

Prevention in Public Health

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ABSTRACT

Disease prevention includes all activities carried out to prevent the occurrence of disease, detect chronic and malignant diseases early and apply appropriate therapy in a timely manner. Heart and blood vessel diseases, high blood pressure, diabetes, chronic lung diseases, lung cancer, breast cancer, cervical cancer, prostate cancer and colon cancer are just some of the diseases that take lives every day because they are detected late. The importance of prevention has made it a global public health priority today due to its significant positive health, social and societal impacts and its unequivocal connection to economic savings in the field of health services.

Keywords: Diseases, Health Care , Public Health, Prevention, Patients

1. Introduction

Diseases and health issues can be classified in a few important ways¹. The open frequently classifies diseases by organ or organ framework, such as kidney disease, heart infection, respiratory disease and so on. Another strategy of classification is by causative agent-viral disease, chemical harming, physical harm and so forward. In this conspire, causative specialists may be natural, chemical or physical. Organic specialists incorporate infections, rickettsiae, microscopic organisms, protozoa organisms and metazoa (multicellular living beings). Chemical specialists incorporate drugs, pesticides, mechanical chemicals, nourishment added substances, discuss toxins and cigarette smoke. Physical specialists that can cause damage or disease incorporate different shapes of vitality such as warm, bright light, radiation, noise vibrations and speeding or falling objects. In community health, infections are more often than not classified as intense or constant and as communicable (infectious) or noncommunicable (noninfectious).

2. Problems

Public health's approach to health issues in a community has been portrayed as a five-step prepare [2]:

- Characterize the health problem.
- Recognize the hazard variables related with the problem.
- Create and test community-level mediations to control or anticipate the cause of the problem.
- Actualize intercessions to improve the health of the population.
- Screen those intercessions to survey their effectiveness.

Thus, a fundamental errand of anticipation is to create mediations planned to prevent particular issues that have been recognized either through an evaluation prepare started by a public health organization or through community concern raised by an bizarre course of occasions. For case, measurable information may appear that a community has a tall rate of

cancer in comparison with other comparable communities. Or a arrangement of lethal crashes caused by inebriated driving may mobilize a community to request activity to anticipate encourage tragedies.

Public health has created orderly ways of considering approximately such issues that encourage the prepare of planning intercessions that anticipate undesirable health results. One approach is to think of avoidance on three levels: essential anticipation, auxiliary anticipation and tertiary anticipation. Essential anticipation anticipates an ailment or damage from happening at all, by anticipating presentation to chance components. Auxiliary avoidance looks for to minimize the seriousness of the ailment or the harm due to an injury-causing occasion once the occasion has happened. Tertiary anticipation looks for to minimize incapacity by giving restorative care and restoration services.

Thus intercessions for essential avoidance of cancer incorporate endeavors to dishearten young people from smoking and endeavors to empower smokers to stopped. In auxiliary anticipation, screening programs are set up to identify cancer early when it is still treatable. Tertiary avoidance includes the therapeutic treatment and restoration of cancer patients.

3. Examination

As portion of a schedule health care examination, history ought to incorporate medicine utilize, sensitivities, immunization history, dietary history, utilize of liquor and tobacco, sexual hones, security hones (situate belt and head protector utilize, weapon ownership) and a exhaustive family history³. Schedule estimations ought to incorporate appraisals of stature, weight, body-mass file and blood pressure. Screening ought to moreover be considered for household viciousness and depression.

Counseling by health care suppliers ought to be performed at health care visits. Tobacco and liquor utilize, slim down and work out speak to the tremendous larger part of components that impact preventable deaths. Whereas behavioral changes are habitually troublesome to accomplish, it ought to be emphasized that ponders appear indeed brief (<5 min) tobacco counseling by doctors comes about in a noteworthy rate of long-term smoking cessation. Instruction approximately self-examination (e.g., skin, breast, testicular) ought to too be given during preventative visits.

In expansion to the common suggestions pertinent to all people, screening for particular illnesses and preventive measures require to be individualized based on family history, travel history or word related history. For illustration, when there is a noteworthy family history of breast, colon or prostate cancer, it is judicious to start screening almost 10 years some time recently the age at which the most youthful family part created cancer.

4. Levels

There are three levels of application of preventive measures in disease control-primary, auxiliary and tertiary¹. The reason of essential avoidance is to forestall the onset of sickness or damage during the prepathogenesis period (some time recently the disease prepare starts). Cases of essential anticipation incorporate health instruction and health advancement programs, safe-housing ventures and character-building and identity advancement programs. Other illustrations are the utilize of

immunizations against particular infections, the practice of individual cleanliness such as hand washing, the utilize of elastic gloves and the chlorination of the community's water supply.

