Q6　「もう大丈夫です」という言葉を信用してよいですか？

A6

自殺企図患者の危険性は、本人の医学的重症度と危険因子や自殺念慮などの危険度を総合的に判断することが原則である。心理的に動揺している本人の言説だけで簡単に信用することはできない。事例によってはカタルシス効果によって一時的に精神状態が改善し、本人がすっきりしているようにみえる場合もある。自殺企図は、たとえそれが未遂に終わっても、患者に達成感をもたらし、リセットがかかったように患者の状態が一時的によくなることがある。周囲の関係者が患者を慮っている状況や、今の精神状態の改善が一時的なものであり、早晩、また悪化するおそれがあることを伝え、受療を促すことが望まれる。

Q7　「体の状態がよくなったら退院します」という言葉に対してどう対応したらよいですか？

A7

ほぼ例外なく自殺未遂患者は精神疾患に罹患していること、また自殺企図を繰り返すリスクが高いことを事実として伝え、精神医学的なアセスメント、あるいはその導入の必要性と、自殺再企図の予防を含めて、今後の道筋が立つところまでが治療に含まれるということを説明する。また本人だけでなく、家族などの支援者とその後の対応を検討する必要もある。

Q8　具体的問題があった場合、誰といつから連携していけばよいのでしょうか？

A8

自殺企図は、哲学的な問題から生じるのではなく、また、ある時に突然生じるのではなく、具体的な生活問題や職場問題、対人関係の問題から精神疾患に至り、自殺企図が生じるというプロセスがほとんどの場合に存在する。このような環境的な問題の改善・解決については、ソーシャルワーカーによる支援が有効なことが多い。病院には医療ソーシャルワーカー（MSW）や精神科ソーシャルワーカー（精神保健福祉士：PSW）がいる。PSWは、とくに精神障害者とのコミュニケーションや精神障害者のための社会資源に詳しい。ソーシャルワーカーは、他の医療機関の紹介から、生活経済問題、住居問題、労務問題、多重債務問題など、さまざまな問題について具体的な助言が可能である。自殺未遂患者のほとんどに、企図に至った社会的な背景・生きづらさがあるので、患者搬送直後からソーシャルワーカーに連絡をとり、面接に同席してもらうなど、初期から治療に参加してもらうことが望ましい。なお、地域医療や福祉の利用に関して、地域の保健所や保健福祉センターに相談をすることもできる。また、ほとんどの行政には自殺対策を担

う部署があり、都道府県・政令市には必ず精神保健福祉センターがあり自殺対策の窓口が設置されているので、そこでさまざまな相談をすることもできる。

自殺未遂患者は多くの場合複合的な問題を抱えているため、その支援も複合的となる。一人だけで取り組むことは大きなエネルギーが必要となり、勧められない。常に患者を支援するスタッフや関係者との連携を通して活動することが不可欠であろう。

コラム3：カタルシスについて

患者は、自殺企図によって長く続いていた苦痛や困難を終わらせようとするが、たとえ自殺が未遂になっても、いったん重荷をおろしたかのようになって悪化していた精神状態が軽快してしまうことがある。このことをカタルシスと呼ぶ。カタルシスは、救急に入院中、継続することがあるが、あくまでも一時的なものであり、退院後の環境は、自殺企図時から改善しているわけでもなく、また治療が強化されなければ精神症状もすぐに再燃するので、自殺の再企図の危険性が再び強まる恐れがある。つまり、患者が、ふっきれたような表情や言動を示しても、あるいは「大丈夫です」と断言しても、その言葉を鵜呑みにすることなくアセスメントを行うことが必要である。

シナリオ３

症　例

50歳、男性

診　断

アルコール依存症

現病歴

老齢の母と同居している。40代の時、対人関係の悩みをきっかけとして飲酒量が徐々に増えた。ここ数年は一晩で焼酎１本（720ml）を飲むこともしばしばあった。大量飲酒の翌日は、飲酒中のことをまったく覚えていなかった。また体調不良で仕事を欠勤することもあった。最近は平日の朝から飲酒をすることもあり、欠勤が増えた。ある日、上司から強く叱責され「これ以上休むようならクビだ」と言われた。それでも飲酒をやめられず、翌日、飲酒中に死にたい気持ちが強まり、遺書をなぐり書きして割腹自殺を図った。気づいた母親が救急隊に連絡し、搬送された。

来院後経過

身体的な治療は終わったが、割腹自殺を図ったにもかかわらず「精神科に通院する気はない」と訴える。「もう酒はやらない」と医師と約束したため、母が退院手続きをとっていたが、看護師には「酒をやめる自信はない」と話している。

やってはいけない対応例

・アルコールに依存する人は「意思の弱い人間」「どうせ治らない、変わらない」などと判断する。
・強い叱責や、単に恐怖心をあおって飲酒をやめさせようとする。
・本人の自責感をいたずらにあおる。
・拒否的な態度をとったり、故意に冷淡にふるまう。
・患者に付き添う家族（このシナリオでは母）を責めたり、「あなたがしっかりしていないから」と叱咤する。

好ましい対応例（関わりのポイント）

・アルコール依存症は病気であることを伝える。
・患者の心理的、環境的な問題に焦点をあてた対応をする。
・患者が依存症の専門治療を受けることのできるような環境を整える。
・本人ではなく「困っている人」（＝付き添い）にも注目する。

