Attachment B:

Educational Materials

Preparing for the Community Forum:

Thinking about quality health care

AHRQ COMMUNITY FORUM

Thank you for agreeing to take part in the Community Forum project!

This handout tells you about the Community Forum and what you can expect to do during this exciting project. This handout also gives some background information on quality health care and medical research.

What is the Community Forum?

The Community Forum is your opportunity to be part of a group that tells government decision-makers your ideas about how medical research can be used to improve the quality of health care for everyone. Your group's ideas will help federal government agencies make better decisions about how to improve health care.

Who is sponsoring the Community Forum?

The Community Forum is a project sponsored by a federal government agency called the Agency for Healthcare Research and Quality, or AHRQ. AHRQ works to improve the quality and safety of health care in the United States.

The American Institutes for Research (also called A-I-R) is a non-profit research organization that is leading the groups on behalf of AHRQ.

Why do we want to hear from you?

AHRQ often hears from doctors and researchers about health care. Even so, AHRQ feels that there is an opinion that is just as important as those of health care professionals—**Yours!**

What will happen during the group?

[Tailored to each method] You will learn about and discuss how medical research can be used to make health care safer and better. The group takes place over three days. This may sound like a long time, but there will be breaks and lots of chances to talk and learn new information. A facilitator will lead the group, making sure everyone gets a chance to talk. You will get the chance to ask questions of experts such as doctors and researchers too.

What do I need to do?

- Come to the discussion with an open mind and be ready to listen, learn, ask questions, and share your ideas.
- AHRQ wants to know what you think is best for everyone in your community or society overall. It may be natural to think about yourself and your family first—that's important—but we also want to hear what you think is best when you think about everyone.
- We ask that you give reasons for your opinions or feelings, so everyone in the group can understand why you feel the way you do. Remember – your input is really important!
- Some of the issues we discuss may be new to you. Don't worry! We will help you understand the health topics, so you can be part of the discussion. There will also be plenty of time to ask questions.

Who is taking part in the group?

The group will include all types of people from your community to allow for a rich discussion and many different points of view.

What happens after the group?

We will put together the ideas we get from all of the groups across the country and write a report for AHRQ and other people who make decisions about health care. They will use everyone's input to make decisions about the use of medical research to improve the quality of health care.

Quality Health Care

What is good quality health care?

Good quality health care is care that gets people the best possible results for their health and well-being. Getting good quality health care can help people stay healthy and recover faster when they get sick.

According to the Institute of Medicine[1], good quality health care is:

- **Safe**. Safe health care is health care without medical errors. Doctors, nurses, and hospitals work hard to prevent medical errors, but mistakes still happen. A report by the Institute of Medicine estimates that as many as 98,000 people in the United States die in hospitals each year as the result of medical errors.
- **Effective**. Effective health care means patients get health care based on the latest evidence from medical research about what health care works best.
- **Patient-centered**. Patient-centered health care is when doctors, nurses, and other health care professionals respect and respond to the preferences, needs, and values of patients and their families.
- **Timely**. Timely health care is when patients get the health care they need at a time when it will do them the most good.
- **Efficient**. Efficient health care is health care that does not waste the patient's time or money—or cost more than it needs to.
- **Equitable**. Equitable health care is when everyone has the same chance to get good quality health care. It means people are not treated differently because of their gender, ethnicity, where they live, or how much money they make.

[1] The Institute of Medicine is an independent, non-profit research organization that is part of the National Academies of Sciences.

This figure shows the different parts of good quality health care, as described by the Institute of Medicine.

Medical Research and Medical Evidence

The Community Forum will get your ideas about how **medical research** and **medical evidence** can be used to make sure everyone gets good quality health care.

What is medical research?

Medical research is when doctors and researchers study groups of people to find out what types of health care work best for most people.

Everyone is different. But if medical research is done well, then doctors and researchers can feel sure that they have enough information to say if a treatment will work for most people.

What is medical evidence?

Medical evidence is when doctors and researchers have enough information from the results of medical research to say how well a treatment will work for most people.

Using medical evidence is part of good quality health care

When medical research is done well, it leads to medical evidence.

When there is medical evidence to show which health care works best, then using medical evidence is part of good quality health care.

Does everyone get health care based on medical evidence?

No. It may surprise you to learn that often Americans do NOT get health care based on the latest medical evidence.

Here are just two examples of research that have shown problems with quality of health care:

- Americans receive appropriate health care when they need it only 55% of the time. All Americans are at risk of receiving poor health care—no matter where they live, how much money they have, or their race, education or health insurance.
- Over 90,000 Americans with conditions such as high blood pressure, diabetes, and heart disease die each year because they don't receive the type of health care that research has shown to work best for their condition[2].

What does it mean when medical research is done well?

In general, medical research is done well when:

The study has enough people to say what the chances of the same thing happening to other people.

The study lasts for a long enough time to make sure all the benefits and risks of a treatment can be known. For example, one study may last for 6 months, but another study may last for 5 years.

Doctors and researchers design the study to reduce bias so that they know the benefits and risks are due to the treatment and not to other factors.