Unfortunately, infection or harm cannot continuously be dodged. Inveterate infections in specific some of the time cause impressive inability some time recently they are recognized and treated. In these cases, provoke intercession can prevent death or restrain incapacity. Auxiliary anticipation is the early determination and incite treatment of illnesses some time recently the illness gets to be progressed and disability becomes severe.

One of the most critical auxiliary anticipation measures is health screenings. The objective of these screenings is not to avoid the onset of disease but or maybe to distinguish its nearness during early pathogenesis, in this way allowing early mediation (treatment) and restricting inability. It is critical to note that the reason of a health screening is not to analyze infection. Instep, the reason is to financially and effectively sort those who are likely solid from those who may conceivably be positive for a infection. Those who screen emphatically can at that point be alluded for more particular symptomatic strategies. Screenings for diabetes and tall blood pressure are well known illustrations of health screenings, as are Pap smears and testicular self-examination.

The objective of tertiary avoidance is to retrain, re-educate and restore the quiet who has as of now brought about a inability. Tertiary preventive measures incorporate those that are connected after noteworthy pathogenesis has happened. Treatment for a heart quiet is an case of tertiary prevention.

Public health accounts of anticipation arrangement moreover look for to advance health value by centering on the social determinants of health and health imbalances⁴. There is an progressing exertion to advance 'upstream' measures planned to move forward health value or the health of the entirety populace or maybe than 'downstream' measures focusing on people. Essentially, there is much utilize of logical prove to recognize the nature of issues and most successful arrangements. There is moreover a unfaltering center on the part of industry causing public health issues (the 'commercial determinants of health') or undermining the political will to control commercial action. In this way, there is an intrigued in conceiving of public health and anticipation as a shape of social assurance in which there is a ethical basic to mediate (in sharp differentiate to contentions that underscore person duty for 'lifestyles' and resistance to the 'nanny state'). In that setting, 'prevention' entireties up an generally approach objective and 'preventive policymaking' is an approach to that end, counting a center on joined-up government, since the obligation for health enhancement goes well beyond health departments.

5. Patients

For numerous sicknesses, fruitful anticipation and treatment depend on troublesome principal behavioral changes, counting modifying eat less, taking up work out, giving up smoking, cutting down drinking, wearing covers to avoid contamination and following to complex pharmaceutical regimens⁵. Adherence is a common issue; up to 50% of patients come up short to accomplish full adherence and one-third never take their medications. Numerous patients with therapeutic issues, indeed those with get to to care, do not look for suitable care or may

drop out of care rashly. Adherence rates for short-term, self-administered treatments are higher than for long-term treatments and are contrarily related with the number of intercessions, their complexity and taken a toll and the patient's discernment of overmedication.

Patient reasons for problematic adherence incorporate basic absent mindedness, being absent from domestic, being active and changing every day schedule. Other reasons incorporate psychiatric disorders (depression or substance abuse), instability approximately the viability of treatment, need of information around the results of destitute adherence, regimen complexity and treatment side impacts. The rising costs of medicines, counting bland medicines and the increment in quiet cost-sharing burden have made adherence indeed more troublesome, especially for patients with lower incomes.

Patients appear superior able to take endorsed medicines than to follow to suggestions to alter their count calories, work out propensities or liquor admissions or to perform different selfcare exercises (such as observing blood glucose levels at domestic). For short-term regimens, adherence to solutions can be moved forward by giving clear informational. Composing out exhortation to patients, counting changes in pharmaceutical, may be accommodating. Since low utilitarian wellbeing education is common (nearly half of English-speaking US patients are incapable to examined and get it standard health instruction materials), other shapes of communication-such as outlined straightforward content, tapes or verbal instructions-may be more viable. Clinicians and health care conveyance frameworks ought to give socially and phonetically suitable health services.