■症例の解説

ストレス対処で飲酒量が増え、依存症に至った事例である。アルコール依存症では、抑うつ状態を合併していることが多く、この症例でも抑うつ状態のなかで自殺企図を行っている。依存症そのものが自殺のリスクの高い精神疾患であり、さらに他の精神障害が合併するとリスクはさらに上昇する。とくに飲酒時には衝動的な自殺企図が生じやすい。本症例では、適切な治療がなされなければ、再企図の可能性が高いと考えられる。

Q&A

Q1　本人が酒を飲まないと約束するので、退院させてもよいですか？

A1

アルコール依存症は酒を飲み続けるとどんどん進行していき、飲酒を止められなくなる病気である。その症状として同じ失敗を何度も繰り返し、平気で嘘をつき、時には暴力を振るって警察のお世話になる。本人が酒を飲まないということを具体的に実践できるように、行動の目標をたてることが効果的である。まずは、アルコール依存症の治療は断酒を継続していくしかなく、精神科医療へつなげることが重要である。

Q2　このまま入院を継続した場合、どのような離脱症状が出現しますか？

A2

入院当日はとくに訴えないが、最終飲酒後48時間から72時間以内に離脱症状が出現しやすい。たとえば、アルコールが抜ける入院2日目より痛みを訴えることがある。また離脱症状のため苛立ち、態度が横柄になることもなる。離脱症状は過去に出現した症状と同様の症状が起きやすい傾向にある。離脱症状は時間的経過により、小離脱と大離脱の2つに区分される。

Q3　離脱症状の2つの区分である小離脱と大離脱について具体的な症状を教えて下さい。

A3

小離脱は、飲酒停止後に酩酊症状が6～7時間ほどで消失し、血中アルコール濃度が100mg/dlまで下降する頃（飲酒停止後10時間前後）より約48時間以内に出現する、自律神経機能の亢進

を主とする症状である。具体的には発汗、手指の振戦、睡眠障害、頻脈、高血圧、不安、いらいらを観察する。また、一過性幻覚や痙攣発作が観察されることもある。痙攣は断酒後24時間以内に出現し、強直間代性で大発作の形で起こり、1～3回で終わる。

一方、大離脱としては、飲酒停止後48～72時間して始まり、2～3日持続する意識障害、精神運動性興奮を主とする振戦せん妄が観察される。夕方や夜間に発生することが多く、意識レベルの低下で恐怖心や不安感の増強した状態であり、それに伴う行動化がみられる。具体的には、クモやゴキブリ等の小動物や、天井や壁のシミが人間の顔に見えたりといった幻視や錯視があるか、人が口々に自分に対して非難の声をあげているとか、トイレの中からお化けが呼んでいるなどの脅迫めいた内容の幻聴が聞こえるか、あたかも自分が仕事をしているかのように思い、作業する職業せん妄があるかも観察する。

Q4　離脱症状が出現した際にどのようなケアが必要ですか？

A4

離脱症状時には意識もはっきりせず、自分が今どこにいるのか、今何時なのかといったことも分からない。ほとんどの場合、数日以内で元に戻るが、戻るまでの症状は移り変わりやすい。日中は比較的落ち着いていても夕方や夜になると不穏となり、おかしな言動が認められる。室内が暗いと増悪しやすく、患者はきわめて暗示にかかりやすい。夜間せん妄の場合には、電灯をつけて明るくして様子をみることもある。

この時期には患者自身の安全と事故防止に十分配慮し、個室での離脱症状への対応に努める。身体的観察はもちろんのこと、精神的観察も十分行っていかなければならない。また、どうして入院に至ったのかという、治療への動機づけや、入院していることの意味を考えられるようにかかわることも必要である。

Q5　アルコール依存症の患者に対してどのような対応をしたらよいですか？（やってよいこと・やってはいけないこと）

A5

援助の対象であるアルコール依存症者に対して否定的な感情をもっていると、良好な人間関係を築くことはできない。アルコール依存症者についてのとらえかたを振り返り、そこに偏った見方がないかを見直し、苦しさと闘っている目の前の患者と対等に向き合う必要がある。つまり、酒を止められないという辛い気持ちを理解するよう、同じ弱い人間として、共感的な理解、共感的な態度で接するよう努めてみることである。説教調の会話は効果がないばかりか、患者の中に反発感情しか生まれない。しかし患者の行動が間違っている場合には、時に厳しく指摘することも必要である。またアルコール依存症の自殺未遂患者の場合に、アルコールの問題のみをクロー

ズアップしないで、自殺の危険性や背景の危険因子も適切に評価することが大切である。

Q6　アルコール依存症の患者の家族に対してどのような対応をしたらよいですか？

A6

アルコール依存症者を援助し、アルコール依存症であり続けさせている人をイネーブラー（enabler）という。アルコール問題が続いている家族の場合、母や妻が援助の手をかけすぎていると嗜癖を悪化させてしまい、嗜癖はどんどん進行していくことになる。この誤った関係を絶つためにも、家族への援助を欠かすことはできない。本人が入院している間に、アルコール依存症についての正しい知識を得て、病気を悪化させないような対応方法を学んでもらう。これまでの混乱した生活の立て直しを図っていくため、保健所、家族会や酒害相談所へつなぐようなかかわりをする。この事例のように本人が精神科受診を望んでいない場合は、とくに治療協力者としての役割を担うことを期待する。

