

Acute Care Hospitalization Event Tree

What is the Acute Care Hospitalization Event Tree?

The Acute Care Hospitalization Event Tree is a “picture” or representation of the pathways that may lead to a hospitalization of a home health patient.

What are the purposes of the Acute Care Hospitalization Event Tree?

One purpose of the ACH Event Tree is to illustrate, in a very concrete way, the complexity of the problem of hospitalization among home health patients. Nationally, about 28% all home health episodes ends with a hospitalization—that’s more than a million hospitalizations per year (a huge problem!). There are no simple solutions to this problem. When we think about it, we quickly realize that the problem is multi-dimensional—not only the home health agency, but hospitals, doctors, and the patients/caregivers themselves contribute to the problem. These dimensions are all represented on the ACH Event Tree.

Another purpose of the ACH Event Tree is to help the people who are thinking about the problem of acute care hospitalization to think about the “big picture” and to better recognize and understand the many different causes behind ACH. Why is this important? Well, for at least a couple of reasons.

First, because when you recognize that there are many causes of ACH, you begin to realize that there will be many different approaches that you can take to reduce the need for those hospitalizations. Note: Not all the causes of ACH that are identified in the Event Tree will actually be problems in your particular agency. The more likely scenario is that there will be a few things that are the major contributors to ACH in your agency.

More importantly, when you really see and understand the causes for ACH in your own agency, you should be more successful in identifying the improvement strategies that actually address your agency’s problems. This in turn means that you should be more successful in reducing the need for hospitalization among your patients

How Do You Navigate the ACH Event Tree?

Turn to page 7. The top of the tree is the undesirable outcome of Acute Care Hospitalization. There are 3 main “branches” in this tree (the A branch, the B branch, and the C branch). Notice that the branches are color-coded and have “IDs” (e.g., A.1, A.2, etc.) so that you can more easily remember where you are on the tree.

Lines connect the “causes” underlying a particular failure. Turn to page 8. On this page, it’s pretty easy to see that there is an inherent idea of hierarchy in the tree...one problem may lead to another, which in turn leads to another, and so on, until the final “failure” or “problem” happens (that is, the ACH of a home health patient).

Unless otherwise noted, a particular failure may occur due to one of several different causes or combinations of causes (linked by lines). Occasionally, however, two problems may both have to occur before the failure occurs. This is noted on the tree by the use of an “AND” connector. You can see this scenario at the top of page 8.

Now, go back to the first page of the tree. Notice branches B and C. See the little dots at the end (these are called ellipses). These dots indicate that the B and C branches have been expanded further on a later page of the tree. So if you go to page 8, you can see how branch B has been expanded. And if you go to page 13, you can see how branch C has been expanded.

Patient Experiencing Acute Care Hospitalization

Now, look at the ACH Event Tree in a little more detail. Turn the first page of the Event Tree. Notice that at the top is the undesirable outcome that we are concerned with: “Patient experiences Acute Care Hospitalization” .

Underneath this outcome, connected by lines, you see the three main branches that lead to an acute care hospitalization of a home health patient: Hospitalization necessary and unavoidable, outlined in purple; Hospitalization necessary but avoidable, outlined in blue; and Hospitalization unnecessary, outlined in green.

Look a little more closely at the A branch – hospitalization necessary and unavoidable. This box is connected to three other boxes...these are 3 causes of a hospitalization that is necessary and unavoidable. So, you can have a necessary and unavoidable hospitalization because it is an elective admission or because of trauma that isn’t related to home health care (such as a car accident)

or because of limitations of therapeutic science (this box describes the scenario of a patient who is on a downward trend and there just isn't anything that medical science can do to stop that downward spiral).

Notice also that the A.1, A.2, and A.3 "branches" are not developed any further. This is because there may not be many opportunities for a home health agency to intervene with these causes in ways that would actually reduce hospitalizations.

