



Dr. Hairil Akbar, S.K.M., M.Epid

EPIDEMIOLOGI SOSIAL *dan* PENYAKIT MENULAR



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KATA PENGANTAR

Rasa syukur yang teramat dalam dan tiada kata lain yang patut kami ucapkan selain mengucap rasa syukur. Karena berkat rahmat dan karunia Tuhan Yang Maha Esa, buku yang berjudul “Epidemiologi Sosial Dan Penyakit Menular” telah selesai di susun dan berhasil diterbitkan, semoga buku ini dapat memberikan sumbangsih keilmuan dan penambah wawasan bagi siapa saja yang memiliki minat terhadap pembahasan tentang Epidemiologi Sosial Dan Penyakit Menular.

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Penulis

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BAB 1

PENDAHULUAN EPIDEMIOLOGI SOSIAL

📌 TUJUAN PEMBELAJARAN :

Setelah mempelajari bab ini, mahasiswa diharapkan mampu:

1. Menjelaskan pengertian dan ruang lingkup epidemiologi sosial serta membedakannya dari epidemiologi klasik berdasarkan fokus, pendekatan, dan tujuan analisis.
2. Menguraikan perkembangan historis epidemiologi sosial dari akar pemikiran abad ke-19 hingga penerapannya dalam konteks global dan Indonesia.
3. Menganalisis peran faktor sosial—seperti ekonomi, pendidikan, pekerjaan, dan lingkungan—dalam penularan serta distribusi penyakit.
4. Menjelaskan hubungan antara struktur sosial, perilaku individu, dan kesehatan masyarakat melalui mekanisme interaksi multilevel.
5. Mengidentifikasi manfaat epidemiologi sosial dalam kebijakan, intervensi, pendidikan, dan penelitian kesehatan masyarakat di era globalisasi.
6. Menunjukkan sikap kritis dan empatik terhadap ketimpangan sosial sebagai determinan kesehatan serta pentingnya keadilan sosial dalam pembangunan kesehatan.

A. DEFINISI EPIDEMIOLOGI SOSIAL DAN PERBEDAANNYA DENGAN EPIDEMIOLOGI KLASIK

Epidemiologi sosial merupakan cabang dari ilmu epidemiologi yang secara sistematis mempelajari bagaimana kondisi sosial, struktur masyarakat, dan ketimpangan sosial membentuk distribusi penyakit dan kesehatan dalam populasi. Bidang ini berfokus pada pemahaman bahwa kesehatan seseorang tidak hanya dipengaruhi oleh faktor biologis atau perilaku individu, tetapi juga oleh konteks sosial, ekonomi, dan lingkungan tempat individu tersebut hidup. Menurut **Nancy Krieger (2001)**, epidemiologi sosial adalah “studi tentang bagaimana distribusi sosial dan struktur sosial memengaruhi kesehatan, penyakit, dan kesejahteraan.” Definisi ini menegaskan bahwa faktor-faktor sosial seperti kemiskinan, pendidikan, pekerjaan, gender, dan lingkungan sosial memiliki peran penting dalam menentukan kondisi kesehatan masyarakat. Dengan kata lain, kesehatan bukan hanya hasil dari paparan agen penyakit, tetapi juga

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BAB 2

KONSEP DASAR PENYAKIT MENULAR

📌 TUJUAN PEMBELAJARAN:

Setelah mempelajari bab ini, pembaca diharapkan mampu:

1. Menjelaskan definisi penyakit menular dan terminologi epidemiologi dasar yang relevan.
2. Memahami rantai penularan penyakit berdasarkan konsep agent–host–environment.
3. Mengidentifikasi berbagai jenis agen penyebab penyakit menular.
4. Menghitung dan menginterpretasikan indikator dasar epidemiologi penyakit menular (insidensi, prevalensi, attack rate, R_0).
5. Menyebutkan dan menganalisis contoh penyakit menular utama di Indonesia dan dunia.

A. DEFINISI PENYAKIT MENULAR DAN TERMINOLOGI PENTING

Penyakit menular merupakan salah satu fokus utama dalam ilmu epidemiologi karena memiliki karakteristik yang berbeda dari penyakit tidak menular. Penyakit ini ditandai dengan kemampuan agen infeksius untuk berpindah dari satu individu ke individu lainnya, baik secara langsung maupun melalui perantara tertentu. Secara umum, penyakit menular didefinisikan sebagai gangguan kesehatan yang disebabkan oleh mikroorganisme patogen seperti bakteri, virus, parasit, atau jamur yang mampu bereplikasi di dalam tubuh inang dan ditularkan kepada inang lain yang rentan.

