CLINICAL PRACTICE

Caren G. Solomon, M.D., M.P.H., *Editor*

Hoarding Disorder

David Mataix-Cols, Ph.D.

This Journal *feature begins with a case vignette highlighting a common clinical problem. Evidence supporting various strategies is then presented, followed by a review of formal guidelines, when they exist. The article ends with the author's clinical recommendations.*

A physically healthy 53-year-old woman is referred to her local mental health team for the management of depression and anxiety. On questioning, she reports that she has been living in the basement of her apartment building, eating in restaurants, and using a local gym for showers; her own apartment is so full of clothes, magazines, books, suitcases, and boxes jam-packed with items that she is no longer able to get in the door. The mere thought of discarding anything makes her intolerably anxious and upset. She reports having had difficulties discarding possessions for as long as she can remember. How should she be evaluated and treated?

THE CLINICAL PROBLEM

Hoarding disorder is a mental disorder that has been newly included in the *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition (DSM-5).[1] The cardinal feature of hoarding disorder is persistent difficulty in discarding or parting with possessions (Table 1). The most commonly saved items include newspapers, old clothing, bags, books, and paperwork. The diagnosis does not require that the saved items be worthless; valuable items are frequently saved also.[2] Persons with hoarding disorder attribute their difficulties in discarding items to the perceived usefulness or aesthetic value of the items, a strong sentimental attachment to the possessions, the wish to avoid creating waste, or a combination of these factors.[3,4] A criterion for establishing the diagnosis is that the prospect of discarding or parting with possessions causes substantial distress to the person. In addition, these difficulties result in the disorganized accumulation of possessions that clutter active living areas, substantially compromising their intended use, and cause clinically significant distress or impairment in social, occupational, or other important areas of functioning, including maintaining a safe environment for oneself and others.

Persons with hoarding disorder may not be able to sleep in their bed, sit in their living room, or cook in their kitchen (Fig. 1). In some cases, the clutter spills beyond the active living areas and interferes with the use of other spaces, such as vehicles, front and back yards, the workplace, and relatives' homes. In severe cases, hoarding can pose a range of health risks, including fire, falling, and poor sanitation.[5] Hoarding can also increase the risk of death from a house fire[5-7] or from being trapped under a "clutter avalanche." Quality of life is substantially affected,[8] and family relationships are often considerably strained.[9] Sometimes threats to health and safety extend to neighbors and others living nearby.[5] Persons with hoarding disorder who have poor insight may not necessarily report distress, and the impairment may be apparent only to close contacts or neighbors, but attempts by third parties to remove the possessions invariably cause distress and conflict.

From Karolinska Institutet, Stockholm. Address reprint requests to Dr. Mataix-Cols at Karolinska Institutet, Department of Clinical Neuroscience, Child and Adolescent Psychiatry Research Center, Gävlegatan 22 (Entré B), Fl. 8, SE-11330 Stockholm, Sweden, or at david.mataix.cols@ki.se.

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KEY CLINICAL POINTS

HOARDING DISORDER

- Hoarding disorder, newly included in the *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition, is characterized by persistent difficulty in parting with possessions, which results in severely cluttered living spaces, distress, and impairment that are not attributable to another neurologic or mental disorder.
- The majority of persons with hoarding disorder excessively acquire items that they do not need or for which no space is available.
- Many persons with hoarding disorder have limited insight into their difficulties and are reluctant to seek help.
- Hoarding disorder is easily diagnosed by means of a direct psychopathological interview with the affected person, ideally conducted in the person's home to assess the extent of the clutter and impairment.
- Currently, the intervention with the strongest evidence base is cognitive behavioral therapy that is specifically tailored to hoarding difficulties.