Now look at the B branch. Again, notice the ellipses in the B box. This tells us that this branch has been expanded on another page. Go ahead and turn to the next page (page 8).

Hospitalization Necessary, but Avoidable

At the top of the page is the top of the B branch: Hospitalization necessary but avoidable.

Now, before we go any further with the tree, make sure you understand what is meant by "avoidable hospitalization" on the Event Tree. It does NOT mean that, at the time of the hospitalization, the hospitalization should not have happened. Instead, it means that it would have been possible to have prevented the deterioration of the patient's condition such that a hospitalization would not have been necessary.

The first scenario that that can cause an avoidable hospitalization is an inappropriate admission to a home health agency (see the box labeled B.1). Underlying causes of this problem are that the patient is sent to the agency AND the agency admits the patient (notice the AND that connects these "boxes" – both have to happen for the next problem will occur). Under B.1.2, things that can cause an agency to inappropriately admit a patient include missing information (box B.1.2.1.1 at the bottom left); inadequate knowledge or skills on the part of the intake staff or the field staff, or pressure on either intake or field staff to admit patients.

Although we haven't delved very deeply into the Tree yet, we can already see that possible intervention approaches to address these causes may include working directly with doctors/hospitals so that patients are not discharged too soon; working with discharge planners to ensure that complete patient information is available; building knowledge and skills of HHA staff; and changing agency culture so that staff do not feel obligated to accept patients that they know are not ready for home care. Taking this idea further, if an agency is accepting inappropriate patients because of internal pressures to do so, convening a staff in-service may not be an effective intervention. Perhaps a more effective intervention approach in this type of situation would be to determine the reason for the pressure and possibly work toward a shift in the culture of the agency.

Patient Care Plan Adequate, Implementation Incomplete

Now turn to page 11. This branch deals reasons why the patient care plan may not be implemented.

You can see very clearly that there are failures that are directly under the control of the HHA control (that's the left side of the page, under B.2.3.1) and failures that that are patient/caregiver driven (that's the right side of the tree, under B.2.3.2). Remember, one of the purposes of the tree is to help you think about the causes of ACH in your agency and about what kind of interventions might be effective to reduce hospitalizations. So, even though the right hand part of the tree focuses on failures on the patient/caregiver, you should be thinking about what things that you, the home health agency, could do to make these things less likely to happen if this is in fact a problem in your agency. For example, if there are financial reasons that a patient/caregiver is not implementing their care plan, you may be able to facilitate assistance from other community medical/social resources.

A few things you may want to think about when you get to this section of the tree are:

- the resources available within your agency and/or within the community;
- the communication patterns among your staff that are involved with a patient;
- the competencies of staff assigned to specific patients;
- and about how the care plan might need to be modified based upon the home environment, particularly if you feel the patient/caregiver may not be able or willing to implement the care plan

Hospitalization Unnecessary

Now turn to page 13. This is the beginning of the C branch of the tree that addresses hospitalizations that are actually unnecessary (that is, the patient's condition has not deteriorated to the point of needing hospitalization, but a hospitalization happened anyway). Failures related to direct admissions and to admissions via the Emergency Department are addressed on this and the next two pages.

Note that once again, the tree "recognizes" the fact that HHAs do not have complete control over ED visits and hospitalizations. However, a careful examination of the tree will likely bring to light several ideas for interventions that you can actually put into place that might drastically reduce hospitalizations of your patients.

How/when should the ACH Event Tree be used?

Now that you understand the purposes of the tree and how to navigate it and interpret it, what is next? How and when you can use the tree within your agency?

First, you can use this tool as a basis for discussion about what might be an avoidable or unnecessary hospitalization, about the many different reasons behind acute care hospitalization, and about possible approaches that might be useful in addressing these reasons. You could have these types of discussions with your QIO, within your QI team, with your administrators, and even with your field staff.

You could also use this tool before beginning your process of care investigation. It will give you more scenarios to consider as you choose care processes that you may want to more closely examine. It may also give you ideas for things that you may want to check for during your chart audits.