More than one study shows the same results. If more than one study shows the same results, then researchers can feel sure that the same thing will happen to other people.

[2] For details, see *The Essential Guide to Health Care Quality*) and *State of Health Care Quality* by the National Committee for Quality Assurance (www.ncqa.org/tabid/203/Default.aspx).

Comparative Effectiveness Research

Medical research helps make sure people get good quality health care. There are different types of medical research. For this project, we will learn and talk about one type of medical research called **comparative effectiveness research**.

What is comparative effectiveness research?

- **Comparative effectiveness research,** sometimes called CER (C-E-R), is a type of medical research that compares treatments for the same health problem to see which one works best.
- **For example, researchers might compare two different asthma medicines to see which one helps patients breathe more easily**. Or, researchers might compare whether surgery or radiation works best to treat cancer.
- **CER does not help discover new treatments or services because it looks at treatments that are already available**. Researchers do other types of medical research to find new treatments.
- **Sometimes, there is not enough medical evidence from CER to say which kind of health care works best**. More research may be needed to find the answers.

Who does comparative effectiveness research?

Doctors and other medical experts do CER. These researchers work at different independent organizations, such as universities and public or nonprofit research centers. Government agencies, such as the Agency for Healthcare Research and Quality (AHRQ), pay to have much of this research done.

A Note About the FDA

The FDA (Food and Drug Administration) decides if a new drug or medical device can go on the market. The FDA makes sure that the drug or device does what it is supposed to do and is safe. But the FDA does not compare drugs or devices to find out which one works best for a specific health condition.

That's why it is important to look at the results of CER.

How can medical evidence from comparative effectiveness research be used?

Medical evidence from CER can be used in different ways. For example:

- **Doctors and patients can use the results of CER to choose the treatment that works best for the patient**. CER helps doctors and patients understand the facts about different treatments, such as what works well and what the problems may be.
- **Groups of doctors, who are experts in their field, may make quality recommendations for good patient health care**. These recommendations help doctors and other health care professionals know the best way to care for patients in most situations. Quality recommendations may also be called clinical practice guidelines or quality standards.

  Health care that follows quality recommendations is sometimes called "evidence-based care" because it is based on medical evidence that says what type of health care works well.
- **Health insurance plans may use the results of CER to help decide what the cost of the treatment will be for patients**. For example, when medical evidence shows that one treatment works better than another, health insurance plans may set a lower cost to patients for that treatment to encourage patients to use it.

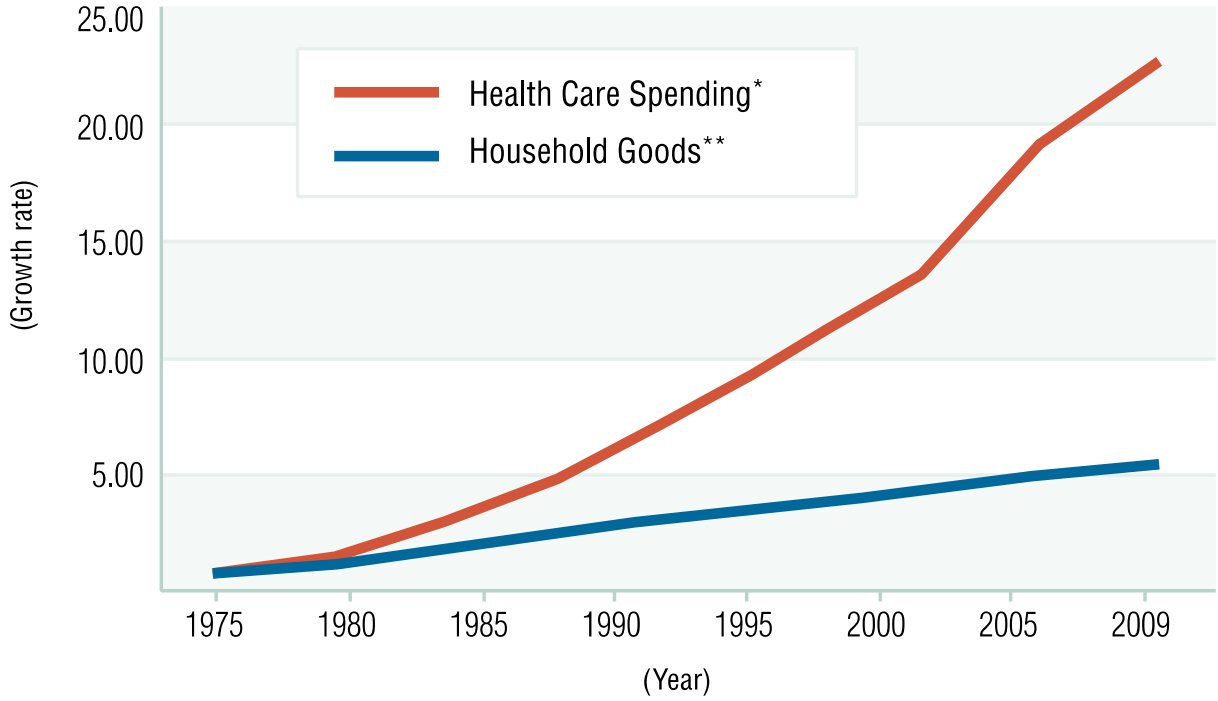
Health Care Costs

The costs of health care to society are important when thinking about the use of medical evidence to improve the quality of health care. After all, the wrong kind of health care can not only harm people, we also often spend more money than we need to.