Menurut **World Health Organization (WHO, 2020)**, *“Communicable disease is an illness due to a specific infectious agent or its toxic products that arises through transmission of that agent from an infected person, animal, or reservoir to a susceptible host.”* Definisi ini menegaskan bahwa penyakit menular selalu melibatkan tiga komponen utama: keberadaan agen infeksi spesifik, mekanisme transmisi, dan kerentanan host terhadap infeksi. Pemahaman terhadap ketiga komponen tersebut menjadi dasar dalam analisis epidemiologi klasik maupun sosial, karena penularan tidak hanya ditentukan oleh faktor biologis, tetapi juga oleh kondisi sosial dan lingkungan tempat individu hidup (Heymann, 2015; WHO, 2020).

Dalam studi epidemiologi penyakit menular, pemahaman terhadap terminologi yang digunakan menjadi hal yang esensial untuk memastikan konsistensi dan keakuratan dalam pelaporan maupun analisis wabah.

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BAB 3

DETERMINAN SOSIAL KESEHATAN DAN PENYAKIT MENULAR

TUJUAN PEMBELAJARAN :

Setelah mempelajari bab ini, pembaca diharapkan mampu:

1. Mengidentifikasi faktor sosial, ekonomi, dan budaya yang memengaruhi penyebaran penyakit menular.
2. Menjelaskan hubungan antara ketimpangan sosial dan risiko penyakit.
3. Menganalisis peran perilaku, gaya hidup, dan lingkungan sosial terhadap kejadian penyakit.
4. Menilai dampak urbanisasi, migrasi, dan mobilitas terhadap epidemiologi penyakit.
5. Menginterpretasikan studi kasus yang menunjukkan hubungan antara kemiskinan dan penyakit menular.

A. DETERMINAN SOSIAL KESEHATAN

Sebagaimana telah dibahas pada Bab 1, determinan sosial kesehatan (Social Determinants of Health/SDH) menekankan bahwa kesehatan tidak hanya ditentukan oleh faktor biologis, tetapi juga oleh kondisi sosial, ekonomi, dan kebijakan yang membentuk kehidupan sehari-hari. Dalam konteks penyakit menular, determinan sosial berperan penting dalam memperkuat paparan risiko, kerentanan host, serta hambatan akses terhadap pencegahan dan pengobatan.

Faktor-faktor sosial utama seperti pendidikan, pendapatan, pekerjaan, kondisi perumahan, dan akses terhadap layanan kesehatan memiliki hubungan langsung dengan kejadian dan penyebaran penyakit menular. Faktor-faktor tersebut menentukan tingkat paparan individu terhadap agen penyakit, kemampuan bertahan terhadap infeksi, serta kecepatan mendapatkan layanan pengobatan. Studi **WHO (2018)** menegaskan bahwa ketimpangan dalam faktor sosial tersebut merupakan penyebab utama kesenjangan kesehatan antarnegara maupun di dalam suatu negara. Hubungan antara faktor sosial dan dampaknya terhadap penyakit menular dapat dilihat pada tabel berikut:

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BAB 4

MODEL DAN TEORI EPIDEMIOLOGI SOSIAL

🎯 TUJUAN PEMBELAJARAN :

Setelah mempelajari bab ini, pembaca diharapkan mampu:

1. Menjelaskan berbagai model dan teori yang digunakan dalam epidemiologi sosial.
2. Memahami bagaimana struktur sosial, perilaku, dan lingkungan saling berinteraksi dalam proses penularan penyakit.
3. Menghubungkan teori perilaku dan struktural dengan praktik pencegahan penyakit.
4. Menggunakan model konseptual untuk menganalisis hubungan sosial dan epidemiologi penyakit.
5. Mengaplikasikan teori sosial dalam penelitian dan kebijakan kesehatan masyarakat.