To offer assistance make strides adherence to long-term regimens, clinicians can work with patients to reach assention on the objectives for treatment, give clear, brief data around the regimen, guarantee understanding by utilizing the "teachback" strategy, direct almost the significance of adherence and how to organize medication-taking, strengthen selfmonitoring, give more helpful care, endorse a basic dose regimen for all solutions (ideally no more than one or two dosages day by day), propose ways to offer assistance in recollecting to take dosages (time of day, mealtime, cautions) and to keep arrangements, endorse lower-cost bland medicines when accessible and give ways to streamline dosing (medication boxes). Single-unit measurements provided in foil wrappers can increment adherence but ought to be maintained a strategic distance from for patients who have trouble opening them. Medication boxes with compartments (eg, Medisets) that are filled week after week are valuable. Gadgets can give input to appear patients whether they have taken measurements as planned or to inform patients (or others) inside a day if dosages are skipped. Updates, counting cell phone content messages, are another viable implies of empowering adherence. The clinician can also enroll social back from family and companions, select an adherence screen, give a more helpful care environment with less boundaries and give rewards and acknowledgment for the patient's endeavors to take after the regimen. Collaborative programs in which pharmacists offer assistance guarantee adherence are moreover viable. Motivational meeting methods can be supportive when patients are undecided almost their therapy.

Adherence is also moved forward when a trusting clinicianpatient relationship has been built up and when patients effectively take an interest in their care. Clinicians can progress

persistent adherence by asking almost particular behaviors and obstructions in a nonjudgmental way. When inquired, numerous patients concede to deficient adherence with medicine regimens, plans for giving up cigarette smoking or locks in as it were in "safer sex" hones. In spite of the fact that troublesome, adequate time must be made accessible for communication of health messages.

6. Noncommunicable Diseases

Rapid demographic changes, especially in poorer regions of the world, will lead to an increment in the burden of noncommunicable illnesses in the nonattendance of preventive activity⁶. The noncommunicable infection plagues are basically preventable concurring to existing information. Over the final fifty years an broad body of inquire about has amassed in different settings utilizing a assortment of strategies counting research facility, clinical strategies and quantitative and subjective populace sciences. It is well known, for illustration, that the major built up hazard components common to numerous noncommunicable infections (smoking, high blood pressure, insufficient diet, need of physical action), are mindful for most of the event of untimely cardiovascular infection in created nations. This investigate has distinguished suitable techniques for the avoidance and control of noncommunicable infection and a few of these lessons have been connected with great impact in affluent nations. Endeavors to decrease populace cardiovascular infection hazard calculate levels, for illustration, have contributed to an critical decrease in cardiovascular disease death rates in numerous created nations and tobacco-attributable mortality is presently declining among men in a few of these countries.

The causes of the noncommunicable illness scourges in creating nations show up to be generally the same as in affluent nations. The challenge will be to decipher this information into viable activity in creating nations in arrange to dodge the unsurprising, but generally preventable, burden of noncommunicable illnesses. It is troublesome for poorer nations to center on medium-term preventive methodologies in the confront of more prompt health issues, indeed in spite of the fact that over 40 percent of all passings in the poorest 20 percent of the world's populace are as of now due to noncommunicable illnesses. The "double burden" of illness is being superceded by the "triple burden". To the unfinished plans of irresistible and noncommunicable infection avoidance and control, is being included modern health dangers ensuing on the modern stage of globalization. These unused challenges will possibly decline territorial and national health inequalities.

7. Professional Practice

As a proficient practice, public health is by and large conceptualized as the science (but moreover craftsmanship) of anticipating infection, drawing out life and advancing health (social, physical or mental health) of people and of their communities⁷. So conceptualized, public health includes the application of numerous distinctive disciplines - from science, open approach, insights, designing, medication, public health nursing, nutrition, health instruction, sociology, anthropology and trade fair to title a few. Public health interfacing with and locks in partners from each teach - to finish its objectives and to serve its mission. These are conveyed through a few administrations - the so-called basic public health administrations. Right now ten in number, these administrations agreeing to look for to:

- Screen health status to recognize community health problems.
- Analyze and examine health issues and health dangers in the community.
- Advise, teach and engage individuals almost health issues.
- Mobilize community associations to distinguish and illuminate health problems.
- Create arrangements and plans that bolster person and community health efforts.
- Implement laws and directions that secure health and guarantee safety.
- Interface individuals to required individual health administrations and guarantee the arrangement of healthcare when something else unavailable.
- Guarantee a competent open and individual healthcare work force.
- Assess viability, openness and quality of individual and population-based health services.
- Give inquire about for modern bits of knowledge and imaginative arrangements to health problems.

These administrations recognize the multi-layered determinants of open wellbeing (counting social, lawful, as well as commercial). For instance, the social environment decides health dangers (low salary and instruction levels, stuffing and individual security). Other social variables related to the utilize of health and therapeutic administrations, such as travel remove, the number of suppliers and indeed the accessibility of day-care administrations, also influence health. With so numerous components, on-screen characters, partners and segments influencing health, no one field can claim public health hone and there is no require to. The reason of public health practice is to guarantee health. It does not matter where it is “housed.” Health is guaranteed through intentional activities that avoid, oversee, treat, control, dispense with and if doable annihilate infections or health problems.

