

H — Infection and community health

6 statements · Recommended tool: CP-INFECT Infection Check · Validated scales: qSOFA / sepsis screen

H1 Exposed to an infectious disease

Group: Infection and community health | Type: Risk problem

Definition: The person has had contact with someone who has a contagious illness.

Risk factors: Close contact; shared room; travel; crowds

Warning signs: Fever; cough; rash; known contact history

Scenario. A nurse treats a patient later found to have tuberculosis.

S: "I was near him when he coughed."

O: Contact with a tuberculosis case; no symptoms yet; staff exposed.

Tools: CP-INFECT · qSOFA / sepsis screen **CarePath diagnosis:** Exposed to an infectious disease related to close contact and shared room (risk factors); no signs of the problem are present yet.

Interventions and rationale | Intervention | Rationale | ---|---| | Do hand hygiene. | Hands carry germs between people and surfaces. Cleaning hands before and after contact reduces the chance of spreading infection to others or to yourself. | | Wear masks. | A suitable mask, such as a fitted respirator for tuberculosis, filters the tiny airborne droplets that carry the bacteria and protects the person wearing it. | | Isolate the source patient. | Placing the infectious patient in isolation prevents the germs reaching other people while exposed staff are monitored and tested. | | Trace contacts. | Finding everyone who shared air with the case lets them be assessed and tested, so any early infection is caught and treated and further spread is stopped. | | Test. | Testing shows whether the exposed person has been infected, even before symptoms start, so treatment can begin early and others are protected. | | Follow protocol. | Following the local protocol makes sure that exposure is managed in a consistent, evidence-based way, with the right tests, reporting and follow-up. | **Expected outcomes** - Contact assessed. - Tests done. - No infection develops. - Precautions followed. **Linking the data to the diagnosis** This is a risk diagnosis because the nurse has been exposed but is not ill. She treated a patient later found to have tuberculosis, and the statement says, "I was near him when he coughed." She has no symptoms yet, so an actual infection diagnosis would be wrong; the risk rests on close contact and exposed staff. The plan stops spread and finds infection early through precautions, contact tracing and testing. The aim is that the contact is assessed, tests are done, precautions are followed and no infection develops.

CarePath diagnosis: Exposed to an infectious disease related to close contact and shared room (risk factors); no signs of the problem are present yet.

Intervention	Rationale
Do hand hygiene.	Hands carry germs between people and surfaces. Cleaning hands before and after contact reduces the chance of spreading infection to others or to yourself.
Wear masks.	A suitable mask, such as a fitted respirator for tuberculosis, filters the tiny airborne droplets that carry the bacteria and protects the person wearing it.
Isolate the source patient.	Placing the infectious patient in isolation prevents the germs reaching other people while exposed staff are monitored and tested.
Trace contacts.	Finding everyone who shared air with the case lets them be assessed and tested, so any early infection is caught and treated and further spread is stopped.
Test.	Testing shows whether the exposed person has been infected, even before symptoms start, so treatment can begin early and others are protected.
Follow protocol.	Following the local protocol makes sure that exposure is managed in a consistent, evidence-based way, with the right tests, reporting and follow-up.

Expected outcomes: Contact assessed. · Tests done. · No infection develops. · Precautions followed.

Linking the data: This is a risk diagnosis because the nurse has been exposed but is not ill. She treated a patient later found to have tuberculosis, and the statement says, "I was near him when he coughed." She has no symptoms yet, so an actual infection diagnosis would be wrong; the risk rests on close contact and exposed staff. The plan stops spread and finds infection early through precautions, contact tracing and testing. The aim is that the contact is assessed, tests are done, precautions are followed and no infection develops.

H2 Distress from isolation

Group: Infection and community health | Type: Actual problem

Definition: Isolation for infection control leaves the person lonely or anxious.

Possible causes: Isolation room; lack of visitors; fear; boredom

Signs and symptoms: Loneliness; tearfulness; restlessness; low mood

Scenario. A patient in isolation feels abandoned.