The Event Tree would also be useful after you have completed your process of care investigation. For example, your process of care investigation may reveal that some process or procedure had not been done consistently. If you can find this (or something related) on the Event Tree, it may help you to understand the reasons why that process had not been done consistently.

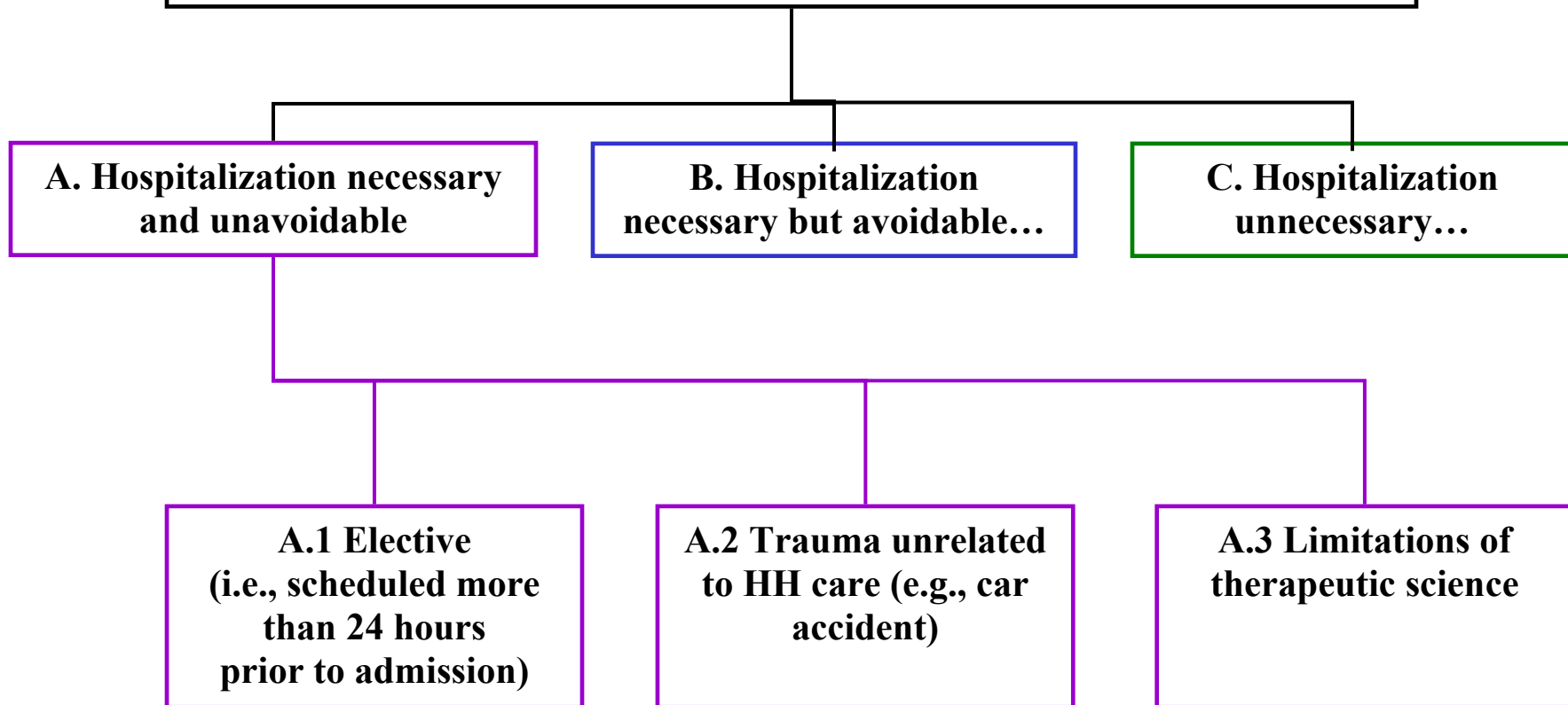
Taking this idea further, if you can understand the causes of failures, you will have a better chance of choosing intervention actions that are appropriate for the failures that you identified. This will help you as you develop your POA. For example, if you identify that a knowledge gap is the reason that a process has not been done consistently, then staff education might be an appropriate intervention; conversely, if the reason that something is not done consistently is because of inadequate care resources, then an appropriate intervention might be related to staffing issues, visit frequency issues, or even inventory issues. Furthermore, if the latter is the cause, an education intervention would be ineffective and wasteful.

