ABSTRACT

Self care and self-medication are critical components of modern healthcare. If people chose to seek professional medical care for all the minor ailments they suffer, the formal healthcare system would soon be overburdened. Therefore it is important for healthcare providers to understand how the public approaches such ailments and how non-prescription medicines are used. Factors that can influence a consumer’s ability to do so safely are reviewed over a series of articles. In this first review, the influences on decisions to treat an illness as minor, and therefore treatable without professional advice, are considered.

While there may be individuals that are incapable of self-medication, for the majority of populations there is likely to be a continuum of ability, which people move along with changing circumstances and experience. Reports do suggest that most consumers can and do self-medicate appropriately, however there will always be some that choose not to read labeling or even deliberately misuse agents. Therefore projections of safety for new non-prescription medicines must take account of the potential for misuse or deliberate abuse.

There is more potential than ever for the public to self-medicate, however there is enough cause for concern from the evidence so far to make it unwise for healthcare professionals to be complacent about their ability to always do so safely. Knowledge of the influences which determine self care behavior is an important pre-requisite to guide healthcare policy in this area.

Key words: self-medication; OTC medicines; review; minor ailments.

PART 1 – CORRECTLY INTERPRETING SYMPTOMS AS A MINOR ILLNESS

OVERVIEW

Self-diagnosis – and subsequent self-treatment – have been common practices across centuries of human history. Today self medication represents a cornerstone of modern health. Most health care in daily life is, in fact, self care\(^1\). While sometimes viewed with scepticism by
professionals in the past\textsuperscript{2} self care is now promoted in many countries as public policy. One clear impetus for this is to divert people from the formal healthcare system, in order to save resources while still delivering acceptable levels of care.

There is evidence that more people are taking greater responsibility for their own health\textsuperscript{3-7}. Levin (in 1990) felt that entrusting the public with a larger share of their personal health was in fact long overdue\textsuperscript{8}. The informed patient now appears to be part of modern life\textsuperscript{9}. However most healthcare workers have stories of questionable self care practices based on erroneous beliefs. A podiatrist, for instance, noted that some diabetics were soaking their feet in very hot water in an attempt to kill bacteria\textsuperscript{10}.

The purpose of this report is to discuss the factors that may influence a person’s ability to self-medicate effectively for minor illness. This is done with an emphasis on Western cultures, where formal mechanisms for regulating self medication are most developed. It is an important issue. With more agents being deregulated to non-prescription status, the public is being asked to undertake more complicated decision-making involving new and increasingly potent medicines.

**DEFINITIONS**

An agreed definition of what is a ‘minor illness’ is lacking\textsuperscript{11} however most would agree that symptoms associated with a short-term or self-limiting illness should be considered a minor ailment. A diverse range of common conditions would qualify\textsuperscript{12}. A 1996 survey found that over 90 percent of people in the United Kingdom (UK) had experienced at least one and an average of 5.2 ailments within a two-week period\textsuperscript{13}. In the United States (US), the more common minor ailments in surveys have been muscle/back/joint pain (experienced by 48 percent of respondents), cough/cold/flu/sore throat (also 48 percent), headache (43 percent), allergy/sinus (39 percent), heartburn/indigestion (32 percent), skin problems (31 percent), upset stomach/nausea (26 percent), and constipation/diarrhoea (17 percent)\textsuperscript{14}.

Products suitable for minor ailments have been defined as those which the average consumer can use to treat minor, self-limiting illnesses without the intervention of a prescribing, dispensing or monitoring health professional with relative safety and effectiveness\textsuperscript{15}. The World Health Organization notes that when using an over the counter (OTC) product safely, the consumer must perform a number of functions normally carried out by a physician: accurate recognition of the symptoms, selecting a product, setting of therapeutic objectives, determination of an appropriate dosing regimen, monitoring of the response to treatment and possible adverse events, all while taking into account medical history, contraindications, concomitant disease and concurrent medication\textsuperscript{16}. Manufacturers are required to give consumers enough information to allow usage of their products to occur with a minimum of risk. Typically, the condition treated can be self-diagnosed\textsuperscript{17}, and the success of the therapy monitored by that same person, with an expectation the condition will be short-lived, so that sufferers can be directed to visit
a physician if it continues or worsens\textsuperscript{18}. It is also generally assumed that the condition itself is sufficiently innocuous that self care measures will not have proven counterproductive if formal care is delayed.