S: "I feel so alone in this room."

O: Isolation room; no visitors; tearful; restless.

Tools: CP-INFECT · qSOFA / sepsis screen **CarePath diagnosis:** Distress from isolation related to isolation room, as evidenced by loneliness and tearfulness. **Interventions and rationale** | Intervention | Rationale | ---|---| | Explain the reasons. | Understanding why isolation is needed helps him accept it as protection, not punishment, and lowers fear and feelings of abandonment. | | Allow calls. | Phone or video calls keep him in touch with family and friends, which lessens loneliness while keeping the infection-control barrier in place. | | Keep routines. | Familiar daily routines give a sense of normality and control, which supports mood and helps against restlessness and low mood. | | Provide activities. | Books, music, television or other activities occupy the mind and reduce boredom, which is a major source of distress during isolation. | | Visit regularly. | Regular, planned visits show that he has not been forgotten, give a chance to talk and let the nurse notice early signs of worsening mood. **Expected outcomes** - Within 2 days: says he feels less lonely. - Has contact by phone. - Routine kept. - Activities provided. **Linking the data to the diagnosis** This is an actual problem because distress is already present. The patient is in an isolation room with no visitors, is tearful and restless, and says, "I feel so alone in this room." The cause is the isolation itself, which fits this statement better than a general mood problem. The nurse cannot remove the isolation, so the plan lessens its emotional cost through explanation, calls, routines, activities and regular visits. The aim is that within 2 days he says he feels less lonely, has phone contact, keeps his routine and has activities provided.

CarePath diagnosis: Distress from isolation related to isolation room, as evidenced by loneliness and tearfulness.

Intervention	Rationale
Explain the reasons.	Understanding why isolation is needed helps him accept it as protection, not punishment, and lowers fear and feelings of abandonment.
Allow calls.	Phone or video calls keep him in touch with family and friends, which lessens loneliness while keeping the infection-control barrier in place.
Keep routines.	Familiar daily routines give a sense of normality and control, which supports mood and helps against restlessness and low mood.
Provide activities.	Books, music, television or other activities occupy the mind and reduce boredom, which is a major source of distress during isolation.
Visit regularly.	Regular, planned visits show that he has not been forgotten, give a chance to talk and let the nurse notice early signs of worsening mood.

Expected outcomes: Within 2 days: says he feels less lonely. · Has contact by phone. · Routine kept. · Activities provided.

Linking the data: This is an actual problem because distress is already present. The patient is in an isolation room with no visitors, is tearful and restless, and says, "I feel so alone in this room." The cause is the isolation itself, which fits this statement better than a general mood problem. The nurse cannot remove the isolation, so the plan lessens its emotional cost through explanation, calls, routines, activities and regular visits. The aim is that within 2 days he says he feels less lonely, has phone contact, keeps his routine and has activities provided.

H3 Outbreak risk in community

Group: Infection and community health | Type: Risk problem

Definition: Conditions in the community raise the chance of a disease spreading.

Risk factors: Poor sanitation; lack of vaccines; crowding; travel

Warning signs: Cluster of cases; rapid spread; alerts

Scenario. A school has low measles vaccine coverage and a case of measles has been reported in the neighboring town.

S: Teacher: "Many parents have not vaccinated their children."

O: Vaccine coverage 60%; measles reported in the neighboring town; crowded classrooms; no cases at the school yet.

Tools: CP-INFECT · qSOFA / sepsis screen ****CarePath diagnosis:**** Outbreak risk in community related to low vaccine coverage and crowding (risk factors); no signs of the problem are present yet.

