

Issues in Bioethics
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Module No. #03
Lecture No. #13
Problems in Resource Allocation

Welcome back to this course, Issues in Bioethics. This is the Unit Three of the Module Three, which will deal with problems in resource allocation, which is a very crucial and vital problem within the practice of medicine. Particularly with the modern scenario, which I have, which we have already seen, which is characterized by a lot of technology, use of technology and other factors.

The issue of resource allocation is a perennial problem. And, there is no direct solution to the problem. That is a very sad-state of affairs. Because, the very simple fact that, there is more demand and supply is less. Precisely that is the reason, why this problem. Recently, just two weeks back, there was a very unfortunate incident, that has happened. One boy in Delhi died, out of dengue. His parents noticed that, he has fever and took him to the hospital.

And the hospital was not able to provide proper care, because there was no resources, there was no proper bed, no room available, no doctors available, various factors. So, the boy failed to receive proper care, at the proper time, and as a result, the boy died. So, it was during the dengue outbreak, which is definitely a deadly disease, but at the same time, which is not something, which should necessarily lead a person to death.


Which can be perfectly under control, with the kind of scientific knowledge and medicines, we have in today's world. So, it is very unfortunate that, we lost a valuable life, that too a small little boy. So, one of the reasons, why this is happened or why such incidents happen quite frequently in today's world, particularly in resource scarce countries like India, is because of the scarcity of resources.

More than anything else, it is a scarcity of resources. But sometimes, people say that even the attitude of people also matter. I am not getting into the attitude issue here. This issue, this lecture is primarily focused on the scarcity problem.

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Scarcity

- India ranks among the lowest in the patients-number of beds ratio globally, with 0.9 beds per 1,000 population.
- In India 200,000 people need a new kidney every year and 100,000 need a new liver, but only 2 to 3 percent of the demand for new organs is met. [Aarti Vij, Head of the Organ Retrieval Banking Organisation (ORBO) at All India Institute of Medical Sciences (AIIMS)]
- Almost 10 lakh people suffer from corneal blindness and await transplant.
- India's organ donation rate at 0.34 per million is among the lowest in the world.
- All over the world, there is a shortage of organs and many people lose their life which otherwise can be saved.



Before we get into the real issue, let us see, some of the facts, particularly with reference to India. India ranks among the last, in the patient's number of beds ratio, globally with 0.9 beds per 1000 population, which is very low compared to the global standards. See in India, 200,000 or 2 lakh people need a new kidney every year and 100,000 or 1 lakh need a new liver. But, only 2 to 3% of the demand for new organs is met. So, this is another side of the story, where again resources are scarce.

Again, almost 10 lakh people suffer from corneal blindness and await transplantation in India. India's organ donation rate at 0.34 per million is amongst the last in the world, in spite of the fact that, we are the second populous country in the world. And, there are a lot of other human resources, which are available in India. Lot of people die and there is a lot of scope, if proper harvesting is made of organs, with of course public awareness and other things, which we fail to achieve.

So, where is the failure. What is the reason for this failure, are things, which we have to explore? But, that is not the concern of this lecture. That is a different issue. That is an entirely social issue. This lecture is concerned with the problem of resource allocation. Resource allocation becomes a problem, because resources are scarce. That is why, I was pointing out these issues, these facts. And, this is not just a local phenomenon. All over the world this happens. There is a shortage of organs and many people lose their lives with, otherwise, can be saved. This happens everywhere in the world.

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What is Scarcity?

- Indicates a gap between demand and supply.
 - Demand is more – supply less.
1. The number of original Picasso paintings are scarce: [natural scarcity](#)
 2. The *Titanic* had lifeboats sufficient only to protect at most half its complement of passengers- those in first class and its crew: [quasinatural scarcity](#)
 3. India has about 6-6.5 lakh doctors but would need about four lakh more by 2020 to maintain the one doctor per 1,000 people ratio: [quasinatural scarcity](#)
 4. India has just one doctor for every 1,700 people, while the US has 2.5 doctors for 1000 patients: [quasinatural scarcity](#)
 5. US healthcare system excludes more than 44 million citizens, though it has sufficient number of personal: [artificial scarcity](#).

