

Antecedent Interventions

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WHAT'S COVERED

This lesson will explore antecedent interventions by defining and discussing the following:

1. Noncontingent Reinforcement (NCR)
2. Demand Fading
3. Task Modification
4. High-P Request Sequence
5. Functional Communication Training (FCT)
6. Environmental Modifications
7. Token Economy
8. Premack Principle
9. Antecedent Interventions Plan Example

1. Noncontingent Reinforcement (NCR)

Noncontingent reinforcement, or NCR, is the delivery of functional reinforcement for free on an ongoing time-based schedule. It is an antecedent intervention that may be used to reduce problem behavior. It can be used to address any function of behavior, regardless of the challenging behavior.

Access to reinforcers are delivered on a time-based schedule (determined by the BCBA), independent of the challenging or problem behavior. Basically, we are giving the patient what they want for free. If we are providing the reinforcer for free, it should not be necessary for the patient to engage in problem behavior to gain access to your attention or a toy that they want.

NCR is noncontingent, meaning it is not dependent on any behavior. This means that regardless of what is happening or what has occurred, the reinforcer is delivered. It is only delivered on the time-based schedule, not the behavior that the patient may or may not be engaging in at the time.



THINK ABOUT IT

Can you think of any examples of noncontingent reinforcement?

Let's explore a couple of examples of NCR, for attention and for tangible objects.



EXAMPLE NCR for attention: If you provide the patient with a lot of attention for free, they may be less

likely to engage in problem behavior to seek attention. For instance, a patient engages in pinching for attention on average every 10 minutes. The BCBA writes in the BIP to give attention every eight minutes in the form of social praise, questions about their day, and/or any additional form of attention when the timer goes off.

Video Transcription

I like your pretty coloring. I like blue. It's great.

➦ **EXAMPLE** NCR for tangibles: If you provide the patient with free access to toys (tangibles) on a time-based schedule, they may be less likely to engage in problem behavior to get access to the toy. For instance, a patient engages in tantrum behavior to play on the iPad on average every 30 minutes. The BCBA writes in the BIP to allow access to the iPad every 25 minutes when the timer goes off.

If we are providing stimulating items to engage with for free, NCR might also make it less likely for some patients to engage in behaviors that are maintained by automatic reinforcement.



THINK ABOUT IT

Can you think of examples of NCR for automatically maintained behaviors?

➦ **EXAMPLE** If the patient engages in repetitive visual stimulation behavior and we let them watch a stimulating video for free, they may be less likely to engage in the repetitive visual stimulation behavior.

Depending on the rate of occurrence of a challenging behavior, your BCBA may initially instruct you to noncontingently provide the reinforcer continuously. Then, slowly over the course of days, your BCBA will likely reduce the time that the patient has noncontingent access to the reinforcer, so long as problem behavior remains low.

Using an NCR procedure, the reinforcer specified in the BIP should be delivered using the reinforcement schedule specified in the BIP.

Video Transcription

Hey Andre, it's break time. Finish that page, OK? OK. Good break, buddy.



TRY IT

Practice with a friend. Have your friend play the patient and stick their tongue out for attention from you. You, as the behavior technician, will be providing attention noncontingently every ten seconds. Do not attend to the person sticking their tongue out.



TERM TO KNOW

Noncontingent Reinforcement (NCR)

The delivery of functional reinforcement for free on an ongoing time-based schedule.

2. Demand Fading

Demand fading is the gradual increase in demand requirements prior to delivering functional reinforcement. The task is reduced to a small amount, then gradually increased. It reduces inappropriate behavior maintained by social negative reinforcement or escape from demands.

There is a gradual increase in demand requirements before providing a reinforcer, for example:

1. The behavior technician delivers a demand to the patient (touch the picture of the dog) and then a break from additional demands is provided.
2. The behavior technician delivers two demands to the patient (touch the picture of the dog, point to your nose) and then a break from additional demands is provided.

As the problem behavior decreases with increased breaks, the number of demands are gradually increased.

🔗 **EXAMPLE** Zarah tears her paper when she has to do her math homework, which usually consists of ten problems. Initially, Zarah only has to complete two problems and then is given a break. Once she is not tearing her paper, she has to complete four problems before she gets a break.

