# HALK SAĞLIĞI USUL VE ÜSLUBU

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Yazar
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# TAKDİM

Zengin koleksiyoncu bir Van Gogh eskizini evinde sadece kendi gözlerinin görebileceği biçimde saklayabilir, ama bilgiyi zapt etmek imkânsızdır ve yaşamın yarattığı değerler arasında insanın tamamen sahiplenemediği, kontrol edemediği ve ehlileştiremediği tek değer bilgidir.

Bir cam parçası sayesinde, mikroptan uzayın derinliklerine kadar bilgimizin ne kadar büyük bir genleşmeye uğradığının farkında bile değiliz, bilginin bu muazzam devrimsel sıçrama kapasitesi, sadece bilimsel bakışa görünür ve izleri her yerdedir. Silisyumdan cam yapıp silikonu ehlileştiren karbon esaslı insan zekâsı, doğal güçlerin tamamen üstesinden gelemese de bir kısmını ve bilgiyi iyi kötü kontrol etmeyi artık başarıyoruz; sadece bilginin kaynağı doğaya hak ettiği gibi davranmayı öğrenmemiz yeterlidir ve gecikmeyecektir, şimdiden çok ağır bedeller ödedik. O cam parçası sayesinde başka canlıların da bilgili ve becerikli olabildiklerini ve haddimizi öğreniyoruz.

Kaldı yapay güçler. Bir yandan işlerimizi aklımızın ürünü yapay zekâya devretmeye hazırlanıyor, bir yandan da yarattığımız bu heyulaya alışmaya çalışıyor ve korkuyoruz; geçecektir, yaratığımızı sevmeyi öğrenmek zorundayız. İnsanın yarattığı bütün güçler, nükleer güç en iyi örnektir, iki yanı keskin birer kılıç olarak doğsalar da önünde sonunda ehlileşir ve doğrunun egemenliğine girerler, arada sırada uyanan bir volkan gibi homurdansalar da yaşamın sonu gelmez ve var olma inadına teslim olurlar.

Hastane klinisyen ve cerrahı, benim isimlendirmemle uzman pratisyen-icraatçılar, her seferinde tek bir hastaya teşhis koyarken; birinci basamak klinisyeni, diğer adıyla genel pratisyen, en azından teoride, hasta kadar sağlama da teşhis koyar. Halk sağlıkçısının teşhis ettiğiyse, insan topluluklarının sağlık ihtiyaçları ve sağlık planları, politikaları ve müdahalelerinin ham sonuçlarıdır.

Ham "sonuçlar" hazırlanıp yenmeye hazır hale getirildikten sonra, halk sağlığı jargonunda adı "gösterge" olur. Göstergeler ise kendiliğinden oluşmaz, onları mutfağa temizleyip de getirenler istatistikçiler ve epidemiyologlardır, halk sağlıkçılarsa onları istatistikçilerle birlikte pişirir ve sofraya koyar, gerekirse nasıl yeneceklerini de gösterirler.

Göstergeler neden bu kadar önemli? Onlar, insan topluluklarının sağlığını ölçmenin, bu toplulukların sağlık ihtiyaçlarını saptamanın ve ihtiyaca en uygun müdahaleyi planlayıp yürütmenin yegâne araçları ve gidişatın mihenk taşlarıdır. Göstergelerin hammaddesi verinin büyük kısmı rutin sağlık bildirimlerinden gelir. Bu türden veri, uzunluğu ülke sağlık sisteminin gelişmişlik düzeyine göre belirlenen listelere giren hastalıkların ayrıntısız verisidir. Rutin veri kayıt ve bildirim sistemi istatistikçilerin kontrolündedir ve öyle de olmalıdır. Rutin sağlık verisi, geniş ve sığ bir enformasyon setine dönüştürülebilir ve bir genel manzara sunabilir, adı artık sağlık enformasyonudur. Bunu başarmak bile hiç küçümsenmeyecek bir iştir ve usul bilen karar mercisine yeteri kadar şey söyleyebilir. Ancak bu geniş manzaranın belirli bir yerinin istenen derinlikte görüntüsünü, enformasyon halindeki veri sunamaz ve bilgiye dönüşmesi için yeni bir araca ihtiyaç doğar.