Are health care costs increasing a lot?

Health care costs are increasing much faster than other parts of the economy. In 2009, health care spending in the United States totaled $2.5 trillion. Health care spending in 2009 was 22 times more than in 1970. In comparison, prices for household goods were only 5.5 times more than in 1970.

Health Care and Household Goods Spending Rates, 1975–2009



*Health care spending data is determined by the National Health Expenditures per capita.

**Household goods data is determined by the Consumer Price Index.

Sources: Centers for Medicare and Medicaid Services (CMS), Office of the Actuary; Bureau of Labor Statistics (CPI-U, U.S. city average, annual figures).

Who pays for our health care?

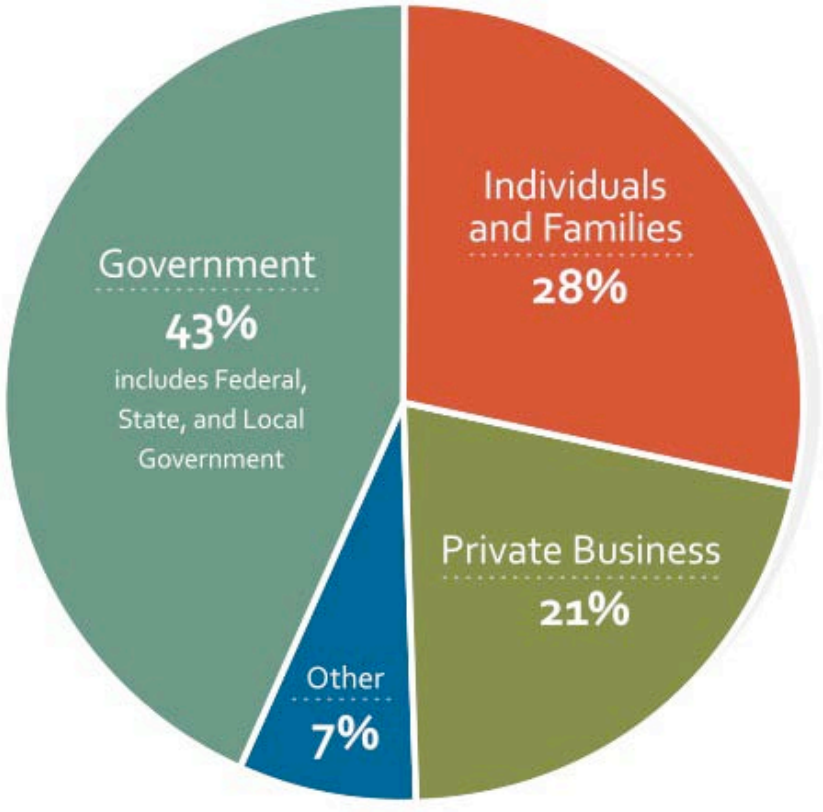
All of us play a role in paying for health care.

Individuals and families–even those who have health insurance–paid 28% of the costs of all health care in 2009. Individuals and families pay this amount in different ways. For example, they pay:

- Part or all of their insurance premiums
- Out-of-pocket costs for their medical care
- The portion of their salary that goes to support Medicare for seniors.

Also, the federal, state, and local government paid 43% of all health care costs in 2009.

Contributors To Health Care Payments in 2009*



*Estimates of spending by contributor are organized according to the underlying entity (business, households, and government) financing the health care bill payer. CMS refers to these contributors as "sponsors." Figure does not add to 100 percent due to rounding.

**Other includes philanthropic giving, worksite healthcare, and revenues received by some health care providers for non-health activities.

Sources: Centers for Medicare and Medicaid Services (CMS), Office of the Actuary

For more information

If you would like more information about the group or any part of this project, please contact Dierdre Gilmore at AHRQcommunityforum@air.org.

Case Study Descriptions

Comparing Hospital Quality

What is the health problem?

Many serious health problems require treatment in the hospital. This treatment can be surgery or intensive medical treatment. As medical technology improves, hospitals can save more lives and treat more serious health problems. But doing more complicated medical work also puts more pressure on hospitals to have highly skilled and experienced doctors and support teams.

Are some hospitals better than others?

Yes. Hospitals that do a specific surgery or treatment for lots of patients are called high-volume hospitals. Hospitals that do a specific surgery or treatment for a fewer number of patients are called low-volume hospitals. High-volume hospitals often have greater success for that surgery or treatment than low-volume hospitals. A hospital that is high-volume for one health problem (for example, heart surgery) may not be high-volume for a different one (for example, cancer surgery). For common health problems like pneumonia, low-volume hospitals are just as skilled as high-volume hospitals.

What does the medical evidence show?