Video Transcription

OK. We need to get a little bit of homework done, OK?

OK.

So I know you-- I know you don't really like math all that much. So what we'll do is, we'll start-- you can just do one problem. That's all you got to do, and then you can take a break with the DS.

All right.

OK? So all you got to do is do this first problem, and then you can have a break. OK?

OK.

OK. Great job. Looks good. Do you want to take another break with the DS?

Sure, OK.

OK. Let's put it there. This time we're going to do these two next ones.

OK.

And then that's all you got to do, and you can take another break.

OK.

OK?

All right. That looks good, buddy. We just got to do one more page. OK?

OK.

So all we got to do is do three more this time, and then you can take another break with your DS and be all done.


OK.

All right?

OK.

So let's do one, two, three. And you'll be done.

Demand fading can also be done in the reverse. Towards the end of a session when the patient may become fatigued, demands can be systematically reduced to prevent escape-maintained problem behavior from occurring. The BCBA may instruct the behavior technician to work on more difficult tasks in the middle of the session, fading demands in and then back out towards the end of session.

 **EXAMPLE** Binh engages in tantrums when answering “wh” questions. At the start of the session, the behavior technician asks Binh only one “wh” question, then provides a break. After the break, the behavior technician asks Binh two “wh” questions, then provides another break. A little later, the behavior technician asks Binh three “wh” questions, and provides a break again. Towards the end of the session, the behavior technician asks Binh only two “wh” questions before offering a break, then one “wh” question prior to break.



TRY IT

Practice with a friend. Have your friend play the patient and engage in yelling to escape a nonpreferred writing task. Ask them to write the word “teacher” ten times. You, as the behavior technician, will require them to write the word once and then give them a 30-second break before bringing them back to write the next word.



TERM TO KNOW

Demand Fading

The gradual increase in demand requirements prior to delivering functional reinforcement

3. Task Modification

Task modification involves changing some aspect of the antecedent task to make the activity less aversive to the patient. The less unpleasant or difficult a task becomes, the less the patient feels the need to escape the task.

Inappropriate behavior is reduced by altering some characteristic of the task so it is less nonpreferred to the patient. Some aspects of the task that might be changed include:

- materials
- difficulty level
- location
- order of tasks

As problem behavior decreases, the modifications to the task are gradually decreased.

➦ **EXAMPLE** Give choices and visual cues. Have the patient feel like they are in control with choices.

Video Transcription

Do you want green or orange?

Orange.

OK, ready? Then we'll start your timer. Watch carefully. [INAUDIBLE], out of the room, thank you. I want you to copy lowercase k. So, are you watching?

No.

OK, I need you to fix it. Thank you, ma'am. Good, big line down. Start right here in the middle. Nice job, [INAUDIBLE]. That looks beautiful.

Mine looks better than yours.

Is it better than mine?

Yes.

It looks beautiful. Should you circle that one?

Is it the best?

It is the best.

Is it better than yours?

You can say, "it looks so good."

It looks so good.

It does. Are you proud of yourself?

Yeah.

You should be, it's beautiful.

➞ **EXAMPLE** Use different stimuli. Patient does not like to color? Have them color their favorite TV show characters.

Video Transcription

Do the circle.

D.

Now connect them. Nice! You can say erase it, please.

Erase it, please.

Awesome.

Let's explore a few scenarios that put the concept of task modification into practice.

➞ **EXAMPLE** Dennis does not enjoy practicing eye-contact with his behavior technician. To modify the task:

- Complete the task on the swing (a preferred location).
- Put something funny on the behavior technician's face that Dennis likes.
- Let Dennis only glance at the behavior technician initially.

➞ **EXAMPLE** Sandra dislikes handwriting. To modify the task:

- Let Sandra choose where she sits, what she writes with, and what she writes on.
- Practice handwriting in rice, sand, or finger paint.
- Allow Sandra to choose her favorite thing to write about.