また暴力を振るわれた場合は家から逃げたり、警察に通報するといった断固たる態度も必要であることを説明する。

Q7　アルコール依存症と自殺との関係について教えてください。

A7

うつ病が自殺の危険因子であることは言うまでもない。そのうつ病であることが周囲から見て分かる症状に、対処行動として飲酒量が増えることがあげられる。とくに中高年の男性でうつ病になって、飲酒量が増えている人が多い。彼らは必ずしもアルコール依存症の診断には該当しない。飲酒をすると一時的に気分が晴れることを経験しているために、医療機関に受診して抗うつ薬を処方してもらう代わりに、ついつい酒に手を出してしまう。飲酒することで気分もよくなり、不眠も改善すると本人は確信している。しかしアルコールには依存性があり、薬理学的には中枢神経系の機能を抑制する作用があるために、うつ病は確実に悪化していく。さらに危険なのは、酩酊状態で自己の行動をコントロールできない状態に陥って、自殺行動に及ぶ人が圧倒的に多いことである。一方でアルコール大量摂取者は長期的にうつ病や自殺のリスクが高いことが知られている。またアルコール摂取下では計画性のない自殺企図を導く可能性が高いため、計画性のない自殺企図の背景にアルコールの問題があり、それが改善されない場合には、再企図の可能性があると考えられる。精神科医療機関（コラム５参照）などへの受診をすすめることも解決につながる。

コラム４：アルコール依存症という病気の考え

アルコール依存症は、アルコールを摂取していないときに、飲まずにはいられなくなる疾患である。飲んでいるからトラブルが生じているのではなく、飲まずにいられないからトラブルが生じると考えることが重要である。

コラム５：アルコール専門外来

アルコール依存症者が退院後、治療継続のために週１回から２週間に１回通院し、アルコール専門医の診察を受ける。その後、通院者が集まり集団精神療法に参加する。そこで話された内容の秘密は守られるという信頼のもとに、お酒に対する今の自分の気持ち、生活面でのさまざまな困難な状況などをそれぞれが話す。他の依存症者の話を聞き、自分自身のことを話していくうちに、共通する経験を発見して共感が育ち、病識ももつようになる。最近ではアルコール専門外来クリニックが各地に開設されており、身体合併症の治療も同時に行われている。

※AA（Alcoholics Anonymous）：「匿名による断酒会」と称される。患者同士で運営する自助グループ

シナリオ４

症　例

23歳、男性

診　断

幻覚・妄想状態（統合失調症の疑い）

現病歴

中学でいじめにあったことがきっかけで不登校になった。高校には何とか進学したが、1学期の途中から家に引きこもるようになり、高校を中退した。20歳頃から昼夜逆転の生活となった。壁に向かってブツブツ喋ったり、急に泣いたり笑い出すようになった。X年6月「意味ないよ！」「死ねって言われている！」と言い、突然家を飛び出した。そして、走行している車の前に飛び出し車と接触し、転倒した。腰部打撲で救急搬送された。

来院後経過

救急病棟に入室時から「痛い！痛い！」と訴える一方「お前は俺をバカにしているだろう！」と看護師を相手に怒鳴りちらす。また「『お前のようなバカは死ね』と言う声が聴こえる」と話し、毛布を頭からスッポリかぶってしまう。

やってはいけない対応例

・診察まで接触を避け、患者が動き回るのを静観しそのまま放置する。
・スタッフ一人だけで対応する。
・「そんな声はあるはずがない」「それはあなたの妄想ですよ」と、患者の言っていることをすべて否定する。
・感情的に患者と同じ調子で声高に話したり、無理に説得をしようとしたり、叱りつけたりする。
・説明なしにいきなり抑制帯を使って行動制限をする。

好ましい対応例

・複数のスタッフで早めに対応する。
・自分の職種と名前を名乗り、ここが病院であること、これから治療にあたることを、ゆっくり、わかりやすく説明する。
・見当識を確認するなどして、意識レベルを確認する。
・患者が安心できるような言語的、身体的なコミュニケーションを図る。妄想や幻覚の内容を深く追求せず、幻覚・妄想状態で生じている患者の恐怖や不安、苦しみなどに焦点をあて、患者に「さぞ、つらかったでしょう」というような共感的な声かけをする。
・自分自身が身に着けているもの、患者自身が所持しているもののうち、自殺企図や他害行為につながるような危険物を除去する、あるいは遠ざける。
・妄想の世界から現実の世界へ戻すようなかかわりを継続する（例：痛みがあることを認識させ、安静を保つように声かけをする）。

■症例の解説

精神科受診歴のない、幻覚・妄想状態の患者で、統合失調症が疑われる。興奮している患者に対しては、一人では対応せず、複数名のスタッフで対応すべきである。これは、患者とスタッフ双方の安全確保と円滑に治療を進めていくうえで重要である。幻覚・妄想は、一般的に説得によってこれを消失させることは困難であり、無理に説得を試みるよりも、まずコミュニケーションを図りながら、安心感や信頼感を醸成することが先決である。