COEXISTING CONDITIONS

In clinical samples, approximately 75% of persons with hoarding disorder have a concurrent mood or anxiety disorder.[10,11] Symptoms of attention deficit–hyperactivity disorder, particularly inattention, are also common.[10] These coexisting conditions, rather than the hoarding, are often the main reason for consultation[12] and may contribute to the overall impairment and disability of a person with hoarding disorder, but the symptoms of hoarding disorder are impairing in their own right. Persons with hoarding disorder, particularly older persons, also have worse general health and more medical problems than age-matched controls.[13-15]

PREVALENCE AND NATURAL HISTORY

Community surveys have estimated the point prevalence of clinically significant hoarding to be approximately 2 to 6% among adults[16] and 2% among adolescents.[17] In one epidemiologic study involving the use of in-home psychiatric interviews and the DSM-5 criteria, the prevalence was estimated to be approximately 1.5% among both men and women.[15]

The course of hoarding is often chronic and progressive, with few persons reporting a waxing and waning course.[18] Hoarding difficulties typically begin early in life (often in the early teenage years) and tend to increase in severity as the person ages. Symptoms often start interfering with the person's everyday functioning by the mid-20s and cause clinically significant impairment by the mid-30s.[17-20]

RISK FACTORS

The causes of hoarding disorder are unknown, but it appears to run in families. Studies involving twins suggest that, in adults, approximately 50% of the variance in hoarding behaviors is attributable to genetic factors, with the remaining variation being attributable to nonshared environmental influences.[21] Reports of specific genes predisposing people to hoarding disorder have not been replicated consistently.[22,23] Persons with hoarding disorder often retrospectively report stressful and traumatic life events preceding the onset or exacerbations of the disorder,[18-20] but it is uncertain whether these factors are causally related. Despite common lore, available evidence does not indicate that material deprivation in childhood predisposes people to the disorder,[20,24] although longitudinal research is lacking.

STRATEGIES AND EVIDENCE

EVALUATION

The diagnosis of hoarding disorder is usually made on the basis of a direct interview with the person being evaluated to establish whether the diagnostic criteria are met. The Structured Interview for Hoarding Disorder[25] is available for this purpose (see the Supplementary Appendix, available with the full text of this article at NEJM.org).

Because hoarding may not always be the initial reason for consultation,[12] clinicians often need to ask direct questions, such as "Do you find it difficult to discard or part with possessions?"

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Table 1. **DSM-5 Diagnostic Criteria for Hoarding Disorder.***

Criteria†
Persistent difficulty discarding or parting with possessions, regardless of their actual value
This difficulty is due to both a perceived need to save the items and distress at the thought of discarding them
The difficulty in discarding possessions results in the accumulation of possessions that congest and clutter active living areas and substantially compromise their intended use; if living areas are uncluttered, it is only because of the interventions of third parties (e.g., family members, cleaners, or authorities)
The hoarding causes clinically significant distress or impairment in social, occupational, or other important areas of functioning (including maintaining a safe environment for self and others)
The hoarding is not attributable to another medical condition (e.g., brain injury, cerebrovascular disease, or the Prader–Willi syndrome)
The hoarding is not better accounted for by the symptoms of another mental disorder (e.g., obsessions in obsessive–compulsive disorder, decreased energy in major depressive disorder, delusions in schizophrenia or another psychotic disorder, cognitive deficits in major neurocognitive disorder, or restricted interests in autism spectrum disorder)
Specifiers‡
Excessive acquisition
Specify whether the difficulty in discarding possessions is accompanied by excessive acquisition of items that are not needed or for which there is no available space
Insight
Indicate whether hoarding beliefs and behaviors are currently characterized by one of the following:
Good or fair insight: the person recognizes that hoarding-related beliefs and behaviors (pertaining to difficulty discarding items, clutter, or excessive acquisition) are problematic
Poor insight: the person is mostly convinced that hoarding-related beliefs and behaviors are not problematic, despite evidence to the contrary
No insight or delusional: the person is completely convinced that hoarding-related beliefs and behaviors are not problematic, despite evidence to the contrary

* DSM-5 denotes *Diagnostic and Statistical Manual of Mental Disorders,* fifth edition. Adapted from the American Psychiatric Association.[1]
† For a diagnosis of hoarding disorder, all criteria must be met.
‡ Specifiers clarify features of the disorder but are not required for a diagnosis.

or "Do you have a large number of possessions that congest and clutter the main rooms in your home?" An affirmative answer to these questions can initiate a dialogue that may lead to diagnosis. Validated clinician-rated and self-administered questionnaires can also help with this process (Table S1 in the Supplementary Appendix).