➞ **EXAMPLE** Pat finds math aversive. Modifications to the task:

- Practice math during cooking (a preferred activity).
- Let Pat choose when to complete math work.
- Teach math by letting Pat calculate how much money they need to purchase a preferred item.



TERM TO KNOW

Task Modification

Changes in some aspect of the antecedent task to make the activity less aversive to the patient

4. High-P Request Sequence

The **high-p request sequence**, also known as the high probability request sequence or the metaphor of behavioral momentum, involves performing several easier or preferred tasks prior to a more difficult task. This establishes momentum and allows the patient to access reinforcement for responding.

- High probability demand: Present a few (about three) instructions that the patient is very likely to respond to and that will not evoke inappropriate behavior.
- Low probability demand: Then, present an instruction that the patient is less likely to respond to or one that evokes appropriate behavior.

As responding increases and inappropriate behaviors decrease, start decreasing the number of high-p demands.

HINT

Easier tasks usually have a high probability, while difficult tasks have a low probability.

Here are several examples of the high-p request sequence in practice.

EXAMPLE

- Doreen engages in inappropriate behavior when she is presented with pictures of actions that she is learning.
- She already knows several actions.
- Present the known actions (high-p), and then present the action that she is still learning (low-p).

EXAMPLE

- Clea engages in screaming when asked to clean up.
- She has several instructions she will follow.
- Present the known instructions (high-p) and then present the instruction to clean up (low-p).

EXAMPLE

- Lex throws his pencil when told to write his name.
- Lex can draw simple pictures.
- Instruct Lex to draw preferred pictures (high-p), and then instruct Lex to write his name (low-p).

TRY IT

Practice with a friend. Have your friend play the patient who knows and responds to the instructions to clap hands, touch nose, and do a thumbs up. They are just learning to respond to the instruction “look at me.” You, as the behavior technician, present three known instructions (clap hands, touch nose, thumbs up) and then present the “look at me” instruction.

TERM TO KNOW

High-P Request Sequence

Also known as the high probability request sequence or the metaphor of behavioral momentum, involves performing several easier or preferred tasks prior to a more difficult task

5. Functional Communication Training (FCT)

Functional communication training (FCT) refers to a method where the patient is taught to use a form of

communication that results in accessing the same reinforcement as the problem behavior. Communication is prompted before the problem behavior occurs.

Communication also serves as the replacement behavior that the patient engages in instead of the challenging behavior. FCT can involve several forms of communication such as:

- picture exchange communication system (PECS)
- gestures
- spoken language
- sign language
- augmentative and alternative communication (AAC) devices

Make sure all or as many of the patient's new communication and requests are honored. This reinforces the use of functional communication rather than the challenging behavior. The functional communication must be easier and more effective than the challenging behavior so that they engage in it instead.

Let's look at some examples of FCT in practice.

EXAMPLE

- Rafael engages in inappropriate behavior (whining and then hitting) when he wants to escape demands from his behavior technician.
- The behavior technician teaches Rafael to touch "I need a break" on his AAC device instead of hitting.
- When Rafael starts to whine, the behavior technician ignores the challenging behavior and prompts him to touch "I need a break" on his AAC device.
- When he touches "I need a break," the behavior technician provides a break from the task demands.

Video Transcription

So we're going to keep going so we can finish our questions.

Oh, my God.

You need a few more. Ready? You can either do your questions, or you can ask for a break.

Can I have a break?

Yeah. I'll give you a minute. OK. Thanks for putting your feet down. All right. Are you ready?

I put them down. [STOMPING]

We need to focus, bud. What does "paint the town red" mean?

Go out, have fun?

Yeah, it does. Thanks for answering.

EXAMPLE

- Marie pulls her sister's hair when she wants a toy her sister is holding.
- The behavior technician teaches Marie to say "My turn" instead of hair-pulling.
- Marie says "my turn" and her sister hands her the toy.

EXAMPLE

- Charles flips his desk when given a challenging worksheet.
- The behavior technician teaches Charles to raise his hand for help instead of flipping his desk.
- When Charles raises his hand, his teacher provides assistance.

Video Transcription

[ERASING FURIOUSLY] [WRITING]

[ERASING FURIOUSLY]

[HEAD BANGS ON DESK]

[LOUD TAPPING]

I need help.