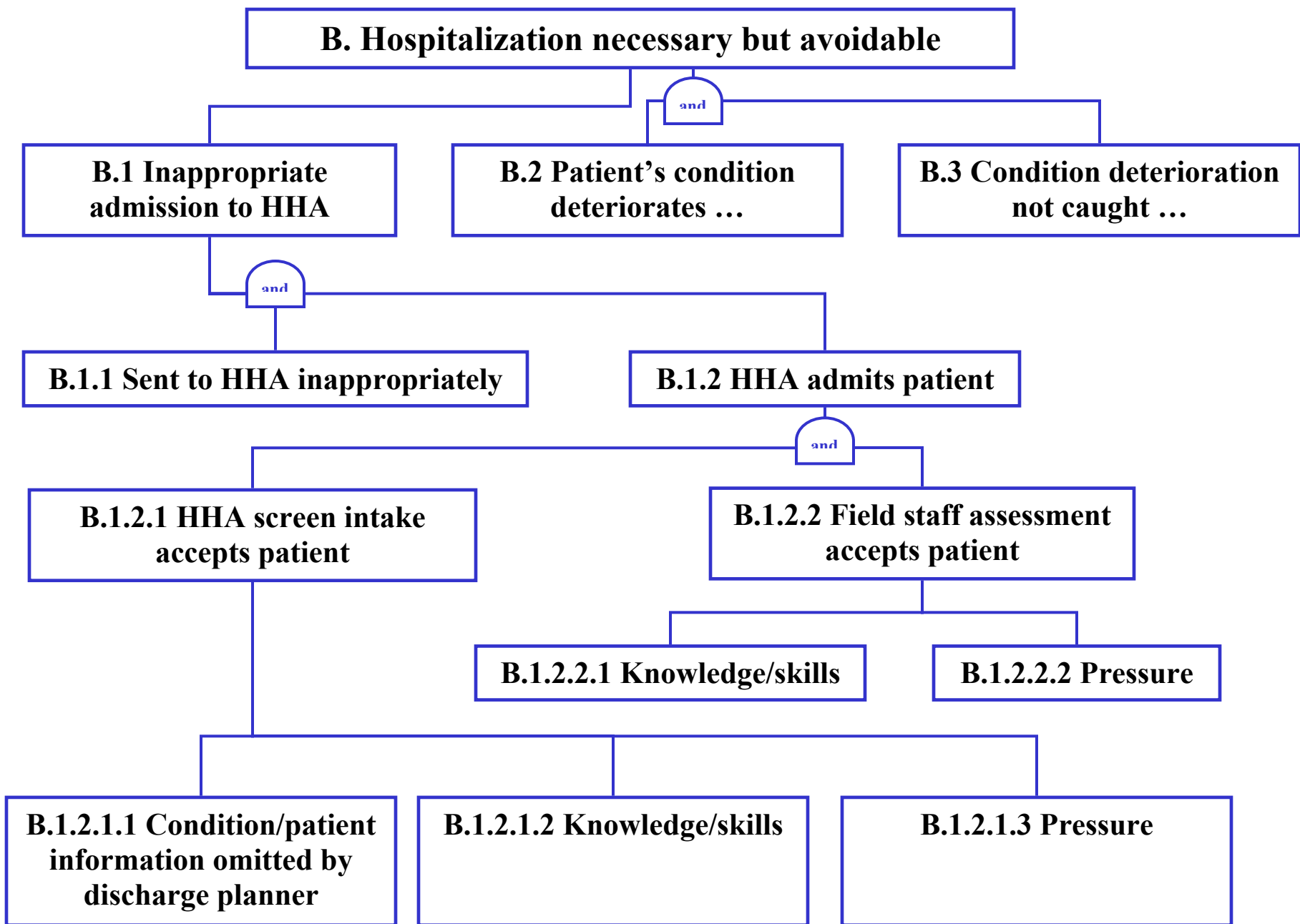
A re-visit of the event tree may also be useful and informative on a periodic basis after you have implemented some improvement strategies. If the improvement strategies that you have implemented seem NOT to be having a positive effect on your ACH rate (that is, if your ACH doesn't seem to be getting any lower), you may want to use the event tree to identify other failures that you might want to consider for intervention activities. You also may find, through monitoring activities, that your ACH had dropped substantially at first, but that the reductions have leveled off. In that case, it might be time to identify other failures for potential intervention activities (this may mean doing another process of care investigation, modifying your POA, etc.).