A. MODEL SOSIAL-EKOLOGIS (*SOCIAL-ECOLOGICAL MODEL*)

Model Sosial-Ekologis (Social-Ecological Model/SEM) merupakan kerangka teoretis yang menjelaskan bahwa kesehatan dan perilaku manusia terbentuk melalui interaksi dinamis antara individu dan lingkungannya. Konsep ini pertama kali dikembangkan oleh Urie Bronfenbrenner (1979) dalam teori perkembangan ekologi manusia, yang menekankan bahwa perilaku individu tidak dapat dipisahkan dari konteks sosial dan fisik di sekitarnya. Bronfenbrenner menggambarkan bahwa setiap individu hidup dalam sistem yang saling terkait, mulai dari mikrosistem seperti keluarga dan teman sebaya hingga makrosistem yang mencakup kebijakan sosial dan budaya. Seiring perkembangannya, model ini diadaptasi secara luas dalam bidang kesehatan masyarakat oleh World Health Organization (WHO) dan Centers for Disease Control and Prevention (CDC) untuk memahami faktor sosial yang memengaruhi perilaku kesehatan (McLeroy et al., 1988; Golden & Earp, 2012).

Dalam konteks kesehatan masyarakat, Model Sosial-Ekologis digunakan untuk menjelaskan bahwa determinan kesehatan bekerja pada berbagai tingkat sistem yang saling berinteraksi. McLeroy et al. (1988) menunjukkan bahwa faktor individu, hubungan sosial, lingkungan, dan kebijakan publik bersama-sama membentuk peluang seseorang untuk hidup sehat, sementara Golden dan Earp (2012) menegaskan bahwa perubahan perilaku akan lebih efektif jika didukung oleh intervensi lintas

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BAB 5

PENGUKURAN DALAM EPIDEMIOLOGI SOSIAL

TUJUAN PEMBELAJARAN

Setelah mempelajari bab ini, pembaca diharapkan mampu:

1. Mengidentifikasi jenis variabel sosial dan indikator yang digunakan dalam studi epidemiologi.
2. Memahami konsep dan metode pengukuran ketimpangan sosial.
3. Menggunakan indikator epidemiologi untuk menilai penyakit menular.
4. Mengenali sumber data sekunder yang relevan untuk penelitian sosial-epidemiologi.
5. Menilai validitas dan reliabilitas dalam pengukuran sosial dan kesehatan.

A. VARIABEL SOSIAL DAN INDIKATORNYA

Dalam kajian epidemiologi sosial, variabel sosial menjadi elemen kunci untuk menjelaskan bagaimana kondisi sosial, ekonomi, dan demografis membentuk distribusi kesehatan dan penyakit dalam populasi. Variabel ini berfungsi sebagai penghubung antara struktur sosial dan hasil kesehatan, sehingga membantu memahami mengapa penyakit tidak terdistribusi secara acak, melainkan mengikuti pola ketimpangan berdasarkan posisi sosial, akses terhadap sumber daya, dan peluang ekonomi antar kelompok masyarakat (Berkman & Kawachi, 2014; Krieger, 2014). Secara konseptual, variabel sosial mencerminkan determinan sosial kesehatan seperti pendidikan, pendapatan, lingkungan fisik, dan jaringan sosial yang bekerja pada tingkat individu maupun komunitas dalam membentuk perilaku, paparan risiko, serta hasil kesehatan (Marmot & Wilkinson, 2006).

Lebih lanjut, variabel sosial mencakup beragam dimensi yang saling berinteraksi dalam memengaruhi kesehatan masyarakat. Setiap dimensi memberikan perspektif unik mengenai bagaimana aspek sosial tertentu berperan dalam memunculkan atau mencegah penyakit. Secara umum, lima jenis variabel sosial utama digunakan dalam analisis epidemiologi sosial, masing-masing dengan indikator dan kegunaannya yang berbeda dalam penelitian kesehatan masyarakat.

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BAB 6

METODOLOGI PENELITIAN

EPIDEMIOLOGI SOSIAL

TUJUAN PEMBELAJARAN:

Setelah mempelajari bab ini, pembaca diharapkan mampu:

1. Memahami pendekatan penelitian kuantitatif dan kualitatif dalam epidemiologi sosial.
2. Menentukan desain studi yang sesuai dengan tujuan penelitian.
3. Menjelaskan teknik sampling dan cara menentukan ukuran sampel.
4. Mengidentifikasi metode pengumpulan data sosial dan kesehatan yang tepat.
5. Menjelaskan prinsip etika dalam penelitian sosial dan komunitas.