****Interventions and rationale**** | Intervention | Rationale | |---|---| | Report. | Early reporting lets health authorities check the risk, offer support and organize a response before measles spreads in the school. | | Isolate. | Measles spreads easily through the air, so separating anyone with symptoms quickly limits how many others are exposed. | | Trace contacts. | Finding children and staff who were in contact shows who may be infected or unprotected, so they can be watched, advised or vaccinated in time. | | Vaccinate. | Vaccination builds immunity so that fewer children can catch and pass on measles. Raising coverage from 60% protects both individuals and the group. | | Educate. | Clear information about measles and vaccine safety answers parents' concerns, which helps them accept vaccination and recognize early signs. | | Follow health authority advice. | Health authorities have current local rules, supplies and outbreak plans, so following their advice makes the response consistent and effective. | ****Expected outcomes**** - Outbreak identified and reported. - Cases isolated. - Vaccination done. - No new cases within the incubation period. ****Linking the data to the diagnosis**** This is a risk diagnosis, because no measles case has occurred at the school yet. Vaccine coverage is 60%, measles was reported in the neighboring town, classrooms are crowded, and a teacher says, "Many parents have not vaccinated their children." These are risk factors, so an actual outbreak statement would be premature. The nurse reports, prepares to isolate and trace any cases, vaccinates and educates, following health authority advice. The aim is that any outbreak is identified and reported, cases are isolated, vaccination is done and no new cases appear within the incubation period.

CarePath diagnosis: Outbreak risk in community related to low vaccine coverage and crowding (risk factors); no signs of the problem are present yet.

Intervention	Rationale
Report.	Early reporting lets health authorities check the risk, offer support and organize a response before measles spreads in the school.
Isolate.	Measles spreads easily through the air, so separating anyone with symptoms quickly limits how many others are exposed.
Trace contacts.	Finding children and staff who were in contact shows who may be infected or unprotected, so they can be watched, advised or vaccinated in time.
Vaccinate.	Vaccination builds immunity so that fewer children can catch and pass on measles. Raising coverage from 60% protects both individuals and the group.
Educate.	Clear information about measles and vaccine safety answers parents' concerns, which helps them accept vaccination and recognize early signs.
Follow health authority advice.	Health authorities have current local rules, supplies and outbreak plans, so following their advice makes the response consistent and effective.

Expected outcomes: Outbreak identified and reported. · Cases isolated. · Vaccination done. · No new cases within the incubation period.

Linking the data: This is a risk diagnosis, because no measles case has occurred at the school yet. Vaccine coverage is 60%, measles was reported in the neighboring town, classrooms are crowded, and a teacher says, "Many parents have not vaccinated their children." These are risk factors, so an actual outbreak statement would be premature. The nurse reports, prepares to isolate and trace any cases, vaccinates and educates, following health authority advice. The aim is that any outbreak is identified and reported, cases are isolated, vaccination is done and no new cases appear within the incubation period.

H4 Unsafe water or sanitation

Group: Infection and community health | Type: Risk problem

Definition: Poor water or waste disposal raises the chance of illness.

Risk factors: Contaminated sources; poor waste disposal; flooding

Warning signs: Diarrhea outbreaks; skin disease; dirty water

Scenario. A village uses an open well close to a pit latrine.

S: Villager: "We drink from the well."

O: Open well 5 meters from a pit latrine; water cloudy; no water treatment; no diarrhea cases reported yet.

Tools: CP-INFECT · qSOFA / sepsis screen ****CarePath diagnosis:**** Unsafe water or sanitation related to a contaminated source and poor waste disposal (risk factors); no signs of the problem are present yet.