Q&A

Q1　幻覚・妄想状態で自殺企図をする場合には、どのような精神疾患が考えられますか？

A1

幻覚・妄想状態で第一に疑う疾患は統合失調症である。統合失調症における自殺企図はまれではない。統合失調症では、「死ね」などの命令性の幻聴により自殺企図に至ったり、抑うつ状態で自殺を企図する場合も多い。また、統合失調症患者は、致死性の高い自殺手段をとることが多いのも特徴的である。

統合失調症以外にも、重症の気分障害（うつ病性障害や双極性障害）、器質性・症状性精神障害、薬物依存（アルコール、覚せい剤等）などでも幻覚・妄想状態が出現する場合がある。

Q2　幻覚・妄想状態で興奮している患者にスタッフが対応するうえで、危険性を取り除くためにどのようなことに気をつければよいですか？

A2

幻覚・妄想状態で興奮している場合、医療スタッフは、患者が幻覚・妄想に左右されて再度の自殺企図に及ぶことを防止し、患者および自身の安全確保を考える。具体的な行動目標として、①患者と二人だけで個室で対応しない、②複数のスタッフで対応する、③危険物を除去する、④警備員等や他のスタッフを呼ぶ、という項目があげられる。

自殺の再企図防止としては、自殺手段へのアクセスの防止が重要である。興奮して自殺企図や他害行為に及ぶときに手段となりうる刃物や紐、毒物などの危険物を、持ち物チェックなどを行って本人の周囲に絶対置かないことである。

場合によっては、静脈ルートからの向精神薬投与による鎮静、抑制帯による行動制限などについても検討する必要がある。

Q3　幻覚・妄想状態にある患者に対して、どのような接し方をしたらよいですか？

A3

幻覚・妄想状態の患者への説得は困難であることが少なくない。そして、強い口調で患者にアプローチすることは、いたずらに相手を刺激することにもなりがちである。

患者に対しては、安心を与えるような対応が必要となる（コラム6参照）。

患者の幻覚や妄想の内容の話を聞いたときに、「そんなことはありえない」とすべて否定したり、「なぜそう考えるのか」と分析的になったり、深く追求しようとしないほうがよい。そういう状態にある患者の苦しみや不安、恐怖に焦点をあてて、「だいぶつらいでしょう」などと共感的な声掛けをする。

治療の説明や「そろそろご飯の時間ですが、食べられますか？」というような食事摂取の確認、「今○時ですよ」という日時の確認、「痛くないですか？」などの痛みの確認等は、幻覚・妄想にある患者が現実的なかかわりをもてるようになることであり、重要なアプローチである。

Q4　幻覚・妄想状態にある患者に対して、どのような評価を行えばよいですか？

A4

臨床的徴候を注意深く観察することが重要である[1]。

(1) 精神的徴候：発症（急性・慢性）、経過、特徴（症状の種類）

(2) 身体的徴候：特徴（症状の種類・性状）、バイタルサイン、血液検査・血液ガス、画像診断（X線・CT）、心電図、その他

(3) 外見・振る舞い

第一に、意識レベルを確認する。一見会話が成立していても意識障害であることもあるため、「今日は何日ですか？」や「今どこにいるかわかりますか？」などの質問で見当識の有無や、健忘がないかを確認する。

軽度の意識障害は、身体疾患を背景とした精神症状と、内因性・心因性精神障害との鑑別に重要性が高いが、臨床的にデリケートな症状であるため、とらえにくい。このため、最終的には臨床症状、臨床検査値、脳波所見などの所見と照らし合わせながら判断する。ベッドサイドでの鑑別方法についてはコラム7を参照されたい。

とくに、以前に同様の精神障害をみた既往がない場合、精神症状の原因が容易に特定できない

場合、患者の年齢が55歳以上である場合、慢性疾患が存在する場合、そして薬を服用している場合などでは、身体疾患を基盤とする精神症状の可能性を想定する必要がある。

また、幻覚・妄想状態にある患者だけから事実確認を行うことは困難である場合も少なくないため、本人だけでなく、家族、かかりつけ医など周囲から情報を収集することが大事である。

Q5　身体的に改善傾向にあるが、精神症状が著しく悪い場合に、どのように対処すべきでしょうか？

A5

身体的治療中に著しく幻覚・妄想による興奮や不穏行動を認め、身体的治療を行うことが困難である場合には、向精神薬による薬物療法も検討する必要がある。

その際には、身体的重症度と照らし合わせながら薬物選択や投与量の決定を行う必要がある。投与薬としては、向精神薬としてリスペリドン、オランザピン、ペロスピロン、クエチアピン、アリピプラゾール、ブロナンセリン等の非定型抗精神病薬やハロペリドール（点滴静注・静注）等の定型抗精神病薬がある（p.26表）。

また、フルニトラゼパム、ミダゾラムなどのベンゾジアゼピン系薬剤を静脈注射などで投与する場合もある。興奮が強い場合、本人の協力のもとに投与することが困難なことも少なくないため、口腔内崩壊錠、液剤、静注で使用できる薬剤が利便性も高い。本人に説明しても理解が得られない場合には、家族に対して薬剤の効果と副作用、適応について十分説明したうえで、投与を行う。投与後も作用や副作用を観察していくことが大切である。薬物療法について判断が難しい場合には、かかりつけ医や精神科医へのコンサルテーションや助言を仰いでもよいと考えられる。