A. PENDEKATAN KUANTITATIF DAN KUALITATIF

Dalam kajian epidemiologi sosial dan kesehatan masyarakat, bab ini menempatkan fokus pada aspek metodologis, yaitu bagaimana hubungan antara faktor sosial dan kesehatan diteliti secara sistematis, bukan lagi pada pembahasan mengapa faktor sosial penting bagi kesehatan. Pemilihan pendekatan penelitian sangat bergantung pada tujuan penelitian, jenis pertanyaan yang diajukan, serta paradigma ilmiah yang mendasarinya. Secara umum, terdapat tiga pendekatan utama yang digunakan, yaitu pendekatan kuantitatif, pendekatan kualitatif, dan pendekatan campuran (mixed methods). Ketiganya saling melengkapi untuk memberikan pemahaman yang utuh tentang hubungan antara faktor sosial dan kesehatan, baik melalui angka yang terukur maupun makna sosial di balik fenomena tersebut.

Pendekatan-pendekatan ini berangkat dari landasan ilmiah yang berbeda. Pendekatan kuantitatif berakar pada paradigma positivisme, yang memandang realitas sosial dapat diukur secara objektif melalui data numerik. Sementara itu, pendekatan kualitatif berpijak pada paradigma konstruktivisme, yang berasumsi bahwa realitas sosial bersifat majemuk dan dibentuk melalui interaksi manusia. Adapun pendekatan campuran (mixed methods) berlandaskan pragmatisme, yaitu pandangan yang berfokus pada pemecahan masalah dengan memanfaatkan kekuatan dari kedua pendekatan tersebut sesuai kebutuhan penelitian (Creswell & Plano Clark, 2018).

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BAB 7

ANALISIS SOSIAL TERHADAP DISTRIBUSI PENYAKIT MENULAR

📌 TUJUAN PEMBELAJARAN :

Setelah mempelajari bab ini, pembaca diharapkan mampu:

1. Menganalisis hubungan antara kondisi sosial dan distribusi penyakit menular.
2. Menggunakan pendekatan spasial dan sosial dalam mengidentifikasi pola penyakit.
3. Menjelaskan pengaruh kelas sosial, gender, pekerjaan, dan wilayah terhadap risiko penyakit.
4. Menilai ketimpangan akses terhadap layanan pencegahan dan pengobatan.
5. Menginterpretasikan hasil analisis sosial untuk mendukung kebijakan kesehatan masyarakat yang adil.

A. ANALISIS SOSIAL-SPASIAL PENYAKIT MENULAR

Pada bab ini, pendekatan sosial-spasial digunakan bukan untuk menjelaskan konsep determinan sosial, melainkan untuk menganalisis pola distribusi penyakit dan implikasinya terhadap perencanaan kebijakan kesehatan. Pemahaman mengenai penyebaran penyakit menular tidak dapat dipisahkan dari konteks sosial dan lingkungan tempat manusia hidup. Dalam epidemiologi sosial modern, penyakit dipandang bukan semata akibat faktor biologis, tetapi juga hasil interaksi antara kondisi sosial seperti kemiskinan, pendidikan, dan pekerjaan dengan faktor spasial berupa lokasi geografis dan kondisi lingkungan (Krieger, 2011; Diez Roux & Mair, 2010; Braveman & Gottlieb, 2014). Pendekatan sosial-spasial membantu menjelaskan mengapa penyakit lebih sering terjadi di wilayah tertentu dan menegaskan bahwa kesehatan masyarakat merupakan cerminan dari ketimpangan sosial dan tata ruang yang tidak merata (Marmot, 2005).

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BAB 8

EPIDEMIOLOGI SOSIAL

PADA PENYAKIT MENULAR TERTENTU

📌 TUJUAN PEMBELAJARAN :

Setelah mempelajari bab ini, pembaca diharapkan mampu:

1. Menganalisis hubungan faktor sosial dengan kejadian penyakit menular utama.
2. Mengidentifikasi pengaruh kemiskinan, stigma, perilaku, dan lingkungan terhadap penularan penyakit.
3. Menjelaskan ketimpangan sosial dalam akses pencegahan dan pengobatan.
4. Membandingkan pola epidemiologi sosial pada beberapa penyakit di kelompok populasi yang berbeda.
5. Menyimpulkan implikasi sosial bagi kebijakan pengendalian penyakit menular.