A home visit is recommended for the assessment of clutter, impairment, and associated risks. If a home visit is not feasible, the clinician should try to gather additional information from reliable informants, such as a spouse or relative (with the patient's consent). This is particularly important for affected persons with limited insight, because they may underestimate the extent and consequences of their difficulties. Informants may also help establish whether the current presentation is long-standing or transient, whether third parties have intervened to clear away some of the clutter, and whether there are potential risks that require attention.

Photographs of the patient's home can also be very useful in helping to document the presence of clinically significant clutter[26] and to track treatment outcomes,[27] particularly when home visits are not possible or are impractical. However, photographs should not be a substitute for a thorough psychopathological interview.

Persons fulfilling the diagnostic criteria for hoarding disorder are further categorized according to additional features, or "specifiers" (Table 1). One feature is whether the person engages in excessive acquisition; this may involve taking free items, buying items in excess, or less frequently, stealing items that are not needed or for which there is no space available. Approximately 80 to 90% of persons with hoarding disorder engage in excessive acquisition[10,11,28]; these persons typically experience distress if they are unable to acquire items or are prevented from acquiring items. The other feature is the extent to which the person recognizes that hoarding-related

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Figure 1. Cluttered Living Space as a Symptom of Hoarding Disorder.

Persons with hoarding disorder may not be able to sleep in their bed, sit in their living room, or cook in their kitchen because of excessive clutter. In severe cases, hoarding can put people at risk for fire, falling, and poor sanitation.

beliefs and behaviors are problematic. Many persons with hoarding disorder lack insight into their difficulties and are reluctant to seek help for their problems.[29]

DIFFERENTIAL DIAGNOSIS

A diagnosis of hoarding disorder can be made only after other neurologic conditions (e.g., traumatic brain injury or brain tumor) and mental disorders (e.g., autism spectrum disorder or dementia) that can lead to the excessive accumulation of possessions have been ruled out (Fig. 2). Obsessive–compulsive disorder warrants particular consideration, given the previous conceptualization, in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*, of hoarding as a symptom of obsessive–compulsive disorder.[30] Hoarding can sometimes be a consequence of typical symptoms of obsessive–compulsive disorder (e.g., fears of contamination or harm or feelings of incompleteness); in such cases, obsessive–compulsive disorder should be diagnosed instead.[31] Both disorders may be diagnosed when severe hoarding appears concurrently with other typical symptoms of obsessive–compulsive disorder but is judged to be independent of these symptoms.[30]

Some persons with hoarding disorder live in unsanitary (squalid) conditions that may be an unavoidable consequence of severely cluttered spaces (i.e., clutter makes it difficult to clean) or that may be related to planning and organizing difficulties.[32] However, most persons who live in severe domestic squalor (where there is trash, rotten food, or excrement) fulfill criteria for other organic or mental disorders (e.g., dementia, psychosis, or obsessive–compulsive disorder) and consequently would not qualify for a diagnosis of hoarding disorder.[32]

Hoarding disorder should also be differentiated from normative collecting, a common activity that is both benign and pleasurable; this distinction is generally straightforward (Table 2). Most children and up to 30% of adults collect items at some point.[34] Collectors report the acquisition of, attachment to, and reluctance to discard objects, but they do not have the disorganized clutter, distress, and impairment that is characteristic of hoarding disorder. In contrast to hoarding, the process of collecting is highly structured and planned, very selective (i.e., confined to a narrow range of items), pleasurable, and often a social activity. Most collectors, even those who might be considered eccentric, are unlikely to meet the diagnostic criteria for hoarding disorder.[33,34]

RISK ASSESSMENT

The diagnostic interview provides an opportunity to carry out a thorough risk assessment. Attention should be paid to potential fire hazards, the risk of a clutter avalanche, the presence of rodent or insect infestation, and unsanitary living conditions that pose a risk to health. In addition, it is important to establish whether other vulnerable persons (e.g., children and elderly people) live with the person who is hoarding.