Interesting to see, what the notion of scarcity here means. When you are trying to tackle a problem like, this resource scarcity, we should also try to understand its conceptually, by distinguishing it from various other concepts. It indicates a gap between demand and supply. No doubt in that. It is a very simple problem, in that sense. But, there is of course, demand is more and supply is less. But, there are certain ways in which, we can understand scarcity. Scarcity itself, are there different kinds of scarcity.

For example, there is something natural scarcity, where certain things are very rare in this world. Say for instance, the number of original Picasso paintings are limited. So, it is impossible for everyone to have a Picasso painting in his home. So, that is a kind of scarcity, which has come out of the notion of rarity. Something is rare So, it is there is scarcity. But this is called natural

scarcity, which cannot be solved. You cannot increase the number of Picasso painting in the world. Because, whatever Picasso has done, they have done, they are there. So, and this is not going to impact as much because, we cannot do anything about it.

The other kind of scarcity is called quasinatural scarcity. Where the Titanic, for example, had lifeboats sufficient, only to protect at the most half of its complement of passengers, those in the first class and its crew. This is called the quasinatural scarcity. I have taken these materials to prepare this lecture, from a couple of materials, couple of books and some web resources. The details are given towards the end of this lecture.

And, India has about 6 to 6.5 lakh doctors total, but would need about 4 lakhs more by 2020 to maintain the ideal, one doctor per 1000 people ratio. This kind of a scarcity is again a quasinatural scarcity, which has a solution. The sad thing about this kind of a scarcity is that, both the Titanic example and the scarcity in the number of doctors, which are not really due to the reason that, there is the commodities are rare or we cannot produce more doctors. But, because of various social and other factors, economic factors, this has happened.

And, India has just one doctor for every 1700 people, while the US has a 2.5 doctors for 1000 patients. So, this is again an example for quasinatural scarcity. I am highlighting this quasi natural scarcity a little more because, that is something, which we are directly concerned with. And, also the next one is called artificial scarcity, which is typical example. The other side is available in the US healthcare sector, where the system excludes more than 44 million citizens, Though it has sufficient number of personnel.

There are sufficient number of beds, sufficient number of doctors and skilled other medical professionals, still the facility is not available, for a huge number of people, because of various factors, primarily because of economic factors. So, this is a kind of scarcity, which can be treated as artificial scarcity. We can definitely be resolved, easily resolved to some extent. We can put it in that way, if you really change the focus to certain other directions.

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The slide features a central title in red: "Need: for Health Care or for Health". Below the title, there are two columns of text, each with a blue heading. The left column is titled "Need for Health" and contains three bullet points. The right column is titled "Need for Health Care" and contains two bullet points. The slide is framed by two vertical black bars on the left and right sides.

Need for Health	Need for Health Care
<ul style="list-style-type: none">• There is illness but health care cannot deliver health.• Available medicine cannot do anything.• Though there is need for health, there is no need for health care.	<ul style="list-style-type: none">• Medicine can help to alleviate illness.• There is need for health care.

In this context, if you try to understand the concept of scarcity with special reference to health care. We can find that, we are referring to the need. So, there are two things, which we have to distinguish, the need for health and the need for health care. So, these distinction, we have to make at the very outset, before we get into more details about it. The problems of resource allocation within the healthcare sector. Let us try to see, how the need for help is different from need for health care in important ways.

So, need for health is, say for example, there is illness. But, healthcare cannot deliver health, because of various reasons. The primary reason is, there is no proper medicine for that particular illness. So, we do not know. We have no medicine developed for that particular illness and though, there is a need for health, there is no healthcare available. There is no medicine available. So, we cannot say that, there is a need for health care because the medicine is not available. (Refer Slide Time: 08:50)

Available medicine cannot do anything. And though, there is need for health, there is no need for health care. But, on the other hand, when we talk about the need for health care, medicine can help to alleviate illness. There is medicine available but what is happening there is need for health care. It is not able to do that for in full satisfaction. So, there is a lot of need, lot of people

need medicine, which is available, but they are not getting it. A social problem, which many societies face.

Due to various problems, see for example, sometime back in one of my earlier lectures, I have mentioned about a situation, where some Dalit children in India, they did not get vaccinated properly, because of their social status, they are Dalits. So, there is a social factor that played a crucial role in preventing these children from getting a very important healthcare.