A. ANALISIS SOSIAL TERHADAP TUBERKULOSIS (KEMISKINAN, KEPADATAN HUNIAN, STIGMA)

Tuberkulosis (TB) merupakan penyakit menular yang hingga kini masih menjadi salah satu tantangan utama kesehatan global, terutama di negara berpendapatan menengah dan rendah. Meskipun secara biologis disebabkan oleh *Mycobacterium tuberculosis*, penyebarannya tidak semata ditentukan oleh faktor patogen, melainkan juga oleh kondisi sosial, ekonomi, dan lingkungan tempat manusia hidup. Berbagai studi menunjukkan bahwa ketimpangan sosial dan kemiskinan merupakan akar dari persistensi epidemi TB, di mana populasi berpendapatan rendah dan dengan akses layanan kesehatan yang terbatas memiliki risiko infeksi jauh lebih tinggi (Wingfield et al., 2018).

Sebagai penyakit sosial-ekonomi klasik, TB memperlihatkan bagaimana kemiskinan dan kondisi permukiman yang buruk menciptakan rantai penularan yang sulit diputus. Kondisi ekonomi yang lemah sering kali berkaitan dengan gizi buruk, rendahnya daya tahan tubuh, serta keterlambatan dalam mencari pengobatan. Selain itu, faktor lingkungan tempat tinggal juga memperkuat risiko infeksi. Kepadatan hunian dengan ventilasi yang tidak memadai menciptakan kondisi ideal bagi penyebaran TB melalui udara. Penelitian menunjukkan bahwa wilayah dengan kepadatan

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BAB 9

PERAN KOMUNITAS DAN KELEMBAGAAN DALAM PENGENDALIAN PENYAKIT MENULAR

TUJUAN PEMBELAJARAN:

Setelah mempelajari bab ini, pembaca diharapkan mampu:

1. Menjelaskan peran sosial komunitas dan lembaga lokal dalam pengendalian penyakit menular.
2. Mengidentifikasi bentuk kolaborasi lintas sektor untuk penguatan upaya kesehatan masyarakat.
3. Memahami fungsi Puskesmas, kader, dan lembaga sosial dalam sistem kesehatan berbasis komunitas.
4. Menggambarkan model pemberdayaan masyarakat dalam surveilans dan pencegahan penyakit.
5. Menganalisis contoh praktik baik dari intervensi sosial yang berhasil di lapangan.

A. PERAN MASYARAKAT, TOKOH AGAMA, DAN ORGANISASI LOKAL DALAM PROMOSI KESEHATAN

Partisipasi masyarakat tumbuh dari nilai gotong royong, solidaritas, dan rasa tanggung jawab bersama terhadap kesehatan. Melalui kegiatan seperti pemberantasan sarang nyamuk, imunisasi, dan posyandu, masyarakat berperan sebagai pelaku utama dalam membangun sistem kesehatan yang tangguh dan berkelanjutan (Indravudh et al., 2025). Berbasis pada modal sosial tersebut, pengendalian penyakit menular berbasis komunitas bertumpu pada empat pilar utama, yaitu peran masyarakat, tokoh agama dan adat, organisasi sosial, serta sinergi lintas sektor.

1. Peran Masyarakat dalam Pengendalian Penyakit

Dalam konteks kesehatan masyarakat, masyarakat diposisikan sebagai pelaku utama, bukan sekadar penerima manfaat layanan kesehatan. Prinsip ini telah ditegaskan sejak Konferensi Alma-Ata tahun 1978, yang menempatkan partisipasi masyarakat sebagai unsur pokok dalam pelayanan kesehatan primer (Primary Health Care). Keberhasilan pengendalian penyakit menular sangat bergantung pada keterlibatan aktif masyarakat dalam upaya promotif dan preventif (Tarafdar, 2020).

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BAB 10

KEBIJAKAN SOSIAL DAN PROGRAM PENGENDALIAN PENYAKIT MENULAR

🎯 TUJUAN PEMBELAJARAN:

Setelah mempelajari bab ini, pembaca diharapkan mampu:

1. Menjelaskan kebijakan nasional dan global tentang pengendalian penyakit menular.
2. Menganalisis peran lembaga nasional dan internasional dalam pengendalian penyakit.
3. Memahami pentingnya integrasi faktor sosial dalam kebijakan kesehatan.
4. Mengevaluasi kebijakan dengan pendekatan *evidence-based*.
5. Mengidentifikasi tantangan implementasi kebijakan di masyarakat berisiko tinggi.