また、救急医療機関での身体的治療が終結に向かっていても、依然として自殺企図とかかわった幻覚・妄想が強く、「『死ね』と聞こえてくる」という幻声、「死なないと迷惑をかける」という被害妄想などが著しく、自殺の危険性が高い場合や、「○○を殺さないといけない」などと他害に及ぶ可能性が強い場合には、精神医療につなぐ絶対的適応である。そして、担当医は病院のケースワーカーに相談して、紹介先の確保を進めてもよいであろう。精神科専門施設は、専門性の高い身体的治療は十分に行えない実情もあり、紹介先には、身体的治療の必要性の有無や今後の見通しを丁寧に説明する。

また受診にあたっては、必ずしも自らが入院を希望して入院する任意入院になるとは限らないため、精神保健及び精神障害者福祉に関する法律（以下、同法）に基づく医療保護入院の保護者となりうる配偶者や扶養義務者を確認して、一緒に受診させることが必要となる。

幻覚・妄想状態による自傷他害のおそれが強く認められる場合には、シナリオ1を参照いただきたい。

興奮、攻撃性が顕著で服薬不可能である場合
●呼吸管理ができる環境での投与 1．ミダゾラム（ドルミカム®） 1～20mg/時で持続投与 2．フルニトラゼパム（サイレース®、ロヒプノール®） 2～4mg　生理食塩水で10倍希釈。入眠まで緩徐に投与 （注：上記2剤とも、拮抗薬のフルマゼニルを準備したうえで投与、バイタルサインを頻回にチェックすること） ●呼吸管理が難しい環境での投与 1．ハロペリドール（セレネース®） 5mg＋生理食塩水　50～100ml　30分かけて　やむを得ない場合1日15mg程度まで投与可能
不穏だが経口摂取あるいは経管投与が可能である場合（1日量）
1．リスペリドン（リスパダール®；錠剤、口腔内崩壊錠、内用液など） 初期投与量　1～2mg　　維持量　4～6mg　分1～2 2．クエチアピン（セロクエル®；錠剤、細粒など） 初期投与量　25～50mg　　維持量　100～600mg　分2～4 3．アリピプラゾール（エビリファイ®；錠剤、内用液など） 初期投与量　6～12mg　　維持量　6～24mg　分1～2 4．プロペリシアジン（ニューレプチル®；錠剤、細粒など） 初期投与量　5～10mg　　維持量　10～60mg　分2～4
上記に加えると攻撃性の抑制に有用な補助薬の例（1日量）
1．バルプロ酸（デパケン®；錠剤、内用液、細粒など） 初期投与量　200～400mg　維持量　600～1200mg　分2～4 2．ロラゼパム（ワイパックス®；錠剤） 初期投与量　1～1.5mg　　維持量　1.5～3mg 3．ミアンセリン（テトラミド®；錠剤） 初期投与量　10mg　　維持量　10～60mg 4．トラゾドン（レスリン®、デジレル®；錠剤） 初期投与量　25mg　　維持量　75～150mg

Q6　暴力行為が出現した場合にはどのように対応しますか？

A6

幻覚・妄想状態による自殺未遂患者では、治療中も自傷他害のおそれを認め、暴力行為が出現することがしばしばあるため、当初より家族やその周囲に対してもその旨と必要な措置を講じる可能性を説明しておく必要がある。また、医療スタッフ自身も危険性を認識しておくことが大切である。院内で幻覚・妄想状態による暴力行為が発生した場合には、各医療機関に暴力対応マニュアルがある場合には、それに沿って対応するとよい。暴力行為のレベルに応じて対応することもよく行われている。

一般的には暴力行為が発生した場合には、二人以上で対応し、患者確保や安全確保のため警備

員、担当の事務職員などを呼ぶ。また、部屋の出入口など逃げ道も確保し、暴力行為が収まらない場合や傷害などレベルの高い暴力行為があった場合、警察への通報を検討する。必ず、医療スタッフはカルテやチャートに事実記載を行い、家族には事実を説明する。

文献：

1）大塚耕太郎、酒井明夫：精神症状．救急医学30(6)：748-750、2006.

コラム６：対応法について

統合失調症では幻覚・妄想状態を認める場合も多い。十分な意思疎通をとることに苦慮する場合もあると思われる。そのような場合でも、救急対応時ではあるが搬送直後の対応のポイントとしては最低限下記のような対応を心がける。初期対応の温かみのある対応はその後の対応の成功につながる。

1．丁寧で温かみのある態度：温かみのある表情での声かけ。威圧的であったり、拒否的な態度はとらない。
2．名乗る：○○病院の○○科の医師です。
3．支援の表明：○○（病名・病態）という状態であり、○○さん（患者）の助けになりたいのです。
4．治療の説明：○○（病名・病態）に対して、○○（治療法）の治療が必要になります。