So, there is a scarcity, which is due to some sort of social factors. It was not available for them. I do not know whether, we can call it scarcity even. It was a much larger issue than that. So, there is a need for health care in under such circumstances, but we are unable to provide it, though we have the ability to provide it.

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Scarcity of Resources

Radical Scarcity	Comparative Scarcity
There is no enough resources to treat all and hence some will be left untreated and die.	All have to be treated, but again some will die as their situation gets worse before their turn arises.


NPTEL

Now, when you again focus more specifically on the scarcity of resources. There are two ways in which, we can understand this concept. When we try to understand it conceptually, there is something called radical scarcity, where there is no enough resources to treat all and hence some will have been left untreated and some will unfortunately die. So, this will happen because there are no enough resources, a country may lack it or humanity as such may lack it. Certain resources are finite. We do not have infinite resources.

Then, on the other hand, there is something called comparative scarcity, where all have to be treated. But, again some will die as their situation gets worse, before their turn arises. This is again, due to some sort of a scarcity. Because we are right at one particular point of time, there is resource scarcity, there is no sufficient enough resources available to treat everyone. So, naturally some people will be left untreated and die.

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Scarcity in Medical Context

- **Scarcity of resources:** equipment, beds, drugs, time or excessive numbers of persons in need prevents hospitals from providing the required care to patients.
- No infinite resources and hence there will be scarcity.
- We may have to choose between patients: calls for a **rationing decision**.
- Fair distribution of resources that is scarce to the needy.
- **Identify the needy:** a set of rules to assure **fair distribution**.
- Puts all concerned in a difficult situation: the criteria?

Now, a little more specific try to understand the problem of scarcity in the medical context. We definitely refer to equipment, various medical equipment, which is there in, if you go to government hospital, we can find it. Most of the patients, who visit some of the government hospitals find it very difficult. Because, they do not have diagnostic test available within the hospital. For that, they have to go to, they have to depend on private diagnostic centers. Where they are charged huge amount of money. A definite cut back will go to the referring doctor or whatever.

So, this is a common system, unfortunately in many countries including India. Equipment, beds, number of beds is another problem. This is a common scene, if you go to hospitals particularly public sector hospitals, you would see, one bed is being shared by two or three patients. And many patients would be lying on the floor, with their relatives sitting near to them. So, there is no question of raising issues like confidentiality, privacy and other things. Safety or even hygiene factors are compromised very highly under such circumstances. All these happen, because of

lack of resources or resource scarcity. So, it is a very important problem. Then again, scarcity of drugs, time or excessive number of persons in need. (Refer Slide Time: 12:36)

This prevents hospitals from providing the required care. Scarcity problem is a universal problem. If in a country like India, which is a developing country, certain resources are limited, finite. Say for example, number of beds may be a problem here. Which may not be a problem in, say for example, in Sweden and Norway, which are highly developed countries.

And the health systems are also highly developed. But, at the same time, that does not mean that, every resource is plenty, available plenty in those countries. There are certain resources, which are scarce in every country because there is, in general, a scarcity of resources, particularly certain resources. When you refer to organs for transplantation, it is a universal problem. Everywhere, there is a scarcity. People are in queue. For several years, some people may have to wait and some people may die in that process.

And, we may have to choose between patients, which calls for a rational decision. One of the very unfortunate and sad scenarios, which we come across in today's modern medicine. Where there is a situation, where doctors or policymakers or government or other people or concerned stakeholders may have to choose between the patients. See for example, a hospital, a typical hospital might encounter such a problem, where two people are in need of a particular organ transplantation. Say for example, a kidney. And, only one kidney is available. So, what are the criteria, we can apply here to decide, which patient is in need of it.

And, sometimes you know, such circumstances will be even more worse than that, both of them are in urgent need of transplantation. So, what will you do? Of course, things may not happen in this way everywhere. Because, in the Indian situation, often patients play a very important role. They look out, they are looked out of, you know organs, which are in need. And, it is often their responsibility to find out organs or donors for the organs.

But, hypothetically there could be situations, where doctors are in dilemma, or hospital staff and management are in a dilemma, where certain resources are scarce like a ventilator, for example.