Over the years, researchers have studied the difference in care between high-volume and low-volume hospitals for a variety of serious health problems. Hospital volume does not affect every health problem. But, for some health problems, patients do better if they receive care at a high-volume hospital. For example:

Pediatric heart surgery: In low-volume hospitals, 15 percent of the children on average will die from the surgery. In high-volume hospitals, 4 percent will die. This means that of 100 children having this surgery, 11 more would die in a low-volume hospital than in a high-volume hospital.

Surgery for cancer of the esophagus (the tube between the mouth and stomach): In low-volume hospitals, 17 percent will live for more than 5 years after surgery. In high-volume hospitals, 34 percent will live for more than 5 years after surgery. This means that of 100 people having this surgery, 17 more people will live for more than 5 years after surgery in a high-volume hospital than in a low-volume hospital.

Artificial knee surgery: Sometimes this knee surgery has to be done over again. The need to re-do an artificial knee is necessary 50 percent more often when surgery is done in low-volume hospitals. This means that if 10 patients need their surgery redone in a high-volume hospital, 15 will need it redone in a low-volume one.

Surgery for aortic aneurysms (when the major blood vessel from the heart needs to be repaired): In low-volume hospitals, nearly 7 percent will die from this surgery. In high-volume hospitals, 3 percent will die. This means that of 100 people having this surgery, 4 more would die in a low volume hospital than in a high-volume hospital.

Hip replacement surgery: The risk of death for patients who get their hip replaced is only about 1 in a 100. Even so, the risk of death in a low-volume hospital is nearly twice as high as the risk of death in a high-volume hospital.

Comparing Hospital Quality

What do you think?

Given the significant differences in results for patients in these low- and high-volume hospitals, people might have different responses, such as:

_____ This seems normal — some hospitals get better results than others and that is to be expected.

_____ The high-volume hospital is the only one I would go to, and I cannot imagine why anyone would do anything else.

_____ Makes me wonder how many people know which hospitals are the better ones.

Does one of these statements reflect your opinion? Has something else occurred to you?

Comparing Hospital Quality

A closer look

While researchers and health care leaders are primarily concerned about providing the highest quality care to patients regardless of which hospitals they use, they also wonder if there are cost differences. In other words, when patients get better results (such as fewer complications or higher number who survive certain surgeries), does this cost more, less, or the same as for patients who do not do as well or are less likely to survive?

Comparing the cost

Some studies compare the actual cost difference between low-volume and high-volume hospitals for particular surgeries. For example, a complex abdominal surgery costs $27,000 in a high-volume hospital and $33,000 in a low-volume. Cost differences like this are because patients recover faster with fewer problems when they are at a hospital that performs many of these operations over time. Yet better hospital care is not always less expensive. For example, patients with heart failure had better results at high-volume hospitals but the cost of the care was greater than at a low-volume hospital.

Another research study compared patients who had major surgery and whether or not they had complications such as an infection, excessive bleeding, or blood clots that would slow down the patient's recovery or even cause their death. With this comparison, the cost difference was considerable:

- **Patients without complications cost an average of $28,000.**
- **Patients with complications cost an average of $159,000.**

These results suggest that patients in low-volume hospitals have more medical problems from their surgery, and the cost of dealing with these problems can be significant.

Although patients who have health insurance may be protected from much of the extra costs that can come with less skilled care, these costs can have an impact on other people. That is because when more dollars are spent on health care, health insurance rates can increase for everyone.

Comparing Hospital Quality

The community of Springview

Knowing that low-volume and high-volume hospitals can get different results, imagine there is a small community, Springview, with just one hospital. This small hospital is low-volume for almost anything it does except delivering babies. The county government is the largest employer in town. Half the county residents are in the families of county employees. Because of the poor economy, the county can only offer employees just one health plan.

The county has to decide which of the two health plans it will offer:

Health Plan A. To support the needs of the local community, this plan covers all the services available at Springview Community Hospital, the local, low-volume hospital. The only time services are approved for the high-volume University Medical Center 50 miles away is for specialized care that is not available at Springview Community Hospital.

Health Plan B. To get the best clinical results possible, this plan covers almost all services at the high-volume University Medical Center 50 miles away. This plan pays for services at Springview Community Hospital only for two situations: 1) maternity care and 2) emergency care before transferring patients to University Medical Center.

Employees' response

This was a difficult issue for county employees.

Many employees supported keeping their medical care at the local, low-volume Springview Community Hospital because patients want their family and friends close to give them emotional support and stay up to date on their progress. Also, patients and families feel more comfortable with local doctors, nurses, and other staff who they know and trust.

Other employees supported getting medical care at the high-volume University Medical Center because they did not want to jeopardize their health and that of their loved ones by agreeing only to get medical services at a hospital that got worse results. They felt that having a better chance of surviving a serious medical problem was more important than convenience and 'loyalty.'

Local hospital concerns

Springview Community Hospital was also worried. If it lost so many of its patients to University Medical Center for treatment, this loss of services would affect the hospital's financial well-being. Without the income from these treatments, other hospital services would be reduced. The hospital director started worrying if the hospital could survive if it faced these major changes.

Comparing Hospital Quality

Initial question:

Suppose all of you are on the Springview town council that has to make the decisions for all the county employees and their families.