MANAGEMENT

Hoarding disorder has been recognized only recently, and there have been no large-scale clinical trials to guide management. Currently, the intervention that has the strongest evidence base for hoarding disorder is a multicomponent psychological treatment that is based on a cognitive

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behavioral model.[3] The treatment incorporates education about hoarding, goal-setting, motivation-enhancing techniques, organizing and decision-making skills training, practice in sorting and discarding objects, practice in resisting acquisition, and cognitive techniques designed to alter dysfunctional beliefs about the importance of possessions.[35]

The benefits of cognitive behavioral therapy for hoarding disorder were described initially in small case series[36] and uncontrolled pilot studies.[37] In a more recent two-site controlled trial, 46 patients with hoarding disorder were randomly assigned to receive either this cognitive behavioral intervention (involving >25 weekly, 60-minute individual therapy sessions plus home visits over a period of 9 to 12 months) or to remain on a waiting list.[38] After 12 weeks, the proportion of patients whose symptoms were rated by clinicians as much or very much improved was significantly greater in the therapy group than in the wait-listed group (10 of 23 [43%] vs. 0 of 23, $P=0.001$). After 12 weeks, patients in the wait-listed group were offered cognitive behavioral therapy; an assessment of all treated patients after 26 weeks of treatment showed improvement on therapists' global-improvement ratings for 71% of the patients (29 of 41 patients who began treatment). The therapy gains were maintained up to 1 year later, with the conditions of 62% of the patients who completed the original study (23 of 37 patients) rated as much or very much improved.[39] More cost-effective methods to deliver this cognitive behavioral intervention (e.g., group therapy, provision of self-help materials, peer-led support groups, and Internet-based therapy) have been tested in small, uncontrolled or wait-list–controlled trials, with results that are similar to those with individual face-to-face treatment.[40-43]

Two uncontrolled trials of cognitive behavioral therapy involving older patients (>65 years of age) with hoarding disorder showed higher dropout rates[44] and lower response rates,[44,45] as compared with the rates among younger persons, suggesting that older persons with this disorder may be particularly challenging to engage and treat. However, an uncontrolled pilot trial involving persons in this age group suggested a greater benefit of therapy that included cognitive rehabilitation techniques — targeting memory and executive function — and emphasized therapist-guided exposure to discarding and not acquiring possessions; 8 of the 11 participants were rated as having symptoms that were much improved.[46]

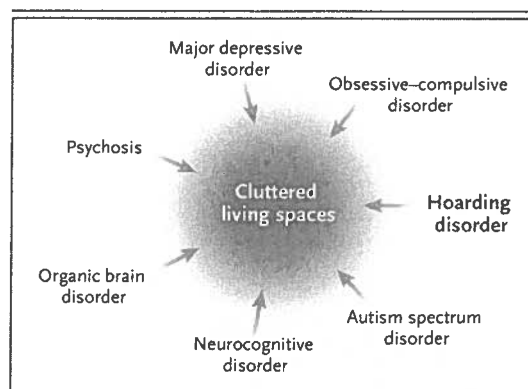

Figure 2. Differential Diagnosis of Hoarding Disorder.
A careful psychopathological interview is necessary to establish the differential diagnosis of hoarding disorder. The presence of cluttered living spaces alone does not necessarily signal the presence of hoarding disorder because cluttered (and sometimes unhygienic) living spaces may be the consequence of multiple conditions. Hoarding disorder should not be diagnosed if the symptoms are judged to be a direct consequence of an organic brain disorder, such as traumatic brain injury, brain tumor, cerebrovascular disease, or infection of the central nervous system. Similarly, hoarding disorder should not be diagnosed if the accumulation of objects is a direct consequence of another disorder listed in the *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition, such as autism spectrum disorder, intellectual development disorder, major neurocognitive disorder (i.e., dementia), schizophrenia or other psychotic disorder, major depressive episode, or obsessive–compulsive disorder. Finally, clinicians should easily be able to distinguish hoarding disorder from normative collecting, a widespread and benign human activity.

Pharmacotherapy — in particular, selective serotonin-reuptake inhibitors — has also been suggested as a treatment for hoarding disorder. However, data regarding the use of such treatment are limited and are derived largely from a small, uncontrolled study.[47] Some evidence has suggested that serotonin-reuptake inhibitors that have demonstrated efficacy in patients with obsessive–compulsive disorder who do not have hoarding symptoms are, at best, only partially effective in patients with obsessive–compulsive disorder who do have hoarding symptoms[16]; however, it is unclear how many of these patients would meet the DSM-5 criteria for hoarding disorder. In one open-label study of paroxetine, patients with hoarding disorder had improvement (including improve-

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Table 2. Differences between Normative Collecting and Hoarding Disorder.*