You have only five ventilators in the hospital. And, there are nearly about seven or eight patients, who need it very urgently. What will you do? How to rationalize? So, there is a process of rationing, which becomes necessary under such circumstances. And, that is quite understand, up to that point, everything looks fine. You need to have a rationing system. But, what should be the criteria, when you ration a particular process. (Refer Slide Time: 15:33)

Fair distribution is a criteria, no doubt about it. But, then again a fair distribution is a very vague term. A fair distribution of resources, that is all fine. But, what you mean by fair distribution. On what criteria, under on the basis of which criteria, do you distribute resources. Again you can say that, need is a criteria. So, you have to identify the needy, the most needy person or the most needy kind of people.

A set of rules, that assure, you know this fair distribution, you can come up with certain rules. You can stipulate that, these are the rules, which we are following to decide, who needs it more. But again, there are issues. What is the, on what basis, these rules are formulated. Puts all concerned in a difficult situation about the criteria. All would be wondering, which criteria can be treated as the most rational one.

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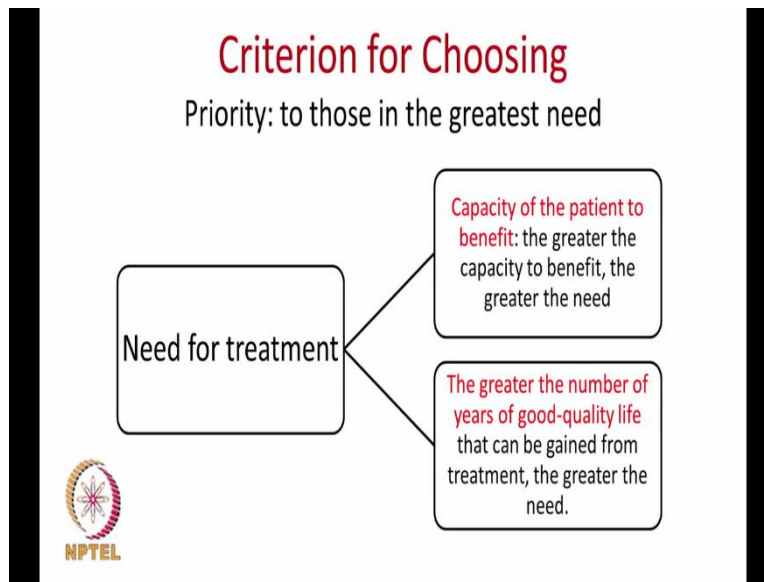
Rationing

- Fair distribution of any of the resources that is scarce to those who need it.
- Identify the needy on the basis of a set of rules that assure fair distribution.



So, rationing is a very difficult process. And, which it deals with fair distribution and also, the identifying the needy.

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We are trying to identify the criterion. And, the priority is need, no doubt, the greatest need. The person, who needs it the more, is the most needy person, that is fine. But, again when you try to understand the concept of need, this can again be understood in, at least in two different ways. The first one is capacity of the patient to benefit. The greater the capacity to benefit, the greater the need. So, there could be such situations, where certain patients would definitely need benefit more than, certain other patients from a particular organ transplantation.

For example, a kidney. So, there are two patients, who are need of a kidney. One patient, the doctors assess would probably live another 2 to 3 years, if he receives the kidney not more than that. Because, that patient is already a little weak and old. But, there is another patient, who is so much younger than this, the first one, who could lead an almost normal life, if he receives a kidney. So, there is a situation, where you have two patients. One is old, the other one is young. One is weak, the other one is a relatively strong. What will you do?

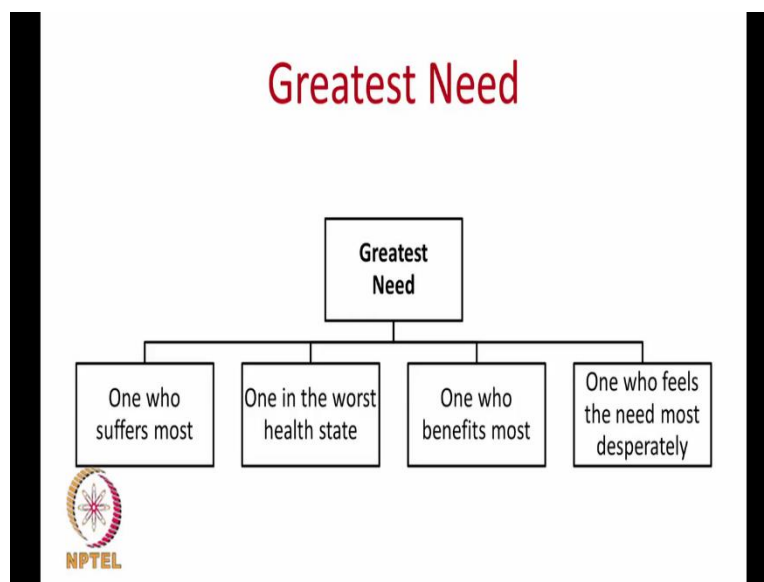
So, the common-sense logic, sometimes suggest that, you give it to the younger chap. But, this is gross injustice. That cannot be the criteria just because, one person is has become a little grown a little old. Can you say that; his life has no value afterwards? So, this is the kind of ageism, which