Which health plan would you pick and why?

Comparing Hospital Quality

What is the health problem?

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Upper Respiratory Infections in Children: Antibiotics vs. Symptom Treatment

What is the health problem?

Children get colds with symptoms like coughs and sore throats throughout their childhood. These conditions are called Upper Respiratory Infections (URIs).

URIs are most often caused by a virus. URIs caused by viruses will get better on their own within a week or so. But, about 10 percent of URIs are caused by bacteria. Sometimes it is difficult to tell whether the infection is viral or bacterial without a special test.

What to do about URIs?

There are two approaches to treating URIs.

- **Relieve symptoms.** URIs have lots of uncomfortable symptoms. One approach to treatment is to relieve these symptoms. This includes having a child drink plenty of fluids and when necessary use common drugstore medicines to loosen congestion, decrease cough, and control any fever.
- **Use antibiotics.** A second approach to treat URIs is antibiotics. Although antibiotics have no effect on a URI that is caused by a virus, antibiotics work against a URI caused by bacteria. URIs caused by bacteria may lead to more serious illness if left untreated. When doctors prescribe antibiotics, they usually recommend that parents also relieve symptoms, as noted above.

What does the medical evidence show?

When antibiotics are given to a child routinely, even with a good reason, bacteria can become 'resistant.' This means they are less likely to get rid of bacterial infections. Researchers believe that if a child is given antibiotics when not needed, those antibiotics might not work to stop future infections that the child may develop. This can put the child's health in danger.

Because of these concerns, the American Academy of Pediatrics established clinical practice guidelines more than 10 years ago saying that to avoid over-using antibiotics, they should not be prescribed unless the doctor is sure that it is a bacterial infection and not a virus.

What is actually done?

Most doctors follow the guidelines by the American Academy of Pediatrics. But some doctors still prescribe antibiotics for URIs – even when they do not know for sure if the URI is caused by a bacteria or virus – for various reasons:

- Doctors may be concerned about sore throats caused by strep bacteria. These infections may cause serious problems if not treated with antibiotics. If they suspect strep, then they may not want to wait for test results before starting treatment.
- Parents ask for them because they believe that the antibiotic make their child feel better. Parents may also think that antibiotics will help them avoid missing work to stay home with their child.
- Some doctors and parents think the antibiotics will not cause harm, so it does not to hurt to try.

Upper Respiratory Infections in Children: Antibiotics vs. Symptom Treatment

What do you think?

Which statement best reflects your view?

_____ If the doctor thinks that an antibiotic will help the child and the parents, then that is more important than what clinical practice guidelines say.

_____ It is the parents' decision about getting the antibiotic or not; they care the most for their children and they should decide if they think the benefit of the antibiotic is worth it or not.

_____ If the clinical practice guidelines say that too many antibiotics might harm the child in the long run, then doctors and parents should follow the guidelines.

Upper Respiratory Infections in Children: Antibiotics vs. Symptom Treatment

Community impact

As mentioned earlier, if antibiotics are used when not needed, they eventually become less able to kill bacterial infections. This affects not only the individual patient who had taken antibiotics when not needed, but it also affects the larger population. One example of this is a severe infection called MRSA ("mersa").

MRSA developed because a common antibiotic, a type of penicillin, was widely used, and now no longer works against the MRSA infection. It takes stronger, more dangerous drugs to control the MRSA bacteria. In 2005, the number of people hospitalized with the MRSA infection was more than 278,000, and about 5,500 people died that year due to this infection.

Because of examples like MRSA, public health experts have been trying for many years to help doctors and patients understand the problems of antibiotics. If antibiotics are over-used, many people – children and adults – who need an antibiotic in the future may be in danger of getting an infection that cannot be controlled. But many parents find it difficult to put aside their current worries about their child's health for a **possible** problem in the future that could impact the population at large.

Upper Respiratory Infections in Children: Antibiotics vs. Symptom Treatment

What do you think?

Now that you've learned more about over-using antibiotics, which statement best describes your view?

_____ I think it is up to the doctor and family to decide if the antibiotic should be used in each individual case. Families should not feel responsible for what might or might not happen with future bacteria.

_____ I think if everyone really understood this well, more doctors and parents would decide not to take antibiotics unless they knew for sure that they had a bacterial infection.

_____ To avoid this problem, there should be stricter rules for when a doctor can order an antibiotic for a patient. We cannot always depend on people to do 'the right thing' voluntarily.

Obesity treatment: Comparing different approaches

What is the health problem?

Obesity is a widespread and growing problem throughout the country. More than one-third of Americans are obese as defined by their "body mass index," or BMI. BMI is a number that describes a person's weight in relation to their height. An adult who has a BMI of 30 and above is considered obese.

Obesity often gives rise to other medical problems such as diabetes, heart disease, arthritis, stroke, depression, and other long-term problems.

	normal weight	overweight	moderately obese	severely obese
BMI	18.5-24.9	25-29.9	30-34.9	35 and above

Compared to people of normal weight, people who are severely obese, with a BMI of 35 and above, are:

- Almost 2 times as likely to have heart disease
- Almost 4 times as likely to have high blood pressure
- 6 times as likely to have diabetes

What are the treatments for obesity?