8. Errors

A medication error is any preventable occasion that may lead to unseemly medicine utilize or quiet hurt whereas the medicine is in the control of the health-care proficient or quiet⁸. Blunders may happen in endorsing, apportioning, planning arrangements organization or checking. Numerous ADRs are considered in hindsight to have been ‘avoidable’ with more care or thinking ahead; in other words, an unfavorable occasion considered by one prescriber to be an disastrous ADR might be considered by another to be a endorsing error.

Medication mistakes are exceptionally common. A few thousand medication orders are apportioned and managed each day in a medium-sized healing center. Later UK ponders recommend that 7%–9% of clinic medicines contain an blunder and most are composed by junior specialists. Common endorsing mistakes in healing centers incorporate exclusion of solutions (particularly failure to endorse normal drugs at the point of affirmation or release, i.e. ‘medicines reconciliation’), dosing mistakes, inadvertent endorsing and destitute utilize of documentation.

Most prescription mistakes result from a combination of failures by the person prescriber and the health-service

frameworks in which they work. Health-care associations progressively energize detailing of blunders inside a ‘no-blame culture’ so that they can be subject to ‘root cause analysis’ utilizing human mistake hypothesis. Avoidance can be bolstered by prescribers communicating and cross-checking with colleagues (e.g. when calculating measurements balanced for body weight or arranging suitable checking after sedate organization). Medicine blunders may moreover be decreased by clinical drug specialist back (e.g. to check the patient’s past drugs and current medicines) and electronic endorsing (which dodges mistakes due to messiness or genuine dosing botches and may be combined with a clinical choice back framework to take account of persistent characteristics and sedate history and give notices of potential contraindications and sedate interactions).

9. Telemedicine

From its investigation of healthcare patterns, the investigate group found that, whereas burgeoning healthcare investing, mostly driven by the ageing society, requires advance management, efficiency needs to be made strides⁹. Essentially, the analysts also recognized a design whereby progressively less prepared therapeutic staff are being called on to perform more and more complex assignments. Elective commerce models, care frameworks and fetched models are right now beneath improvement by both approach creators and private segments, such as patients being advertised treatment at domestic or maybe than having to remain in clinic overnight. People, family individuals and communities will be empowered by approach creators to take more possession of their claim well-being. The ‘caregiver economy’ is operational, created and extended by arrangement producers and businesses. To reinforce and enhance the care instruction is fundamental to bolster the unused social needs.

On the other hand, more and more electronic gadgets are interfacing everybody’s ordinary lives to each other. ‘Life-sharing’ implies sharing other people’s lives by communicating encounters and exercises through different communication channels. They can be utilized to diminish the depression of the elderly and upgrade the sense of having a place. Depending on the individual’s needs, diverse gadgets, instruments and administrations may be chosen to give suitable information collection and observing to avoid illness and improve sound living. Telemedicine has met with tall acknowledgment from both patients and specialists and advance advancement of the essential framework is quickly continuous. Moreover, expectant conclusion and anticipation will play a more vital part in taking care of a more advantageous and dynamic maturing populace. It can also be a key contributor for age-friendly cities.

In the innovation space, the investigate group has seen noteworthy progresses in on-site research facility examination innovations. These innovations empower healthcare experts to give way better persistent administration and quicker investigation and they guarantee enhanced clinical results. These gadgets ought to ended up less demanding to utilize in future, which would moreover render the gadgets more strong in terms of capacity and utilization. For case, lab-on-a-chip innovation permits methods which already required a chemical expository research facility to be performed on a scaled down scale, inside a convenient or handheld gadget. This scaled down innovation improves the comfort of testing and diminishes the fetched of investigation. By implies of these advanced instruments,

healthcare technologies will get to enormous information and make noteworthy advance commitments to customized healthcare, making accuracy medication a reality.

10. Conclusion

Health prevention is a set of measures and activities aimed at reducing the likelihood of developing a disease or injury, stopping or slowing the progression of the disease or reducing the resulting disability. Effective health prevention reduces the risk of an individual developing a disease, but also guides or supports individuals or groups to maintain control over existing diseases as adequately as possible, so that their health is not further impaired. Thus, preventive measures are necessary to reduce mortality, morbidity and disability, but also to make the health system sustainable, improve health equity and reduce the economic burden on society.

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