we should not be supporting. So, that also counters natural justice and also the value of life people have. Does age reduce the value of a person's life; we cannot say that.

Such an argument is definitely mistaken. So, we cannot subscribe to that. Another one is the greater the number of years of good life quality, good quality life. The greater the number of years of good quality life can be the criteria, that can be gained from the treatment, the greater the need. So, if you are sure, that the person is going to live another 20 years and another patient is not likely to live more than a 5 years,

So, let us go for the person, who is likely to live more than 20 years. Because, what is more valuable is the number of years you live, which is also actually not a very correct way of thinking. Which, I have already mentioned with regard to age, another one I am mentioning, with regard to the number of years, a person might live. There are various problems with that.

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Again, a little bit more about the idea of greatest need. We can understand this concept at least from four perspectives. The first one is, one who suffers most. The greatest need is a person who suffers most. This looks quite common sensical. Because a person is in need of it, because he suffers. And, definitely all medical interventions aim at elevating suffering, human suffering, a free the human being from suffering. So, naturally this looks a bit attractive

But, then again, another one is, one in the worst health state, which is also another form of suffering. But, there is something more to suffering because suffering can include various other factors as well. There are social factors. Because, suppose if there are many other human beings dependent on the person, say his entire family and his parents and children. All are dependent on one person. Then that makes a stronger case than the other one, if you apply these criteria.

Again, one who benefits most. So, this is another one. But what do you mean by benefiting most. Again, there are financial, social and other factors, that defines benefit. One who feels the need most desperately. So, here the reference is to the feeling of the patient. So, there are, there can be various such factors taken into account, when we talk about a need.

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How to Characterize Need?

Quality Adjusted Life Years	Disability-Adjusted Life Year
<ul style="list-style-type: none">• The QALY approach.• Examine what a patient stands to lose if she is not treated.• The loss of life-years a person might incur if left untreated.• But how can one be certain about this?	<ul style="list-style-type: none">• The DALY Approach.• Focus is on the global burden of disease in terms of disability.• But can we use this criterion in priority-setting?• Stake on human rights and dignity?



Now, though I have mentioned various such factors and various considerations to be adopted. There are at least two factors, which dominate our discourse. And, definitely the first one is, when you talk about the greatest need, definitely the one is life. The number of years a person is likely to live, quality of the life a person might have. Because, often there is a conflict between these two. These two may not go together. The number of years a person might live and the life, the quality of the life, which this person might have, may not coexist under all circumstances.

Sometimes after treatment, a person might live 20 years, but with a very less quality life. And on certain other occasions, a person might live only five years. But those five years will be highly

qualitative. So, there could be such issues. So, let us try to bring together ideal situations, where the longevity, the number of years a person might live as a result of treatment along with quality. So, it is a quality life, which you gain, which you live, which you are going to lead. And this is called the Q A L Y, QALY approach.


Because, quality adjusted life years' approach, where, what you examine is, what a patient stands to lose, if he or she is not treated. So, you basically look at, what is your loss, if treatment is not provided, whether you are going to lose your life. If you are going to lose your life, what is it that you are going to lose. Or are you going to lose 20 years or 10 years or five years or one year, they are all different. A person who is likely to lose 20 years and another person with one year, there is a difference.

The loss of life years, a person might incur, if left untreated. And, but how can one be certain about this. This is another a very philosophical question. Anticipating that, if this person receives the right treatment, he might live another 20 years' good life. But how can you say this. Life is so uncertain. Anything can happen to anyone. And, there could be several other factors, medical factors themselves might make the situation complicated. So, there is no guarantee that, the patient might live for 20 years. But, with some reasonable calculations, which we can arrive to the conclusion that, it might be possible.