****Interventions and rationale**** | Intervention | Rationale | |---| | Teach boiling and treatment of water.

| Boiling or treating water kills or removes germs that cause diarrhea and other diseases, giving

households a safe drink even if the source stays contaminated. | | Improve sanitation. | Moving waste away from drinking sources, for example by safer latrine placement, stops germs from seeping into the water supply. | | Report. | Reporting tells the health and water authorities about the hazard so they can test the well and give resources or enforce safer practices. | | Educate the community. | Community understanding of how water spreads disease helps people keep safe habits, support changes and teach others, which lasts longer than a one-time intervention. | ****Expected outcomes**** - No diarrhea cases develop. - Diarrhea cases fall. - Community states hygiene steps. ****Linking the data to the diagnosis****

This is a risk diagnosis, because no one has fallen ill yet. The open well is 5 meters from a pit latrine, the water is cloudy, there is no water treatment, and a villager says, "We drink from the well." No diarrhea cases are reported, so an actual outbreak statement would not fit; the contaminated source and poor waste disposal are the risk factors. The plan prevents illness by making water safe and improving sanitation. The aim is that safe water is supplied, diarrhea cases fall or stay low and the community states hygiene steps.

CarePath diagnosis: Unsafe water or sanitation related to a contaminated source and poor waste disposal (risk factors); no signs of the problem are present yet.

Intervention	Rationale
Teach boiling and treatment of water.	Boiling or treating water kills or removes germs that cause diarrhea and other diseases, giving households a safe drink even if the source stays contaminated.
Improve sanitation.	Moving waste away from drinking sources, for example by safer latrine placement, stops germs from seeping into the water supply.
Report.	Reporting tells the health and water authorities about the hazard so they can test the well and give resources or enforce safer practices.
Educate the community.	Community understanding of how water spreads disease helps people keep safe habits, support changes and teach others, which lasts longer than a one-time intervention.

Expected outcomes: No diarrhea cases develop. · Diarrhea cases fall. · Community states hygiene steps.

Linking the data: This is a risk diagnosis, because no one has fallen ill yet. The open well is 5 meters from a pit latrine, the water is cloudy, there is no water treatment, and a villager says, "We drink from the well." No diarrhea cases are reported, so an actual outbreak statement would not fit; the contaminated source and poor waste disposal are the risk factors. The plan prevents illness by making water safe and improving sanitation. The aim is that safe water is supplied, diarrhea cases fall or stay low and the community states hygiene steps.

H5 Crowded living conditions

Group: Infection and community health | Type: Risk problem

Definition: Overcrowding raises the chance of spreading infection and stress.

Risk factors: Poverty; large households; lack of housing

Warning signs: Shared beds; poor ventilation; frequent infections

Scenario. Ten people share two rooms.

S: "Ten of us live in two rooms."

O: Poor ventilation; shared beds; windows rarely opened; no cough or fever at present.

Tools: CP-INFECT · qSOFA / sepsis screen ****CarePath diagnosis:**** Crowded living conditions related to crowding and poor ventilation (risk factors); no signs of the problem are present yet. ****Interventions and rationale**** | Intervention | Rationale | |---|---| | Teach hygiene. | Handwashing and covering coughs reduce the spread of germs in close quarters, where one sick person can quickly infect many others. | | Improve ventilation. | Fresh air dilutes airborne germs, so opening windows and improving airflow lowers the chance of breathing in infectious droplets in a crowded room. | | Screen. | Screening for cough, fever or other signs finds infection early, so it can be treated and the sick person separated before others catch it. | | Link to services. | Housing, social and health services can help with longer-term causes of crowding, which hygiene teaching alone cannot fix. | ****Expected outcomes**** - Hygiene and ventilation improved. - Infection spread reduced. - Referral to housing services. ****Linking the data to the diagnosis**** This is a risk diagnosis, because nobody is sick yet. Ten people share two rooms, beds are shared, ventilation is poor and windows are rarely opened. One resident says, "Ten of us live in two rooms." There is no cough or fever at present, so an actual infection diagnosis would be wrong; crowding and poor ventilation are the risk factors. The plan reduces spread through hygiene teaching, better ventilation, screening and links to services. The aim is improved hygiene and ventilation, less spread of infection and referral to housing services.

CarePath diagnosis: Crowded living conditions related to crowding and poor ventilation (risk factors); no signs of the problem are present yet.