コラム７：軽度の意識障害を鑑別する方法

意識混濁の軽い状態では、はっきりした見当識の障害はないが、注意の集中と持続が困難で、思考のまとまりの悪さ、細かい配慮の欠如、意欲や自発性の減退を認める場合がある。このような軽い意識混濁の存在を疑わせる所見としては、①不眠（入眠困難、中途覚醒、再眠困難、早期覚醒）、昼間の傾眠、②悲観的、容易に涙ぐむ、おびえるような・怖がるような様子、③ややくどい受け答え、反抗的、不機嫌、④話が脱線しやすい、まとまりの悪さ（観念奔逸・観念連合の粗末さ）、⑤注意集中の困難、病室を間違え他の部屋に入る、数時間前の食事の内容が思い出せない、検温したことを忘れている、⑥易変的な気分、軽い躁状態、軽いうつ状態、⑦「100－7」の計算の間違え方に特徴がある（例：100－7＝83、93－7＝76のように下一桁は正解し、二桁目は誤る、⑧間欠的ないし周期的であるということ、変動しやすい、などがあげられる[文献]。

文献：春木茂一：腎不全・透析に伴う症状性精神障害：器質・症状性精神障害、中山書店、東京、1997、pp437-461.

シナリオ５

症　例

26歳、男性

診　断

適応障害の疑い

現病歴

X年４月に職場異動と同時に、実家を離れ単身生活となった。業務内容が今までとはまったく異なり、戸惑う毎日であったが、もともと内気な性格で、誰にも相談することができず、仕事は滞りがちであった。ある日、上司から仕事の遅れを叱責され、頻繁に注意を受けるようになった。繁忙期も重なり追い詰められたような状況のなか、X年６月には風邪をひき会社を休んだ。数日で軽快し、朝出勤しようとしたが、強い倦怠感と仕事への恐怖心から途中で自宅に引き返してしまった。その後、何とか仕事には出るようになったが、口実を設けて仕事を休み、外で時間を潰すようなことが多くなった。

X年７月のある朝から失踪し、数日後、自宅から遠く離れたA県の森林内に駐車した車の中で排気ガス自殺を図っているところを、たまたま通りかかった地元の人に発見され、救急搬送された。

来院後経過

意識が回復した後、しばらくの間は静穏だったが、徐々に落ち着きがなくなってきた。本人によれば、失踪後、しばらく車であちこちを転々としていたが、八方塞がりだと思い、衝動的に自殺を企図してしまったという。「今回のことが会社にバレていないか？」「解雇されるのではないか？」と心配している。そして、「実家の両親にも単身生活になってからのことは一切話していないので、今後どうすればよいのかわからない」と、頭を抱えている。

やってはいけない対応例

・今回の自殺企図行動・自傷行為について何も触れずに、無関心を装う。
・自殺企図が理性的な判断に基づいて行われたと判断する。
・「自己責任でしょう」と突き放す。
・「何て馬鹿なこと（自殺企図）をするのですか」と叱責する。
・「そんなの（悩みごと）たいしたことではないじゃないですか」と自分の価値観を押しつける。
・身体面の状態・治療に関する説明だけをして、精神面には触れない。
・本人の訴えを聞かず、「今は体の治療に専念しましょう」などとはぐらかす。
・家族への気遣いは、とくに治療とは関係ないことだと考える。
・全身状態が回復したら、ただちに退院させる。

好ましい対応例

・まず、身体の痛みや状態を尋ねることを通してコミュニケーションを図る。
・自殺企図の背景には、必ず精神的な問題があると考え、対応する。
・先に、身体的な問題から生じる精神症状の可能性を考慮する。
・当該の行為が故意の自傷／自殺未遂だったのかどうかを患者に尋ねる。
・自傷／自殺未遂に至った経緯を尋ねる。
・現在の自殺念慮の有無や強さを確認する。
・精神的なケアの必要性、精神科受療の必要性を解説する。
・今日と明日の過ごし方、当面の方針を話し合う。
・今回の自殺企図について、内省、後悔の念があるかどうかを確認する。
・メンタルヘルス・サポートや、自殺予防に資する資料を手渡し、社会資源の利用を勧める。
・ソーシャルワーカーとの相談を勧める。

■症例の解説

精神科受診歴のないケースである。もともと内気で心を開くことができず、誰かに相談をすることも苦手な性格の患者である。職場で、これまでに経験したことのないストレスを経験したが、誰にも相談せず、負荷が本人の許容範囲を超えてしまい今回のような行為に及んでいる。本人は、精神科を受診すること自体、思い浮かばなかったかもしれない。

ストレス状態を終わらせる目的での衝動的な行為ではあるが、衝動的、一時的な行為だといって決して軽んじてはならない。今回の自殺企図手段は非常に致死性が高いものである。適応障害を疑うが、絶望感、自責感、不安・焦燥感を伴ううつ病の可能性もあり、精神科受療（入院・外来にかかわらず）につなげることが最重要である。

一酸化炭素（CO）中毒では、曝露時間とCO濃度によって意識障害の遷延時間や後遺症の重症度が異なる。時に、軽度の意識障害が続くことがあるが、臨床症状だけでは時に鑑別が困難である。このため、脳波等を使用した客観的評価は必須である。

Q&A

Q1　まずはどんな声かけをするべきですか？　声かけをする際に注意する点は何でしょうか？

A1

まず、あいさつを交わしたり、一般的な声掛け、問いかけを通じて意識障害の有無を確認する必要がある。その際、ごく軽度の意識障害を見落とさないように注意が必要である（コラム8）。意識が清明であると判断されたら、その後に少し踏み込んだ質問に移る。