- **Supervised diet and exercise programs** are highly recommended for those who are overweight or obese. But, many people find it difficult to stay on these programs, especially programs with little or no supervision.
- **More structured behavior change programs** – such as residential treatment or weight-loss 'camps' –are much more successful in treating obesity than those that are offered only as out-patient programs, but they are expensive and often not covered by insurance.
- **Surgery** provides the most effective short-term treatment for achieving significant weight loss. There are different types of surgeries. **Banding surgery** is a type of surgery where a band is surgically placed around the stomach to restrict its size, so individuals eat much less food than before. Banding is being used more often now because it is less risky than other types of surgery.

What are the benefits of banding surgery?

The success of banding surgery has been measured in different ways for people who are severely obese (a BMI of 35 and above).

- **Weight loss**. When banding surgery is successful, people who are severely obese lose most of their excess weight.
- **Number of prescriptions**. People who are severely obese must often take a lot of prescription medicines for various illnesses. One study showed that the number of prescription medicines dropped from 21 to 13 for severely obese patients who had the banding surgery. This drop was a sign that patients had fewer medical problems after the banding surgery.

What are the risks of banding surgery?

In a study of 299 patients, after 3 years of having the band, 88%, or 263 people, had one or more side effects or complications – mild, moderate, or severe. Most common were nausea and vomiting, band slippage, or stomach blockage. In the study, 25%, or about 75 of the patients, had their band removed. This often followed a complication of the procedure.

In a different study, the response of patients who had banding surgery changed over time. After the surgery, many patients said they were generally satisfied, but several years later almost 40% had major complications and about half had to have their bands removed.

Banding surgery made available to more people

In 2001, the FDA approved banding surgery for people who are severely obese (a BMI of 35 and above) if they also had a related problem such as diabetes. FDA approval means that the banding surgery was shown to be safe and effective. In February 2011, the FDA approved banding surgery for moderately obese people (BMI of 30 to 34.9) if they also had a related problem, such as diabetes or arthritis. This new approval meant that many more people could be eligible for banding surgery.

Concerns about research for the new approval

Many critics were concerned about the new FDA approval for people who are moderately obese. They pointed out that this FDA approval was based on a small study of 149 people that was paid for by the company that makes the bands. Of particular concern, the study results were based on patients having the band for one year, rather than several years. Because banding surgery in severely obese patients often did not create problems until several years after surgery, there were concerns that people who are moderately obese may face risks from banding surgery that did not show up in the one-year study.

Nevertheless, the FDA approval meant that millions of individuals would have access to a surgery that could make a big difference in their health and well-being.

Obesity treatment: Comparing different approaches

What do you think?

Imagine that you live in a community that is receiving government funding to try to decrease the growing number of people who are obese. You can devote these funds in any amounts to these three approaches to obesity treatment:

_____**Structured behavior change programs (no surgery)**. With this approach, patients do not lose as much weight as they do with banding surgery, but they avoid the risks of surgery. Patients average 15% weight loss and they are able to reduce the medical problems that are associated with obesity.

_____**Banding surgery for severely obese**. This approach concentrates on those people with the most severe health-threatening problems, and patients lose an average of 31% of their total weight. This is the most effective way to lose weight and reduce the medical problems associated with obesity.

_____**Banding surgery for moderately obese**. This approach will reach patients before they are severely obese, to help control the weight gain before it reaches the severe level. Focusing efforts on the moderately obese may help them avoid the risk of other diseases, but there is not enough research to say for sure.

Obesity and public policy: Comparing prevention and treatment

Preventing obesity or offering treatment

Some policymakers believe that it is better to spend resources to prevent obesity than to treat obesity and its related health problems. They use "stop smoking" efforts as an example. Over the past couple of decades, "stop smoking" efforts in the community have reduced smoking rates by half and saved resources. Although these efforts have been successful, changing eating habits may be more difficult.

What does the evidence show?

Research has shown that certain factors will increase the risk of obesity for people living in a community. These include:

- Not having markets near them that provide fresh fruits and vegetables
- The cost of fresh fruits and vegetables
- Local stores having processed foods with high sugar, salt, and fat
- Too many fast food restaurants
- Not having "green space" or safe areas for leisure exercise
- The cost of using private gyms and exercise clubs

Many of these factors are especially present in low-income communities, which have a higher percentage of obese residents than higher-income communities.

A community plan to prevent obesity

A group of community leaders put together a plan for a local prevention program. They want to:

- Establish a local tax on foods that have little nutritional value
- Provide calorie counts in restaurants
- Work with schools to improve the nutritional value of the food served to children
- Work with the school district to reinstate active gym classes for school-age kids

Which has priority?

But, others argue that the problem of obesity cannot be changed by this prevention plan. They saw how banding surgery made a meaningful difference in the lives of individuals whose health is affected by obesity. They want to make sure that the moderately obese also had the opportunity to benefit.

Obesity and public policy: Comparing prevention and treatment

What do you think?