Feature	Normative Collecting	Hoarding Disorder
Object content	Very focused; objects are bound by a cohesive theme, with a narrow range of object categories	Unfocused; objects lack a cohesive theme, and the accumulation contains a large number of different object categories
Acquisition process	Structured; planning, searching for items, and organizing the collected items	Unstructured; lack of advance planning, focused searching, and organization
Excessive acquisition	Possible, but less common; primarily bought items acquired	Very common; estimates consistently >80%, with both free and bought items acquired
Level of organization	High; rooms are functional, and collected items are arranged, stored, or displayed in an orderly fashion	Low; the functionality of rooms is compromised by the presence of disorganized clutter
Presence of distress	Rare; for the majority of collectors, the activity is pleasurable, although for a minority, collecting may result in distress due to factors other than clutter (e.g., finances)	Required for diagnosis; distress is often a consequence of the presence of excessive clutter, forced discarding, or inability to acquire
Social impairment	Minimal; collectors have high rates of marriage, and the majority report forming and engaging in social relationships as part of their collecting behavior	Often severe; hoarding disorder is consistently associated with low rates of marriage and with high rates of relationship conflict and social withdrawal
Occupational interference	Rare; scores on objective measures indicate that collectors do not have clinically significant impairment at work	Common; occupational impairment increases with hoarding severity; high levels of work-based impairment have been reported

* Adapted from Nordsletten et al.[33]

ment in hoarding symptoms) that was similar to the improvement in patients who had obsessive–compulsive disorder without hoarding symptoms.[47] Double-blind, placebo-controlled trials of selective serotonin-reuptake inhibitors and other drugs are warranted in patients with primary hoarding disorder.

AREAS OF UNCERTAINTY

It is currently unclear whether animal hoarding (the accumulation of a large number of animals and the failure to provide minimal standards of nutrition, sanitation, and veterinary care) is a special manifestation of hoarding disorder or is instead associated with other mental health problems.[48] Clinical trials are needed to assess the short-term and long-term efficacy of psychological and pharmacologic treatments, alone and in combination, in persons with a well-established diagnosis of primary hoarding disorder. Direct comparisons between different active treatments are also needed.

Little is known about hoarding in children and adolescents and whether the DSM-5 diagnostic criteria require adaptation for these age groups. Given the particular difficulty in engaging and treating older persons with hoarding disorder, studies of early detection and intervention strategies and their effects on chronicity and general health are warranted. The development and evaluation of family-centered interventions are also warranted because hoarding disorder has a negative effect on the entire family.

GUIDELINES

There are currently no recognized professional guidelines for the management of hoarding disorder. Several countries have set up local or federal multiagency task forces (often including mental health, fire, pest-control, housing, legal, and social services) to handle situations involving persons with severe hoarding who do not seek or want help.[49]

CONCLUSIONS AND RECOMMENDATIONS

The woman in the vignette has had difficulties discarding possessions for as long as she can remember. These difficulties and the resulting clutter are causing social isolation, distress, and impairment. This constellation of symptoms is highly suggestive of hoarding disorder. As is true for many persons with the disorder, the motiva-

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tion for the consultation was anxiety and depression, rather than hoarding; hoarding symptoms are sometimes elicited only in response to specific questions. The initial assessment should rule out medical and mental disorders that can also result in the accumulation of clutter.

Once the diagnosis is made, by means of a structured psychopathological interview such as the Structured Interview for Hoarding Disorder,[25] a priority is the assessment of risk (e.g., fire or infestation) for the patient and any dependents, such as children or elderly persons. If a risk is identified, it may be necessary to engage other relevant parties (e.g., housing officials or social services), according to local legislation. If an experienced therapist is available, multicomponent cognitive behavioral therapy — including education about hoarding disorder, goal-setting, motivation-enhancing techniques, organizing and decision-making skills training, and practice in sorting and discarding objects and resisting the acquisition of new items — should be offered and outcomes closely monitored with the use of standardized rating scales (Table S1 in the Supplementary Appendix). It may be beneficial to engage available and willing family members in the therapeutic process in order to reduce family conflict and burden. On the basis of limited data from uncontrolled studies, a selective serotonin-reuptake inhibitor may also be helpful, but controlled trials are needed to determine the efficacy of this or other pharmacotherapy in primary hoarding disorder.

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