Ayrıntıya girmek içinse, buna değecek -daha öncelikli- sağlık sorunları seçilmeli, ayrıntı ölçüsü belirlenmeli ve veriyi toplayacak kişinin yeterlilik kazanması gerekir. Bu veri sağlama biçimine halk sağlığı dilinde sürveyans diyoruz. Bir verinin sürveyansla elde edilmesine karar vermek için, temsil ettiği sağlık sorununun belirli bir coğrafyada, belirli bir süre boyunca, yeterli miktarda ve toplumun sağlığı üzerinde yeteri kadar önemde etkiler yaratması gerekir. Sürveyansla elde edilen ayrıntı da bazen bir sağlık sorunu için yetersiz kalabilir, o zaman araştırma tekniklerine başvurulur ve izleyen kitabın konusudur.

Hastalık tarama programları, bir hızlı teşhis testinin eklendiği birer sürveyanstır; enformasyon üretmekten çok, hastalıkların ileri evre doğrudan ve dolaylı maliyetlerinden korunma amacıyla uygulanırlar. Ancak tarama genel nüfusa uygulandığında pekâlâ taranan hastalıkla ilgili gerçek prevalans verisi elde edilebilir. Maliyetse her zaman para ile ölçülmez, işe gidememe, aile üyelerine yük olma, duygulanım bozuklukları, toplumdan dışlanma, hepsi birer maliyettir. Buna karşılık tarama programlarının da bir maliyeti vardır ve para ile ölçülmeyen yanlış pozitif teşhislerin maliyeti bunların en önemlisidir. Bu yüzden bir tarama programını başlatmaya karar verirken geç tedavi maliyetleriyle erken teşhis maliyetleri arasındaki dengenin doğru tahmin edilmesi gerekir.

Buna karşılık sonradan topluma yük olacak hastalıkları, maliyetine bakmadan doğumdan hemen sonra teşhis etmekten kaçınamayız. Bundan sonra yapılması gerekense, bu prevalans ölçüsünü sağlık enformasyon sisteminin yakaladıklarıyla karşılaştırarak, durumun gerçekten ne kadar farkında olduğumuz hakkında tahminler yürütmektir.

Amasya doğumlu Romalı-Pontus Strabon, Peygamber İsa ile aynı tarihte yaşamış bir tarih ve coğrafya yazarıdır, on yedi ciltlik coğrafya külliyatının birkaç kitabı, bu günkü Türkiye topraklarını anlatır. Strabon'un bilimsel yönteme en önemli katkılarından biri, kendi adına izafeten "Stratum" olarak anılan kavramı geliştirmesi olmuştur. Günümüzde tıp dilinde "stratum corneum" gibi yaygın biçimde kullanılan terim, Türkçe'ye "tabaka" ve "katman" sözleriyle tercüme edilmiştir. İstatistikte stratum (çoğul strata), genel nüfusun daha homojen bir alt kümesini ifade eder. Tabakalama, nüfusun varyansı genel nüfustan daha düşük gruplara bölünmesiyle yapılır. Tabakalama (Tabakalı rastgele örnekleme) coğrafik bölge, cinsiyet, gelir seviyesi, eğitim durumu gibi, tabaka içindeki bireylerin belirli niteliklerinin benzerliğine göre gerçekleştirilir. Daha sonra her tabakadan bağımsız örnek gruplar seçilebilir. Tabakalı rastgele örnekleme demografide yaygın uygulama bulmuştur.