Intervention	Rationale
Teach hygiene.	Handwashing and covering coughs reduce the spread of germs in close quarters, where one sick person can quickly infect many others.
Improve ventilation.	Fresh air dilutes airborne germs, so opening windows and improving airflow lowers the chance of breathing in infectious droplets in a crowded room.
Screen.	Screening for cough, fever or other signs finds infection early, so it can be treated and the sick person separated before others catch it.
Link to services.	Housing, social and health services can help with longer-term causes of crowding, which hygiene teaching alone cannot fix.

Expected outcomes: Hygiene and ventilation improved. · Infection spread reduced. · Referral to housing services.

Linking the data: This is a risk diagnosis, because nobody is sick yet. Ten people share two rooms, beds are shared, ventilation is poor and windows are rarely opened. One resident says, "Ten of us live in two rooms." There is no cough or fever at present, so an actual infection diagnosis would be wrong; crowding and poor ventilation are the risk factors. The plan reduces spread through hygiene teaching, better ventilation, screening and links to services. The aim is improved hygiene and ventilation, less spread of infection and referral to housing services.

H6 Poor hygiene practices

Group: Infection and community health | Type: Actual problem

Definition: Handwashing, bathing, or food handling habits put health at risk.

Possible causes: Lack of facilities; low knowledge; habits

Signs and symptoms: Dirty hands; body odor; infections

Scenario. A child often has diarrhea and does not wash his hands.

S: "I don't always wash my hands."

O: Child with frequent diarrhea; dirty nails; no soap at home.

Tools: CP-INFECT · qSOFA / sepsis screen ****CarePath diagnosis:**** Poor hygiene practices related to lack of facilities, as evidenced by dirty hands and body odor. ****Interventions and rationale**** | Intervention | Rationale | |---|---| | Teach handwashing. | Handwashing with soap at key times, such as after toilet use and before eating, removes germs that cause diarrhea and breaks the route from hands to mouth. | | Provide soap. | Without soap, handwashing is much less effective. Providing it removes a practical barrier that teaching alone cannot overcome. | | Model good habits. | Children copy what they see, so seeing adults wash hands correctly shows the habit in action and makes it more likely to be adopted. | | Educate the community. | Hygiene is shared across households, so teaching the wider community spreads the habit and lowers the number of people who can pass germs to the child. | ****Expected outcomes**** - Washes hands at key times. - Fewer diarrhea episodes. - Soap available. ****Linking the data to the diagnosis**** This is an actual problem because hygiene habits are already harming the child's health. He often has diarrhea, has dirty nails, has no soap at home and says, "I don't always wash my hands." The cause is a lack of facilities and habit, which fits this statement better than a risk of infection, because illness is already happening. The plan teaches handwashing, supplies soap and models the habit. The aim is that he washes his hands at key times, has fewer diarrhea episodes and has soap available.

CarePath diagnosis: Poor hygiene practices related to lack of facilities, as evidenced by dirty hands and body odor.

Intervention	Rationale
Teach handwashing.	Handwashing with soap at key times, such as after toilet use and before eating, removes germs that cause diarrhea and breaks the route from hands to mouth.
Provide soap.	Without soap, handwashing is much less effective. Providing it removes a practical barrier that teaching alone cannot overcome.
Model good habits.	Children copy what they see, so seeing adults wash hands correctly shows the habit in action and makes it more likely to be adopted.
Educate the community.	Hygiene is shared across households, so teaching the wider community spreads the habit and lowers the number of people who can pass germs to the child.

Expected outcomes: Washes hands at key times. · Fewer diarrhea episodes. · Soap available.

Linking the data: This is an actual problem because hygiene habits are already harming the child's health. He often has diarrhea, has dirty nails, has no soap at home and says, "I don't always wash my hands." The cause is a lack of facilities and habit, which fits this statement better than a risk of infection, because illness is already happening. The plan teaches handwashing, supplies soap and models the habit. The aim is that he washes his hands at key times, has fewer diarrhea episodes and has soap available.