Imagine that the local community has limited funding and has to decide which of the two interventions to support: banding surgery for moderately obese or community-based prevention.

Which approach is most important and why?

Heart Disease Treatment: Comparing medicines only and stents plus medicines

What is the health problem?

Coronary heart disease is the leading cause of death for all Americans. Heart disease occurs when the blood vessels in the heart become clogged, and blood and oxygen have a hard time getting to the heart. Not getting enough blood or oxygen to the heart can cause a range of problems such as chest pain (angina), shortness of breath, limitation of activities, a heart attack, and death.

Heart disease ranges from mild to severe. People with mild heart disease have some blockage in their blood vessels, but the symptoms – mainly chest pain – are not severe. People with mild heart disease need to be treated to relieve chest pain and to prevent blockages from becoming worse.

What are the treatments for mild heart disease?

There are two main ways to treat mild heart disease:

- **Medicines only**. Doctors prescribe a combination of medicines, such as those that lower cholesterol, control blood pressure, relieve chest pain, reduce blood clotting, and others. Medicines relieve symptoms, such as chest pain or shortness of breath, but a small percent of patients will not have as good relief from medicines as from a stent. Medicines pose possible risks to the liver and kidney, which can be checked regularly with lab tests.
- **Stent plus medicines**. A stent is a metal device that is placed into a narrowed or clogged heart vessel to keep it open so that blood flow to parts of the heart is improved, or protected from further damage. Stents relieve symptoms, such as chest pain and shortness of breath as soon as they are put in place. But, stents have more risks than only taking medicines. For example, 1 out of 100 patients will have a heart attack from getting the stent. And, 2 out of 1,000 patients will die directly related to having the stent put in. Patients who get a stent also take medicines like those described above.

All patients with mild heart disease are advised to make lifestyle changes, such as stopping smoking, limiting salt and fat in their diets, and exercising regularly, as long as the patient can do so safely.

What does the medical evidence show about each treatment?

Researchers compared the two types of treatment:

- The research showed no difference between the two treatments in the number of deaths or heart attacks over a period of 5 years.
- Getting a stent has more risks than medicines only, but stents bring faster relief from symptoms than medicines only. People who get a stent have fewer symptoms and report a higher quality of life than people who only take medicines. But, after 2 years, these differences go away.

Based on this research, only 1 out of 3, or 33%, of patients eventually will need a stent. The rest will have comparable results from medicines only.

Research recommendation

Based on the medical evidence, medical experts recommend that medicines should be the **first** treatment given to patients with mild heart disease. If patients continue to have chest pain and other symptoms of mild heart disease, then experts recommend offering a stent.

What is actually being done?

A major study showed that 55% of patients were getting stents as the first treatment, rather than getting medicines only as recommended. This number is significantly more than the 33% of patients who need it.

This study raised concerns that many patients are getting stents that they do not need.

Heart Disease Treatment: Comparing medicines only and stents plus medicines

What do you think?

Which statement below is closest to your view?

_____ Patients should trust doctors, not the research, to do the best thing for them.

_____ Patients should expect doctors to tell them about the risks and benefits of each treatment before the patient decides what to do.

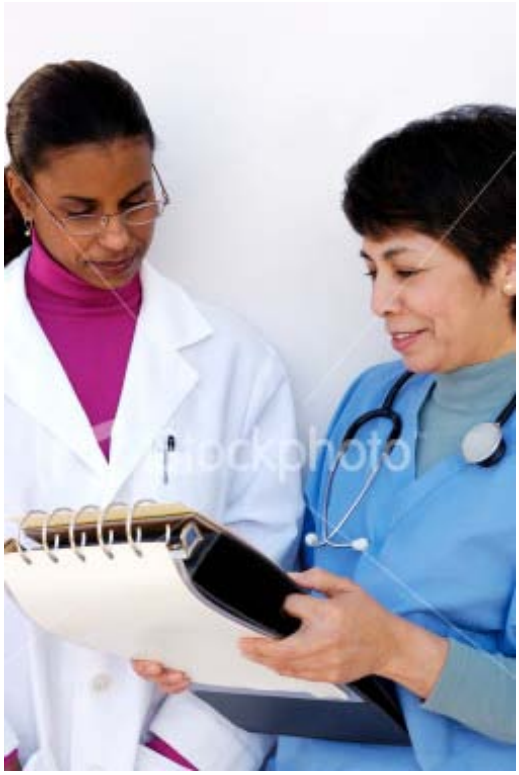
_____ Patients should be wary if doctors are recommending a treatment that research says is not useful.

Heart Disease Treatment: Comparing medicines only and stents plus medicines

What are the costs of treatment?

With so many doctors doing stent procedures, researchers looked at the difference in what these treatments cost. Assuming all patients were also on medicines, then the only difference in cost would be the cost of performing the stent procedure in patients when there was no clear need for them.

In 2004, there were more than 650,000 stents placed as the first treatment in patients with mild heart disease. The average cost of placing a stent was $56,000. This means that in one year (excluding those who would have needed a stent eventually), $37 billion was spent on this procedure that research found to be 'not necessary.'