自発的によく話をしてくれるケースでは、傾聴、共感する姿勢が大切で、まずはしっかりと患者の話を受容するよう心がける。患者のほとんどは、精神疾患や一時的にでもメンタルヘルス不調に陥っているので、ストレスや生活問題にうまく対処できていない状況である。このため、患者の語る問題が医療者からみて容易に解決可能であるように思えても、軽視しないように気をつける。その意味で、患者の語りの内容ばかりでなく、患者がどのような心境にあるのか、どのような面持ちで語っているのかというところも大事にする。

一方、なかなか口が重く語りたがらないケースの場合は、無理して聞き出すということまではしなくてもよいが、信頼関係の醸成に努め、コミュニケーションがある程度できるようになってから、核心部分について話題にあげるようにする。初めはなかなか応えてくれなくても、繰り返し尋ねたり、角度を変えて聞き直すと応えてくれることもある。

いずれのケースも、当該の行為が自殺の意図を伴うものであったのかどうかということを、出来るだけ早期に確認するとよい。

医療者は決して本人の話に対して、自分自身の価値観を押し付けるような話し方にならないように注意する。TALKの原則というコミュニケーション法がよいとされている。TALKの原則とは、T（Tell）：誠実な態度で話しかける、A（Ask）：自殺かどうかについてはっきりと尋ねる、L（Listen）：傾聴、K（Keep safe）：安全を確保する、という語の頭文字からなるものである。

Q2　精神的な側面に働きかけを行う前に、本人についてチェックしておくべきことはなんでしょうか？

A2

救急医療であるため身体的な評価がもっとも優先され、低酸素血症、CO中毒、薬物過量摂取などによる意識障害の有無をしっかり鑑別することが大切である。また、本人にとってのキーパーソンを同定し、あらかじめ情報を詳しく聴いておくことや、精神科のかかりつけ医が存在すれば、できるだけ早く診療情報提供を求め、①精神科診断名、②治療経過、③最近の状態、④治療薬などについて正確な情報を得ておくことが重要である。

Q3　本人が行った行為について、それが自殺を念頭においた行動（自殺企図）だったのかどうかを直接確認してもよいでしょうか？

A3

医療者は自殺の意思についてはっきりと尋ねることが苦手かもしれないが、TALKの原則にもあるように、このことを口に出して確認しなくてはならない。なぜなら、自殺未遂であったのかどうかが、その後の患者の対応を決めていくことになるからである。

自殺の意思について確認しても、先に述べたように口ごもってしまうこともあるが、意外と抵抗なく正直に述べてくれることも少なくない。患者とのコミュニケーションがある程度成立していれば、このことを尋ねても患者が怒り出すことはないし、当初は驚く患者もいるが、大抵はむしろ自分のつらい状況を誰かに聞いてほしかったということで語ってくれる。

もしも質問しにくいと感じたら、たとえば「大事なことなので確認させて下さい」と前置きしたり、「今までも同じような方が沢山入院してきましたので、あなたにも質問しますが…」と、やや婉曲な表現を用いるなどの工夫もある。

Q4　本人が「自殺をしようと思ってしたことです」と答えたらどのように対応しますか？

A4

まずは、動揺しないようにできるだけ冷静に対応する。医療者のなかには、「自殺の意図」に過度に反応し、批判的に対応してしまう人もある。しかし、批判や叱責は控え、共感・受容に努める。自殺企図そのものの是非ではなく、企図に本人を追い込んだ状況がどのようなものであったのかを聞き出すように努力する。ほとんどの場合、自殺企図へ至る要素は複数存在するため、視点を変えて、具体的に質問を行うようにする。その際大切なことは、患者の回答が、自殺企図に相応するようなものかどうかという点である。もしも回答があまりに表面的で納得しにくいものである場合（たとえば、「親と喧嘩した」、「3万円の借金が返せない」など）、それは自殺企図の引き金にすぎず、根本的な原因は別にあるかもしれない。そのため、聴取者は具体的に疑問を口に出して「それだけではなくて、他にもあるような気がしますが」「もっと大きな原因がありませんか？」などと質問をしてみる。必ずしも患者は順序立てて語るわけではなく、当初は語らなかった本当の原因を後々に語るケースもある。

Q5　もし、本人が「自殺企図ではない」と答えたが、家族から「遺書があった」という情報を得たらどのように対応しますか？

A5

しっかり確認することで、自殺の意図を回答する場合が圧倒的に多いが、時には隠し通そうとするケースが存在する。理由はいくつかあげられるが、主なものとして、「答えるのが面倒だから」ということがある。他にも「家族に知られたくない」「職場に知られたくない」などがあげられる。医療者に対する不信感から答えないこともある。そこで大切なことは、基本に帰って、本人が事実を話しやすい環境、関係づくりを行うことであり、意識的に患者の元へ頻回に足を運ぶとよい。今回の件と関連の薄い話から遠回りをしながら、核心に迫っていく方法もある。何度か話をしているうちに、「実は・・・」と話し始めることは少なくない。他には、患者が話してくれた内容を医療者の中だけでとどめておくと約束し、話してもらうやり方がある。

遺書については、やはり家族から話題にしてもらうことが望ましく、できれば患者にとって重い話題は、病院内といういわば保護された空間の中で扱い、解決への方向性を出していくということがよいであろう。