A. KEBIJAKAN NASIONAL DAN GLOBAL TENTANG PENYAKIT MENULAR (TB, HIV, MALARIA, COVID-19)

Pengendalian penyakit menular seperti Tuberkulosis (TB), HIV/AIDS, malaria, dan COVID-19 memerlukan kerangka kebijakan yang terintegrasi antara tingkat nasional dan global. Pemerintah Indonesia merespons tantangan ini melalui berbagai kebijakan strategis yang menekankan deteksi dini, pencegahan berbasis komunitas, serta kolaborasi lintas sektor, selaras dengan pedoman Organisasi Kesehatan Dunia (World Health Organization [WHO], 2021; Kemenkes RI, 2022). Sinkronisasi kebijakan nasional dengan komitmen global menjadi prasyarat penting untuk memastikan efektivitas, keberlanjutan, dan keadilan dalam pengendalian penyakit menular.

1. Kebijakan Nasional Indonesia

Dalam konteks nasional, Pemerintah Indonesia menetapkan kebijakan yang memprioritaskan empat penyakit menular dengan beban tertinggi, yaitu Tuberkulosis (TB), HIV/AIDS, malaria, dan COVID-19. Keempat penyakit tersebut menjadi fokus utama dalam Rencana Strategis Kementerian Kesehatan (Renstra Kemenkes) serta Rencana Pembangunan Jangka Menengah Nasional (RPJMN), dengan penekanan pada penguatan pelayanan kesehatan primer dan pencegahan berbasis komunitas (Kemenkes RI, 2021).

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BAB 11

KETIMPANGAN, STIGMA, DAN ETIKA DALAM EPIDEMIOLOGI SOSIAL

📌 TUJUAN PEMBELAJARAN:

Setelah mempelajari bab ini, pembaca diharapkan mampu:

1. Menjelaskan konsep ketimpangan sosial dan stigma dalam konteks penyakit menular.
2. Menganalisis isu etika dan hak asasi manusia dalam epidemiologi sosial.
3. Mengidentifikasi kerentanan kelompok tertentu terhadap diskriminasi kesehatan.
4. Menilai prinsip etika dalam surveilans dan penelitian sosial.
5. Mengembangkan pendekatan humanistik dalam program pengendalian penyakit menular.

A. STIGMA DAN DISKRIMINASI TERHADAP PENDERITA PENYAKIT MENULAR (HIV, KUSTA, TBC)

Stigma dan diskriminasi merupakan hambatan sosial utama dalam pengendalian penyakit menular. Hambatan ini muncul dari prasangka, stereotip, dan penilaian moral yang keliru terhadap penderita, sehingga memengaruhi penerimaan masyarakat terhadap program kesehatan. Dalam konteks kesehatan masyarakat, stigma tidak hanya bersumber dari ketidaktahuan, tetapi juga dari ketakutan akan penularan dan konstruksi nilai sosial tertentu. Goffman (1963) mendefinisikan stigma sebagai pelabelan negatif yang merusak identitas sosial seseorang, yang dalam praktiknya sering berkembang menjadi diskriminasi berupa penolakan atau pengucilan (Parker & Aggleton, 2003).

Secara konseptual, stigma dipahami sebagai proses sosial yang melibatkan empat unsur utama, yaitu pelabelan, stereotip, pemisahan sosial, dan hilangnya status atau hak individu (Link & Phelan, 2001). Dalam penyakit menular, mekanisme ini kerap diperkuat oleh kesalahpahaman mengenai cara penularan. Misalnya, HIV sering diasosiasikan dengan perilaku tidak bermoral, kusta dipersepsikan sebagai aib atau kutukan, dan TBC dikaitkan dengan kemiskinan. Persepsi tersebut membentuk jarak sosial antara penderita dan masyarakat.

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BAB 12

INOVASI, EVALUASI, DAN ARAH PENGEMBANGAN EPIDEMIOLOGI SOSIAL

📌 TUJUAN PEMBELAJARAN:

Setelah mempelajari bab ini, pembaca diharapkan mampu:

1. Memahami perkembangan dan inovasi teknologi dalam surveilans sosial dan epidemiologi.
2. Menjelaskan integrasi antara data sosial dan data klinis untuk analisis penyakit yang lebih komprehensif.
3. Mengevaluasi efektivitas program intervensi berbasis komunitas dengan pendekatan sosial.
4. Memahami paradigma *One Health* dalam kaitan manusia–hewan–lingkungan.
5. Mengidentifikasi arah kebijakan, riset, dan pendidikan epidemiologi sosial di Indonesia di masa depan.