Oh you need help? OK. I'll help you. Look, what number is that?

6.

OK, and so we're taking away--

2.

OK, so let's count back from 6. 6,

[TOGETHER] 5, 4.

So what's the number?

4.

Good.



TERM TO KNOW

Functional Communication Training (FCT)

The patient is taught to use a form of communication that results in accessing the same reinforcement as the problem behavior.

6. Environmental Modifications

Environmental modification involves altering the physical environment in order to prevent or reduce the likelihood that the behavior will occur. Some examples of this include

- seating arrangement
- removing clutter
- organizing the space
- removing distracting stimuli
- preventing access
- removing potential hazards

Environmental modifications are based on topography, the physical shape or form of a behavior, and not the function, or purpose of the behavior.

Here are several examples of the use of environmental modifications.

EXAMPLE

- In reading class, Rahul likes to sit by Vivaan and poke or tease him.
- Rahul often gets in trouble with the teacher for not completing his work and bothering Vivaan.
- Rahul's teacher moves his seat so he is at the front of the classroom where he is watched and no longer sitting by Vivaan.

EXAMPLE

- When doing laundry, Mohammed does not finish sorting his clothes.
- Instead, he grabs a snack, watches television, and plays on his iPad, items or activities that are all located near the clothes dryer.
- Mohammed's caregiver teaches Mohammed to take his clothes to be sorted into another room with fewer distractions.

EXAMPLE

- Isla is asked to put on her shoes to go outside. Several pairs of shoes are on the floor.
- Isla does not follow the instruction.
- Isla's behavior technician removes the other shoes and places Isla's shoes in a prominent location near the door.



THINK ABOUT IT

What are some ways that you could make environmental modifications to make you less likely to engage in nonpreferred behaviors? Put unhealthy snacks away in a cupboard and place healthy snacks like fruit out on the counter? Turn off the TV when you are trying to study or get work done?

7. Token Economy

In a token economy, tokens are delivered contingent on the target behavior and the tokens are later exchanged for a backup reinforcer. Tokens are a tangible item (stickers, popsicle sticks, tickets, check marks, etc.) that can be delivered immediately after a behavior and later swapped for reinforcers.

➡ **EXAMPLE** Money is an example of a token. We are able to exchange it for many different reinforcers, such as food, clothing, leisure items, etc.

The number of tokens is determined by the BCBA. Tokens teach patients the concept of delayed gratification and are used in conjunction with differential reinforcement procedures.

➡ **EXAMPLE** Dhiraj earns a token (a sticker of his favorite TV character) for completing three activities. At the end of the session, Dhiraj can exchange his tokens for a menu of items using exchange rates created by the BCBA, including goldfish crackers (one token for three goldfish), iPad time (one token per minute), trampoline time (one token per minute), etc. Dhiraj counts his tokens and determines that he has enough to purchase 10 minutes of iPad time.

Video Transcription

OK, look. We're going to get three stars for bubbles, OK?

OK. Can you sit up? Put your hands in your lap? Thank you.

OK. Touch the boy.

[TAPS LOUDLY]

Wow, that was really good. Nice job.

Touch the girl.

[TAPS LOUDLY]

Oh my goodness, that was really smart.

[TAPS RAPIDLY ON DESK AND MAKES TICKLING SOUNDS]

OK.

Is she done?

Touch the girl.

[TAPS LOUDLY]

Wow! You got your three stars. You get bubbles. Ready? Whoop, let's try again.

Weee!

Weeee!

Good job.

8. Premack Principle

The Premack principle is a type of positive reinforcement where the opportunity to engage in a high-probability (more preferred) behavior is contingent upon the occurrence of a low-probability (less preferred) behavior. This helps to increase the occurrence of the low-probability behavior.



DID YOU KNOW

This can also be called first-then statements or “Grandma’s Law.”



EXAMPLE Alex is told that first she must complete her homework (low-probability behavior), then she can go outside and play with her friends (high-probability behavior).



EXAMPLE Gregg is told that first he must eat vegetables with his dinner (low-probability behavior), then he can have ice cream for dessert (high-probability behavior).