Günümüzde tabakalama, katmanlama veya stratlama, yerini çok daha hassas ölçümler yapabilen bilgisayar destekli coğrafik enformasyon sistemlerine (GIS) ve GPS'lere bırakmıştır. Bu teknoloji yerden toplanan veriyle desteklendiğinde, özellikle erken uyarı amacıyla, son derece etkili olmaktadır; bir haliç çevresinde yaşayan balıkçı köylerinde kolera salgını başlama riski, uzaktan algılanabilen alg popülasyonu patlamasıyla tahmin edilebilir; *Aedes aegypti* sivrisineğin habitat genişlemesinin izlenmesi, dang humması, sarı humma, zika ve chikungunya gibi enfeksiyonların öngörülmesinde etkili olabilir.

Güvenilir olduğunda, günlük rutin veri bildirmeyle elde edilen veri kadar hassas ve zamanlı başka bir veri toplama biçimi yoktur, MICS, DHS ve GBD gibi birkaç yılda bir yapılan düzeltmeler ancak birer kilometre taşı olarak önemlidir, ama önemlidir; arada bir "acaba doğru mu yapıyorum?" demekten zarar gelmez. Hastalıkların birer "yük" olarak görülmesi kavramına henüz alışamadık, "Hastalık Yükü" kavramının Dünya Bankası tarafından geliştirilmiş olması da şüphe uyandırıcı olabilir, yine de 1990'lardan beridir elimizde rutin sağlık enformasyon sistemlerinin performansını değerlendirmemize yarayan oldukça iyi bir araç bulunmaktadır. Ancak bu periyodik araştırmaların neredeyse sadece kalkınmakta olan ülkelerde gerçekleştiriliyor olmasının da gösterdiği gibi,

rutin sağlık enformasyon sistemleri geliştikçe ve güvenilirlikleri arttıkça, bunlara duyulan ihtiyaç azalmaktadır.

Yapay zekâ (YZ) son keşfimizdir ve sağlık camiasında yerini kaptırma yersiz hezeyanlarına neden olmaktadır. YZ da diğerleri gibi, insan kullanımında yerini aldıkça ve kontrol etme becerimizi geliştirdikçe kendisine alışacağız ve ondan korkmamayı öğreneceğiz. Klinik tıpta YZ uygulamaları şimdiden çok yaygınlaşmış bulunmaktadır ve yersiz endişelerin kaynağı da burasıdır; uzman pratisyen-icraatçılar kendilerini sağlık sisteminin merkezine koyarak ekmek kapılarının kapanma endişelerini tüm sisteme yansıtmaktadır. Birincisi, YZ uzman pratisyen-icraatçıların sistemin merkezinde oldukları hezeyanından kurtulmalarına yardımcı olacaktır. İkincisi, sistem uzman pratisyen-icraatçıların çok ötesinde görünmeyen bir büyüklüktedir ve asıl düşünmemiz gereken sistemin görünmeyen yerleriyle birlikte bütünüdür ve YZ insan kapasitesinin ötesinde kalan bu işi üstlenerek sağlık sistemleri yönetiminde büyük bir dönüşüm yaratmaktadır. Gerçek zamanlı morbidite, iş göremezlik ve mortalite ölçmeye artık çok yaklaştık ve sadece bütün sağlık hizmetini yöneterek değil, ülkeyi temsil edebilecek şekilde seçilmiş evlere yerleştirilecek sensörler sayesinde bunu başarmak üzereyiz.

Gözlemcinin varlığından şüphe ettiği olgu, cisim veya ilişki, görülemediği ve gösterilemediği sürece yoktur; görme ve göstermenin ise tek yolu, onu ölçmektir. Ölçülemeyen olgu, varlık, cisim veya ilişki de yoktur ve "hiçbir şey göründüğü gibi değildir" önermesi, bu gerçeği açıklamada pek edilgen kalmaktadır; onun yerine "her şey görünmediği gibidir" önermesini koyuyorum.

**Sıcak Temmuz 2025, Ankara**

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