**THE PUBLIC’S ABILITY TO INTERPRET MINOR SYMPTOMS**

Decisions involving health are influenced by a complex interaction of psychosocial, economic, and environmental factors\textsuperscript{19,20}. Many of those decisions involve risk, such as a decision to undergo surgery or take a medicine. When people perceive illness, a process is initiated to determine how to return to health. This will include an assessment of symptom severity and how it will impact day-to-day life.

Many reports have focused on how the public interprets symptoms\textsuperscript{21-34}. Gray \textit{et al}, for example, noted that the range of information assimilated into a minor ailment health repertoire varies in complexity\textsuperscript{35}. Complex sets of symptoms may be ranked as more or less worrying. Maiman \textit{et al} found mothers rated a cough for 2 days and a scratch on an arm/leg (infection) as more problematic for their children than a toothache or diarrhoea\textsuperscript{36}. Jones \textit{et al} looked at a set of 45 symptoms, some serious (convulsions, coughing up blood, paralysis of limbs) and others seemingly minor (stuffy nose, gas, rash)\textsuperscript{21}. The way symptoms were interpreted seemed to follow three themes. The first was the extent to which they were perceived as threatening, disruptive, or painful. The second was the familiarity of symptoms, while the third involved the degree of embarrassment they would cause.

Previous experience with an ailment is critical during self assessment\textsuperscript{12,37-40}. Most minor illnesses are common, so it is unlikely that a person will only experience one headache, a single episode of dry skin, or just one cold. A first episode of rectal bleeding may be alarming, however a person with a history of hemorrhoids in the past would be less inclined to be concerned by such an episode. Similarly, Fenichel indicates that while a woman is not expected to differentiate her first episode of vaginal candidiasis from other causes of vaginal discharge, she is trusted to recognized recurrences of typical symptoms\textsuperscript{41}.

Symptoms considered to be normal in one context may be considered more worrisome in another\textsuperscript{42}. In a community of manual laborers lower back pain may be viewed as a fact of life. Conversely, those in more sedentary jobs may perceive that a similar degree of back pain requires medical care.

**FACTORS THAT INFLUENCE CONSULTING BEHAVIOUR**

At times, and particularly when uncertain, a person will seek information to help in the process of assessing symptoms. British survey data found significant agreement for the statement – \textit{If I am unsure about a problem I always look for advice from a doctor or nurse}\textsuperscript{43}. When in need of information for a non-life-threatening condition, 43\% of Canadians first turn to their doctor, followed by going to the Internet (19\%), walk-in clinics (16\%), nurse or health phone line (7\%).
and pharmacists (7%)\(^4\). However people are likely to address health issues by first attempting to deal with them on their own\(^4\). To do this they first consider the information they already have – personal experience and things they have read or seen in the media. If uncertain what to do, they will look beyond themselves to seek advice from a circle of family, friends, and other trusted intimates. If they are still unsure or if their first attempts at self care are unsuccessful, they will move on to a third circle to consult with healthcare experts.

In assessing the appropriateness of self care, an important aspect is how long people are comfortable to carry on without input from a physician. Focus groups in the UK found people with colds considered a persistent one to be one lasting between four and seven days, at which point a physician should be consulted\(^13\). About half of Canadians (58.6%) in another report deemed persisting symptoms to mean longer than seven days, while 32.9% considered this to mean longer than two to four days\(^45\). Also in Canada, the average length of time with fever at the time of medical assessment for children was just over four days\(^46\). Using a different approach in the US state of Georgia, patients were categorized as either frequent or infrequent users of physician services, to provide some insight into when decisions were made\(^47\). Both groups were equally likely to seek medical care for serious symptoms. For mild symptoms, however, a so-called frequent user was more likely to seek medical care at the one-day point. Infrequent users, on the other hand, tended to self-treat for three to seven days, then seek a medical opinion.