A. INOVASI TEKNOLOGI DALAM SURVEILANS SOSIAL DAN EPIDEMIOLOGI (BIG DATA, GIS LANJUTAN, DAN MOBILE HEALTH)

Perkembangan teknologi digital telah mengubah cara epidemiologi sosial memahami dan merespons masalah kesehatan masyarakat. Jika sebelumnya analisis epidemiologis bergantung pada survei dan observasi lapangan yang memerlukan waktu lama, kini teknologi informasi memungkinkan pengumpulan dan analisis data secara cepat dan real-time. Inovasi seperti Big Data, kecerdasan buatan (AI), sistem informasi geografis (GIS), serta mobile health (mHealth) dan Internet of Things (IoT) memperluas kemampuan epidemiologi sosial menjadi lebih prediktif dan adaptif. Namun, pemanfaatan teknologi ini perlu tetap diseimbangkan dengan nilai-nilai humanistik agar inovasi digital benar-benar mendukung keadilan sosial dan inklusivitas dalam kesehatan masyarakat.

1. Revolusi Digital dalam Epidemiologi Sosial

Transformasi digital telah membawa perubahan mendasar dalam cara epidemiologi sosial mengumpulkan, menganalisis, dan menyebarkan informasi kesehatan masyarakat. Jika sebelumnya analisis epidemiologis sangat bergantung pada survei konvensional dan registri kesehatan yang lambat serta terbatas, kini ekosistem data digital

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PROFIL PENULIS

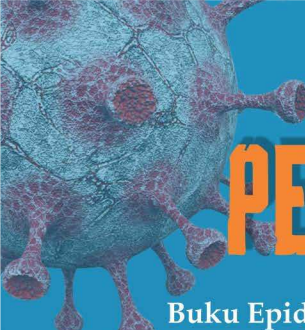
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EPIDEMIOLOGI SOSIAL *dan* PENYAKIT MENULAR

Buku Epidemiologi Sosial dan Penyakit Menular membahas secara komprehensif bagaimana faktor sosial, ekonomi, budaya, dan struktur masyarakat memengaruhi distribusi penyakit serta derajat kesehatan populasi. Berbeda dari pendekatan epidemiologi klasik yang menitikberatkan pada agen biologis dan perilaku individu, buku ini menempatkan konteks sosial sebagai penyebab mendasar munculnya ketimpangan kesehatan. Pembahasan awal menguraikan konsep, ruang lingkup, serta perbedaan mendasar antara epidemiologi sosial dan epidemiologi klasik sebagai landasan analisis kesehatan masyarakat yang lebih luas dan kritis.

Selanjutnya, buku ini menelusuri perkembangan historis epidemiologi sosial sejak abad ke-19 hingga era modern, dengan mengangkat pemikiran tokoh-tokoh kunci seperti John Snow, Rudolf Virchow, Michael Marmot, dan Nancy Krieger. Uraian ini menunjukkan pergeseran paradigma dari pendekatan biomedis menuju pengakuan terhadap peran determinan sosial kesehatan, termasuk kemiskinan, pendidikan, pekerjaan, lingkungan, dan kebijakan publik. Dalam konteks Indonesia, epidemiologi sosial dipaparkan sebagai pendekatan yang semakin relevan dalam menjelaskan pola penyakit menular dan tidak menular di tengah tantangan pembangunan dan ketimpangan sosial.

Pada bagian akhir, buku ini menekankan hubungan interaktif antara struktur sosial, perilaku kesehatan, dan kesehatan masyarakat melalui pendekatan multilevel. Epidemiologi sosial diposisikan tidak hanya sebagai alat analisis ilmiah, tetapi juga sebagai dasar perumusan kebijakan dan intervensi kesehatan yang berkeadilan. Dengan menautkan konsep Health in All Policies dan Sustainable Development Goals, buku ini menegaskan pentingnya epidemiologi sosial dalam mendorong keadilan kesehatan serta membangun sistem kesehatan yang responsif terhadap realitas sosial masyarakat.

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