Of course, you could use the Event Tree in as many of these areas as you want.

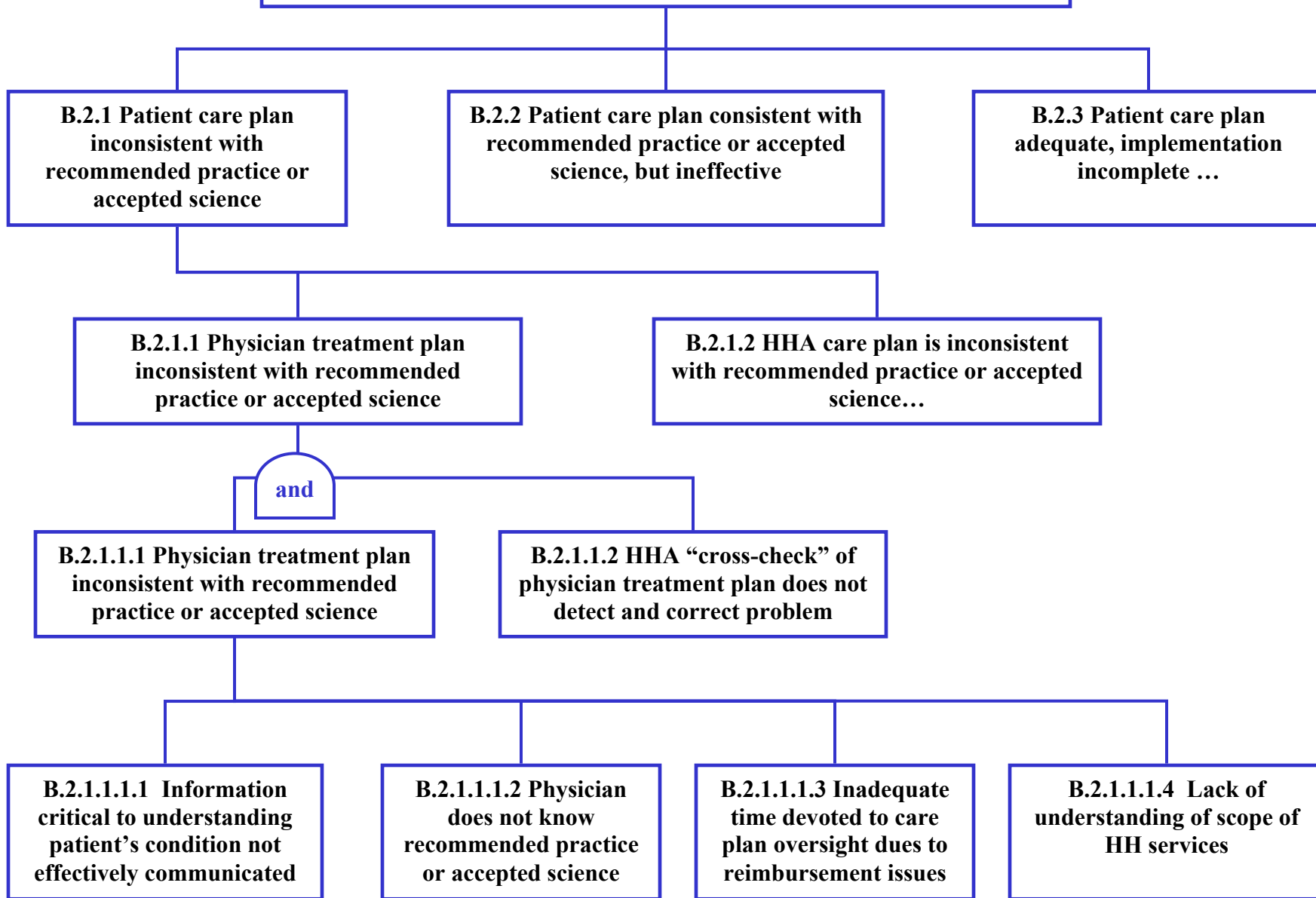
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Patient Experiences Acute Care Hospitalization