Consultations involving children in pharmacies may be made early in the evolution of symptoms: within two days of symptom occurrence (42.5%) or between two and five days (43.8%) in one survey\(^48\). A smaller proportion (11.9%) visited a pharmacy after six or more days from the appearance of symptoms. In another small report, parents noted that decisions to seek advice for children were principally influenced by symptom severity and experience\(^49\). So parents with experience may be confident to observe less severe symptoms for 48 hours, whereas more severely unwell children would be brought for consultation within 24 hours. When these parents did seek advice for minor ailments, it was often done simply for reassurance that they were correct in their actions; however they were still willing to take advice if offered. Seven of 25 interviewees felt that they learned from such experiences, became more confident in their personal knowledge of situations, and eventually no longer saw a need to seek professional help. Younger parents seemed more likely to seek advice quicker.

For some conditions, there appears to be a reluctance to seek help. In a survey of heartburn sufferers, 95% stated they had experienced the symptom for one year or more, with 54% indicating five years. Yet 30% had never spoken to a doctor about their condition and 40% were not currently under a doctor’s care (although they had seen one in the past)\(^50\). Also regarding heartburn, Finnish researchers found sufferers had used OTC dyspepsia drugs for an average of 7.8 years at the time of the study\(^51\). It appeared that only about half had used these products on the recommendation of a physician or pharmacist.
Another aspect of assessing the public’s ability to interpret symptoms is agreement between patient and doctor as to what constitutes minor. A good proportion of the cases family doctors see in a day are in fact minor and do not require their attention. It is estimated that millions of general practitioner consultations a year are for conditions that may be self-treatable, with an early report finding that 14.5% of general physician workload was for minor conditions. This evidence might be interpreted as suggesting some problem with the public’s ability to assess the severity of illness. However, it is also possible that these people correctly judged that their symptoms were minor and other forces motivated them to seek care. For example, the sufferer may be aware that an illness was of little significance, but visited a doctor to help justify missing school or work. If a doctor’s visit (and any subsequent prescribed medicine) is covered by insurance, taking this step may be cheaper than going to a pharmacy to purchase a product. The need for more information was given by others as a reason for presenting to a doctor.

A fairer comparison than simply asking physicians about the severity of cases might be to ask both parties for their interpretation of the illness. Greater congruency between the two opinions of the presenting condition may bode well for relying more on lay assessment skills. Along these lines, researchers in the UK looked at physician-patient agreement on whether the reason for a visit was indeed ‘minor’. Of the 91 situations considered minor by the patient, 56% were considered not so by GPs. In another study, UK doctors perceived patients to be less ill than did the patients themselves. Observing that physicians and patients are often at odds in establishing the relevance of GERD symptoms, other researchers suggested a need for greater reliance on patient-based interpretations.

In a recent examination of professional versus patient interpretation, pharmacy researchers conducted an internet survey which elicited information on the nature of symptoms experienced and to whom patients reported those symptoms. An expert panel then assessed the probability of the symptom being attributable to the reason the respondent cited. Symptoms under investigation included headaches, dizziness/balance, stomach/GI problems, muscle aches, rash/itching. Most subjects thought their symptom(s) were related to a specific disease rather than medications or age. Expert and responder assessments as to the likely cause were quite similar. The authors concluded that most older adults seemed able to characterize symptoms correctly.

**SUMMARY**

The first step in successful self medication is establishing that the condition being treated is suitable for self care without professional supervision. Often this involves a decision as to whether a condition is serious or more minor. The evidence suggests that individuals typically rely on their own experience before seeking help. The decision to consult a doctor for a minor condition may reflect uncertainty and need for reassurance, persistence of symptoms, or failure of initial self care strategies, but can also reflect simple financial motivations. If members of the public err on the side of caution and consult unnecessarily, this represents an opportunity...
for education to allow more self-reliance in the future. However reluctance to consult for particular conditions may indicate a particular need to alert people to signs and symptoms that require professional assessment rather than self medication. Understanding the influences that encourage or discourage self care is an area of growing importance for healthcare professionals around the world.

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REFERENCES