Heart Disease Treatment: Comparing medicines only and stents plus medicines

What do you think?

In what way does having this information about the cost of the stent procedure influence your view?

_____ Knowing the cost of the stent procedure makes no difference in how I think about it.

_____ Knowing the cost of the stent procedure is one of several factors to consider when comparing two different treatments but is not the most important.

_____ You need to know the cost differences of the two treatments to make good decisions.

Preventing Heart Attacks: Comparing a preventive medicine and no medicine

In the last discussion, we talked about ways to **treat** heart disease. In this discussion, we will talk about ways to **prevent** a heart attack.

What is the health problem?

As we discussed before, **coronary heart disease** occurs when the blood vessels in the heart become clogged, and blood and oxygen have a hard time getting to the heart. Not getting blood and oxygen to the heart can cause a heart attack.

A **risk factor** for a heart attack is something that increases the chance of someone having a heart attack. Some risk factors for a heart attack are family history, high levels of LDL or "bad" cholesterol, being overweight and inactive, signs of inflammation in the blood, uncontrolled high blood pressure, and smoking.

People who have already had a heart attack or people with many risk factors (for example a combination of high blood pressure, smoking, and lack of physical exercise) are considered to be at **high risk** for a heart attack.

People who have only one risk factor such as high levels of LDL or "bad" cholesterol are considered to be at **low risk** for a heart attack.

What are approaches to prevent heart attacks?

To prevent heart attacks, doctors and patients try to reduce the number of risk factors a patient faces. Two ways to reduce risk factors are:

- **Making lifestyle changes** such as stopping smoking, following a diet low in salt and saturated fat, and exercising regularly.

- **Taking a statin.** Statins are a type of medicine that decreases LDL or "bad" cholesterol and signs of inflammation in the blood, two risk factors for a heart attack. It is estimated that up to 25% of all American adults take statins.

What does the medical evidence show?

About lifestyle changes: Some risk factors can be reduced by lifestyle changes. But, research has shown that diet alone is not very effective in lowering levels of LDL ("bad") cholesterol, a risk factor for a heart attack.

About taking a statin:

- **Overall**. Statins work well to lower LDL or "bad" cholesterol in both high-risk and low-risk people. Statins have some side effects, such as mild muscle pain, that affect 1-10% of people taking statins. Serious side effects, such as liver and kidney problems, generally affect only one in several hundred people. And, many of these serious side effects can be reversed if the medicine is stopped.
- **For people at high risk, taking statins reduces the chance of a heart attack.** When people have already had a heart attack, taking a statin reduces the chances of another heart attack by 20-60%. Statins are also work well to prevent heart attacks for people with many risk factors, but who have not had a heart attack.
- **For people at low risk, the medical evidence for taking statins is less clear than the medical evidence for people at high risk**. When people only have one risk factor, the benefits of taking statins are not as clear as the benefits for high-risk people. For example, one study discovered that 240 low-risk people would have to take statins to save one life. Another study showed even less benefit: 1,400 low-risk people have to take statins to save one life.

Should statins be prescribed to people at low risk?

Although statins seem to work well to prevent a heart attack for people at high risk, the benefit for people at low risk is not as strong.

Yet, doctors are now prescribing statins more and more to low-risk patients. Doctors do this believing that they will help their patients avoid heart attacks, even though very few people actually benefit.

Preventing Heart Attacks: Comparing a preventive medicine and no medicine

What do you think?

Based on this information, which of the following is closest to your view?

_____ If there is any chance that statins can lower the likelihood of a first time heart attack then they should be prescribed to patients who want them.

_____ It sounds like statins may be useful, but not for everyone. Doctors should be more selective on who they prescribe statins to.

_____ If 25% of adults are getting statins, this sounds like a lot of people are getting more treatment than they need.

Preventing Heart Attacks: Comparing a preventive medicine and no medicine

What are the costs?

Every year, about 785,000 people have a heart attack. About 25% of heart attacks are immediately fatal.

In 2010, heart disease was estimated to cost the United States $316.4 billion dollars altogether, including the cost of medical services, medicines, and lost work productivity. Knowing this was the total cost, researchers also studied the cost of using statins.

One study estimated that if everyone with high levels of LDL cholesterol or signs of inflammation in the blood took statins, including those with no other risk factors for heart disease, 80% of all older adults in this country could be taking the medicine. The cost of statins ranges between $120-$2,000 per year per person depending on the dose and whether the statin is generic or brand name.

Prescribing statins to 80% of older adults, as noted above, would add between $21 and $360 billion dollars to the cost of prescription medications. In addition, there would be other costs associated with extra doctor visits and lab tests to monitor patients for side effects. Although there could be savings from heart attacks that are prevented, overall costs would likely increase for taxpayers, employers, employees, and all others who help pay for health insurance.

Preventing Heart Attacks: Comparing a preventive medicine and no medicine

What do you think?

Does this cost information affect your views in any way? Which is closest to your view?

_____ If a few lives are saved with statins, then it is worth it, regardless of the cost.

_____ We have to draw a line somewhere in prescribing statins to prevent a first heart attack; this is too much money to spend on a medicine that many people may not need.