
  - Medication and counseling
  - In the hospital and after discharge
- Reporting of post-discharge call outcomes
- Hospitals are not required to use them

Intensive Smoking Cessation Intervention Reduces Mortality in High-Risk Smokers With Cardiovascular Disease*

Syed M. Mohiuddin, MD, FCCP; Aryan N. Mooss, MD, FCCP; Claire B. Hunter, MD; Timothy L. Grollmes, MPA; David A. Cloutier, BS; and Daniel E. Hilleman, PharmD

CHEST 2007; 131:446-452

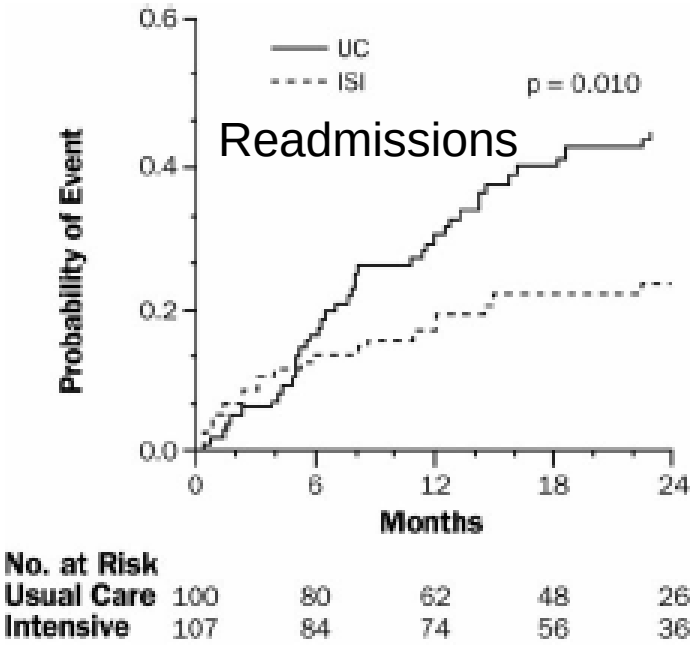


FIGURE 1. Effect of intensive smoking cessation treatment on hospital admissions.

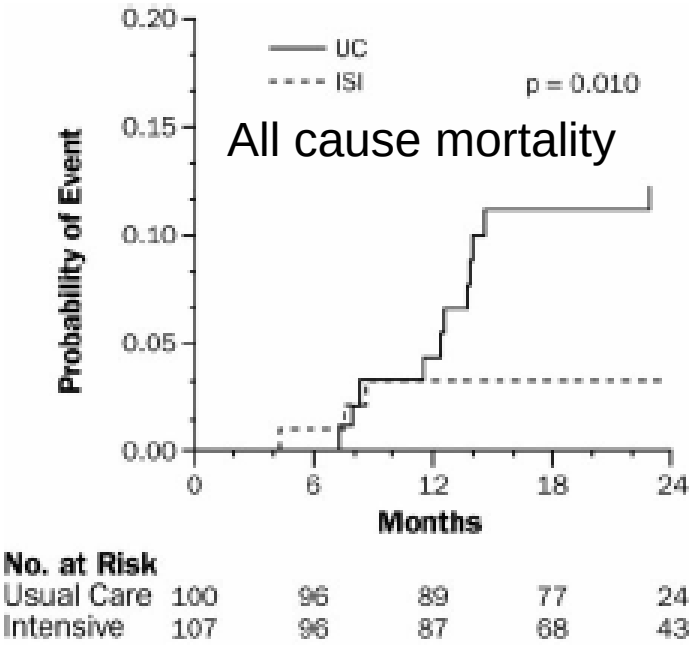


FIGURE 2. Kaplan-Meier curves of all-cause mortality in the intensive-treatment and usual-care groups.

SUMMARY

- Hospitalization is a good opportunity to intervene with smokers
- Counseling and medication starting in hospital and continuing after discharge works
- Our challenge is to translate this evidence to routine care
  - Identify models that are cost-effective and can be widely adopted
  - Advocate for their adoption by hospitals and health care systems

Thank you!

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