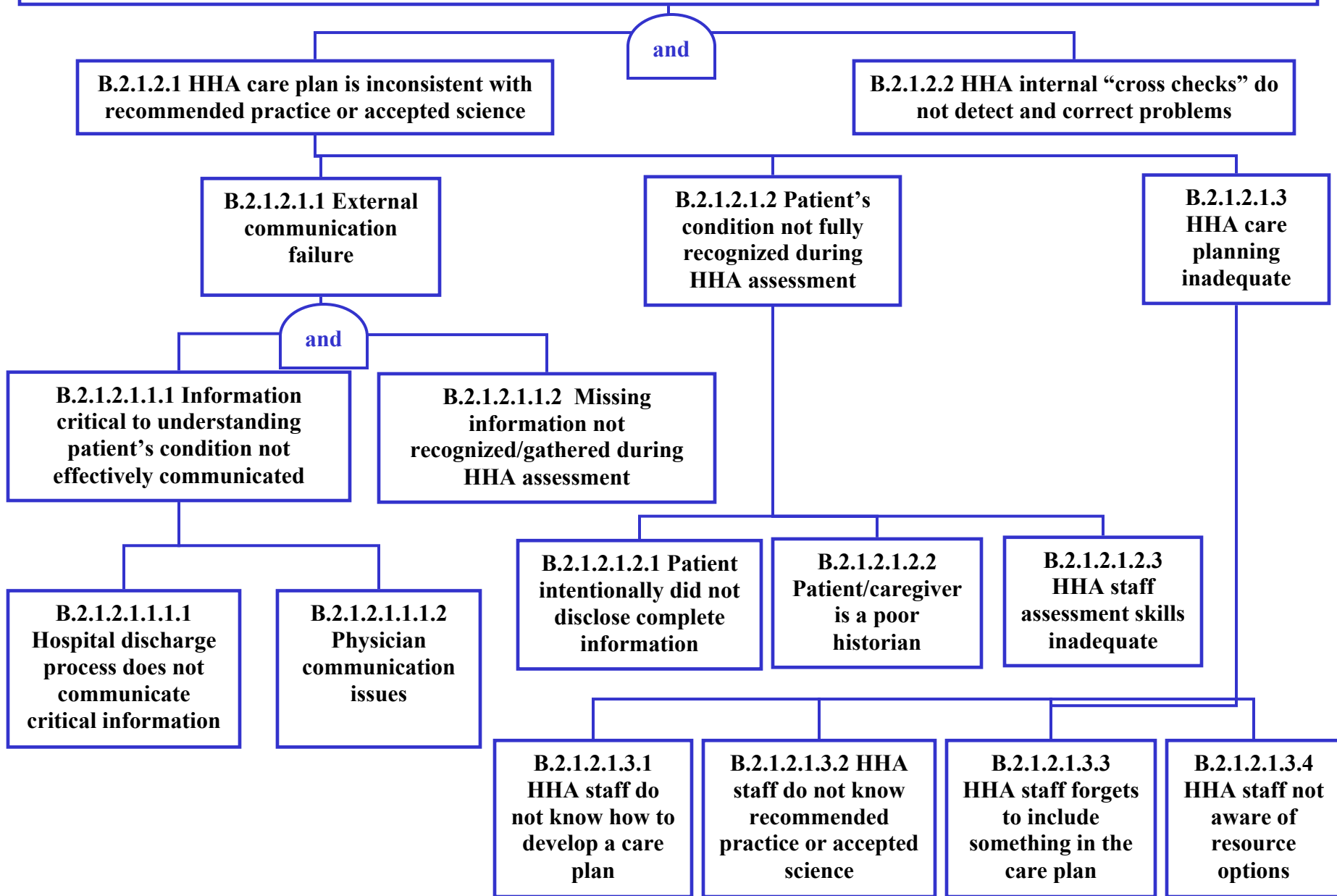




B.2 Patient's condition deteriorates



B.2.1.2 HHA care plan is inconsistent with recommended practice or accepted science



B.2.3 Patient care plan adequate, implementation incomplete

B.2.3.1 HHA staff do not completely implement care plan

B.2.3.2 Patient/caregiver does not completely implement care plan

and

and

B.2.3.1.1 Care plan implementation incomplete (by HHA staff)

B.2.3.1.2 HHA “cross-check” of implementation does not detect and correct problem

B.2.3.2.1 Care plan implementation incomplete (by patient/caregiver)

B.2.3.2.2 HHA “cross-check” of implementation does not detect and correct problem

B.2.3.2.1.1 Care plan not communicated to patient/ caregiver

B.2.3.2.1.2 Care plan not understood by patient/ caregiver

B.2.3.2.1.3 Unintentional non-execution by patient/caregiver

B.2.3.2.1.4 Required care resources not available

B.2.3.2.1.5 Conscious decision by patient/caregiver not to execute care plan

B.2.3.2.1.5.1 Caregiver unavailable

B.2.3.2.1.5.2 Other non-adherence

B.2.3.1.1.1 Required care resources not available

B.2.3.1.1.2 Care plan not communicated

B.2.3.1.1.3 Care plan not understood

B.2.3.1.1.4 Unintentional non-execution By HHA staff

B.2.3.1.1.5 Home conditions unstable, precluding implementation

B.2.3.1.1.6 Conscious decision by HHA staff not to execute care plan

B.3 Condition deterioration not caught

B.3.1 Sudden onset

B.3.2 Missed opportunity

B.3.3 First home visit not soon enough

and

B.3.2.1 Condition deterioration not caught through patient/caregiver monitoring

B.3.2.2 Condition deterioration not caught through HHA monitoring

B.3.2.2.1 HHA monitoring plan inadequate

B.3.2.2.2 HHA monitoring plan not executed

B.3.2.2.3 Change in patient status not recognized (e.g., HHA staff continuity)