EXAMPLE You tell yourself that first you must study for your exam (low-probability behavior), then you can go grab a coffee with a friend (high-probability behavior).

Ultimately, access to desired or more preferred activities contingent upon completion of other activities (first ____, then ____).



THINK ABOUT IT

What are some ways that you can use the Premack principle to increase some of your own low-probability behaviors? For instance, cleaning the house, studying, doing the dishes, etc.

9. Antecedent Interventions Plan Example

Here is an example of the antecedent intervention plan portion of a BIP to address Josiah's escape-maintained behavior.


Antecedent Intervention Plan	Description
Teach Functional Communication (tangible)	<ul style="list-style-type: none">-Prompt Josiah to request preferred items/activities.-The form of requesting that will be taught is full-sentence mands.-The prompt that will be used to prompt the requesting behavior is indirect verbal. Can fade to partial and/or full echoic if needed.-Prompting must be done before the challenging behavior occurs, not as a reaction to it. The method for fading out the prompting is least-to-most prompting.
Choice	<ul style="list-style-type: none">-Maximize opportunities for Josiah to make choices throughout the day, especially

	<p>during demand situations.</p> <ul style="list-style-type: none"> -Encourage him to choose the order of tasks, the manner in which tasks are completed, or any other available choice, as long as the relevant task can still be completed. -Allow Josiah to have as much control of his own environment as you can, while still maximizing learning opportunities.
Teach Functional Communication (escape)	<ul style="list-style-type: none"> -Prompt Josiah to ask for what he wants when asked to do a nonpreferred task. He may want a break from the task, a decrease in the amount of the task, or help with the task, among other things. -You must first determine the particular thing you are going to teach Josiah to ask for (e.g., break or help). The particular request that will be taught is asking for a break, asking for help. -The particular form (e.g., vocal, sign language, pictures) of requesting that will be taught is verbal - full sentences. -The prompt that will be used to prompt the requesting behavior is indirect verbal. Prompting must be done before the challenging behavior occurs, not as a reaction to it. The method for fading out the prompt is least-to-most prompting.
Noncontingent Reinforcement (for escape and tangible)	<ul style="list-style-type: none"> -Provide access to tangibles for free, regardless of what Josiah is doing, on a VI-10 min schedule (approximately every 10 min). -Provide access to escape from demands on a VI-5min schedule (approximately every 5 min). Duration of access and breaks should be approximately 1 min.

HINT

Remember, antecedent interventions work to prevent the challenging behavior from happening.

Below is the full PDF again for reference.



SUMMARY

In this lesson, you learned about a series of antecedent interventions: 1) **noncontingent reinforcement (NCR)**, which is the delivery of functional reinforcement for free on an ongoing time-based schedule. It can be used to address any function of behavior, and its use is not dependent upon any behavior; 2) **demand fading**, the gradual increase in demand requirements prior to delivering functional reinforcement; 3) **task modification**, changing some aspect of the antecedent task to make the activity less aversive to the patient; 4) **high-p request sequence**, which involves performing several easier or preferred tasks prior to a more difficult task; 5) **functional communication training (FCT)**, a method in which the patient is taught to use a form of communication that results in accessing the same reinforcement as the problem behavior; 6) **environmental modifications**, involving altering the physical environment in order to prevent or reduce the likelihood that the behavior will occur; and 7) **token economy**, in which tokens are delivered contingent on the target behavior, and the tokens are later exchanged for a backup reinforcer. Lastly, you explored an **antecedent interventions plan example** of a BIP to address challenging behavior.

**Demand Fading**

The gradual increase in demand requirements prior to delivering functional reinforcement

Functional Communication Training (FCT)

The patient is taught to use a form of communication which results in accessing the same reinforcement as the problem behavior

High-P Request Sequence

Also known as the high probability request sequence or the metaphor of behavioral momentum, involves performing several easier or preferred tasks prior to a more difficult task

Noncontingent Reinforcement (NCR)

The delivery of functional reinforcement for free on an ongoing time-based schedule

Task Modification

Changing some aspect of the antecedent task to make the activity less aversive to the patient