And now, another approach is called the DALY approach, which is disability adjusted life year, which adds certain other factors as well along with the quality adjusted life years. The focus is on the global burden of disease in terms of disability. So, which also takes into account that factor, the global burden of disease in terms of disability. But, at the same time, the whole thing is, the whole question is, can you use these criteria in priority setting. Because, this might violate some of the very important human rights, which we consider are so central in our conception of humanity it's stake on human rights and human dignity.

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QALY Approach	DALY Approach
<ul style="list-style-type: none"> • QALY approach to allocation biases the healthcare system in favour of the young as they have more life years to gain from treatment than the old: ageism. • It favours patients who have conditions which are at present cheaper • It thus prevents research and development achieving. 	<ul style="list-style-type: none"> • Presupposes that life years of disabled people are worth less than life years of people without disabilities. • People with disabilities are disadvantaged twice by QALY- and DALY-based approaches. • They suffer the disability. • On top of this a year of life saved counts less for them.



So, let us have a very brief comparative look at QALY approach and DALY approach. In the QALY approach, allocation is biased. The health care system is in favor of the young, as they have more life years to gain from treatment than the old. I have already mentioned this. A person, who is much younger has more life years, quality life years ahead. So, naturally the preferences go to that person. Viewed from that direction, this is ageism. This seems to be prioritizing young people over old people.

Which is actually not a correct strategy. Again, it seems to be favoring patients, who have conditions, which are at present cheaper. That is also there. It thus prevents research and development achieving. Now DALY approaches, it presupposes that, live years of disabled people are worthless than life years of people without disabilities. Which also actually violates some of our conceptions of justice and human rights.

And, people with disabilities are disadvantaged twice by QALY and DALY based approaches. They already have disabilities in that way, there is a set of disadvantages, they already face. Now, with these approaches, their disabilities are doubled. So, they suffer the disability. And on top of this, a year of life saved counts less for them, which makes them even more disabled, socially and otherwise.

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The Idea of Value of Life

- Related to the idea of quality of life.
- The **value to the community** of the patient.
- Patient's **value to others** : to family, friends etc.
- nearer to her (children or family).
- What value the patient attaches to his/her own



life: **Value to oneself.**

Now in this context, we will also try to address or take into account, the concept of value. Value of life, which is again a philosophical concept and also a very vague and abstract concept. No doubt about it. What is valuable is different for different people and in different context. But, there is one thing, which to, which the concept of value is directly related the quality of life, the quality one has. Again, the quality is a vague concept. No doubt about it. The value of the community of the patient might come into picture on the one hand.

When you contemplate about the quality or value, the value of the community to which the patient belongs. And, the other people to whom the patient is related, as I already mentioned the family members, friends and all that. Then, what value the patient attaches to his or her own life value to oneself. So, it is value to community, value to others and value to oneself. So, all these concepts, we have to take into account. Probably, we can have a very comprehensive view by taking into account all these factors. No doubt, that possibility is also there.

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Various Relevant Factors

- **Capacity to benefit:** best chance of successful treatment.
- Someone's **past contribution** to society, or to the health-care system.
- **Ability to pay.**
- **Future or expected contribution** and **potential for contribution.**
- **Moral character** and **fault:** eg. A drunkard.
- If the illness or treatment have significance for **research purposes.**

But, there are also certain other relevant factors, which might be taken into account, when we think of a criteria or developing a criteria. The capacity to benefit, it is the best chance of successful treatment, which is a very favorite approach adopted by Economist and Utilitarians. Because, capacity of benefit is something, which can be measured, which can be easily, you know, you can quantify the capacity in terms of numbers. So, in that way, this enables us to design policies in a better way than any other approach.

And, some ones past contribution is another one. Because, if someone has contributed a lot to the society in terms of science or literature or anything else or sports. Such people's contribution have to be recognized. And, when it comes to matters of resource allocation, there should be preferred over others. Another one is ability to pay, which at the very outset looks quite objectionable.