B.3.2.1.1 No patient/ caregiver monitoring plan

B.3.2.1.2 Patient/ caregiver monitoring not possible given patient's condition

B.3.2.1.3 Patient/ caregiver monitoring plan inadequate

B.3.2.1.4 Patient/ caregiver monitoring plan not effectively communicated

B.3.2.1.5 Patient/ caregiver does not execute monitoring plan

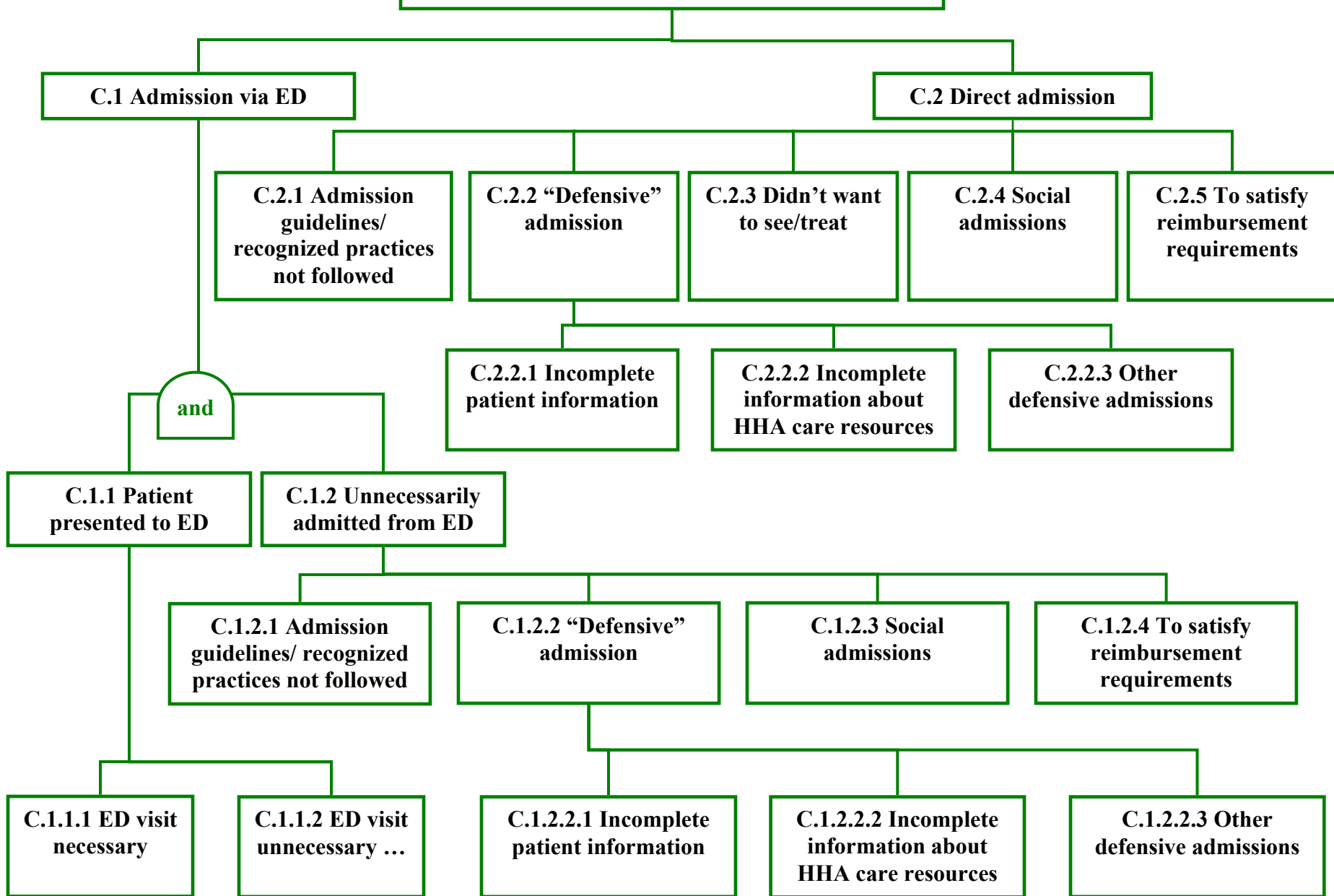
B.3.2.1.5.1 Patient/ caregiver does not recognize condition deterioration

B.3.2.1.5.2 Cannot contact HHA

B.3.2.1.5.3 Patient/ caregiver does not want to bother HHA staff

B.3.2.1.5.4 Patient/ caregiver financial concerns

C. Hospitalization unnecessary



C.1.1.2.3 Patient/caregiver unnecessarily accessed ED