But, at the same time at the practical level, this is something, which happens in many contexts, in many circumstances this happen. Those who are able to pay are getting treatment and scarce facilities. Future or expected contribution and potential for contributions. So, these are also can be taken as criteria. Someone who is a promising scientist or a promising person, who in certain field, who is capable of giving a lot of contribution to the society.

So, considering his potential and the possibility of future contributions, we can consider that person to be the most deserving to receive resources. Moral character and fault. See, this is another very interesting factor. There are two people, who have come for, say for example, liver transplantation. One person was a drunkard. So naturally, he has spoiled his liver because of his alcoholism, excessive alcoholism. Another person, who is a teetotaler, for some other reason, he had liver problems. And, both of them need transplantation and resources are scarce. There is only one person can be treated.

So, what should be the criteria? Whether, we can think of the moral character of these two people. And, consider the drunkard as not worthy to be treated because he has anyway abused his nature given kidney. And, his disease is the cause of his own actions. He is the alcoholic but other person is “innocent” in that way. But this also has its problems because though it appeals to the common sense a lot.

These two things are different. You know, what was your moral character and now you are going to take another moral decision. Whether a person is alcoholic or not to some extent, we can argue that, it is his choice. In our world, we recognize, we respect people’s rights. So, it is his or her choice to be alcoholic. And because of that, he or she should not be penalized by the society in this way.

If the illness or treatment have significance for research purposes, that is, that sounds quite logical. Because, if this particular illness for which, the patient needs a treatment, is going to have some positive consequences in terms of research, development of research, then we can consider that person.

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Equity Approach

- Insists that the principle governing any distribution of public resources must be equality.
- Everyone is entitled to the same concern, respect, and protection: everyone is equal; regardless of race, caste, gender, religion, region.
- Equality is fundamental and cannot be health-status dependent.
- Life expectancy or quality of life cannot be treated as criteria.
- Life has value because everyone is equal.

So, we had a look of many approaches. We began with the concept of research allocation. Then, we have discussed the criteria, we should employ in order to address the problems, the ethical issues. We have seen the importance of the concept of need or and also various criteria, which we can think of applying in certain context. One conclusion, we can arrive at from the, whatever discussion we had is that, a resource allocation issues are very complex, highly complex, which involves lot of factors.

It is not just medical, physical and psychological, but are also social, political even, and economical in many important ways. So, the socioeconomic factors are extremely important, when it comes to resource allocation in healthcare. And, it is very difficult to go with one approach saying that, one approach will have solution for all the problems. So, we may have to probably arrive at a better approach, which is based on largest conceptions of justice, which involves the notion of equity.

So, the equity approach seems to be more a balanced approach, where the insistence is on the principle governing any distribution of public resources must be equity. And, everyone is entitled to the same concern, respect and protection. Everyone is equal regardless of race, caste, gender, religion, region. And I must also add in this context. We have already included that. Regardless of all these factors also, age and certain other factors. So, all these factors should not come into picture at all. Because, what is more important is to recognize individual dignity, human dignity.

To prioritize, people on the base of these factors, amount to be doing injustice to people on several factors.

Equality is fundamental and cannot be health status dependent. Again, life expectancy or quality of life cannot be treated as criteria. Because, that also varies from people to people. And, people's conception about quality and various other things, also depend on various other personal subjective factors. Life has value and everyone is equal. So, this is our fundamental concern. The concept of human rights is also based on this.

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- Kuhse, Helga and Singer, Peter (Edts.) *A Companion to Bioethics* (Second edition), West Sussex, Wiley-Blackwell, 2009.
- *Campbell, Alastair*, *Bioethics: The Basics*, London, Routledge, 2013.



These are the references, based on which, this lecture is prepared.

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Web Resources

- <https://depts.washington.edu/bioethx/topics/resall.html>
- <http://www.cmaj.ca/content/157/2/163.abstract>
- <http://www.bioethicsinstitute.org/scarcemed>
- <http://www.ndtv.com/india-news/india-facing-acute-shortage-of-organ-donors-616190>
- <http://indiatoday.intoday.in/story/nearly-5-lakh-people-die-a-year-due-to-organ-scarcity/1/458880.html>
- <http://timesofindia.indiatimes.com/india/India-doesnt-have-even-1-hospital-bed-per-1000-persons/articleshow/10295898.cms>



And, these are some of the web resources, I have used for this. So, we will wind up this discussion on resource allocation now. Thank you.