Q6　自殺企図をした患者に精神科受診歴がない場合、どのように受診を勧めるのがよいやり方ですか？

A6

前提として、自殺未遂患者の多くが企図時に精神疾患に罹患しているという事実を医療者が知識としてもち、理解しておく必要がある。救急のスタッフが正確な精神科診断を行う必要はない。

また精神科診断にこだわるのではなく、自殺が起こるメカニズム（複合的なストレスと、その複雑化、精神疾患の関与の可能性が大であること、自殺から患者を遠ざけるような保護的な要素の不足・欠如）について疾病教育のように教育を行い、具体的にどのような対処が望ましいのかという情報を伝えることが必要である。

このことを実践するには、一般的には、本人、家族、医療スタッフの面接を設定する。そして、もし救急病棟に入院中に精神科医の関与があり、精神症状に関する診立てがなされたのであればそのことを説明し、地域の精神科への受診を促す。

入院期間が短く精神科診断がつかない場合、入院中の精神科医の関与がまったくない場合（専門家による診断が不可能な場合）、あるいは本人、家族のなかで精神科診療に関する理解が乏しいという場合には、心理教育として自殺に関する客観的事実（「自殺企図の背景に精神疾患が存在する可能性が極めて高い」「医療者として、適切な医学的な判断とケアが必要と考える」「自殺企図の再発率が決して低くない」「自殺未遂は自殺の危険要因」など）をわかりやすく伝え、精神科受療の必要性を説く。理想的には、退院時、または退院後数日以内に精神科へ受療できるよう、家族などに予約をあらかじめ取得してもらうようはたらきかける。

Q7　本人が頑なに精神科受診を拒否する場合には、方法はありますか？

A7

上記の説明方法と同様であるが、家族をはじめとして、患者に対して発言力のある方（キーパーソン）から受療を促してもらうことが有効なこともある。

Q8　遠方から駆けつけた家族が困惑している場合、どのような対応が望ましいですか？

A8

迅速な対応とケアが必要である。患者が突然入院したこと、不慣れな場所に突然来たことだけでも家族には強いストレスがかかっている。家族が責任を感じて自責的になっていることもあるが、ほとんどの家族が、自殺企図と精神疾患の関連など、上記のような自殺企図行動の本質を理解していないのが実情である。

まずは病状について正確に伝え、ねぎらいの言葉をかけるとよい。患者同様に傾聴、共感の姿勢が必要である。家族とともに今後のことを考えていくことを伝え、そのように接することで家族の心の負荷は軽減される。身体の状況や、自殺再企図の可能性について事実を伝えることは大切であるが、過度に恐怖心を煽らないようにも注意する。

状況が落ちつきしだい、家族に対して心理教育（コラム9参照）を十分時間をかけて行うとよい。円滑に精神科受診につながるような具体的な支援も必要である。医師や看護師だけで助言や支援

を行うのではなく、ソーシャルワーカーの活用も重要である。

Q9　自宅への退院が可能と判断しにくいのはどのようなケースですか？

A9

自宅への退院可否の判断においては、とくに以下のような項目に留意する。

①強い希死念慮、具体的な自殺企図の計画を否定せず、依然として強く存在する。
②自らの行った自殺企図に対してまったく振り返りがなされていない。
③患者をサポートし得るキーパーソンがいない（あるいは、いても具体的に機能しそうもない）。
④即座に経済的に困窮してしまうか、衣食住に差し迫った問題がある。
⑤精神症状が活発。
⑥入院中に不眠が顕著。
⑦退院後の精神科受診の目途がまったくついていない。
⑧本人、家族の両者が精神科での入院治療を望んでいるのに、入院先への受診も含めてまったく入院までの段取りについて目途がついていない。

コラム8：意識障害について

過量服薬による意識障害から意識が回復し、一見、見当識も確認できて会話もそれなりに成立したのに、時間をあけて（たとえば翌日など）ベッドサイドを再訪し話をすると、前日に話した内容はおろか診察医の顔すら記憶していないケースが少なからずある。また、過量服薬後に入院した後に不穏状態でスタッフに悪態をついたり暴言を吐く患者がいて困ることがある。このような患者の言動の背景には、しばしば軽度の意識障害の遷延が存在しており、意識が真に清明になってから会うと、前の言動をまったく覚えていなかったり、別人のようであったりする。

精神医学では過過症候群という症候学が提唱されている。これは、軽度の意識障害からの回復過程では多様な精神症状がみられるということを意味することばである。精神症状や本人の心理状態を把握するためには、意識障害を除外しなくてはならないが、しばしば軽度の意識障害は見落とされがちで注意が必要である。以下に、その鑑別のポイントについてまとめた。

軽度の意識障害があると……
・長い会話をしていると、まとまりがないことがわかる（例：「今日は朝から今まで何をしていましたか？」と質問してみるとよい）
・些細な単語の言い間違いが多い（午前⇔午後、国名⇔都市名など）
・100から7を順次引き算してもらうと、途中でできなくなることが多い
・普段と性格が異なっているように見える（多弁、軽口で、精神的に上ずったような、いわゆる「脱抑制的」といわれる状態で、普段患者と接している家族に確認すればすぐにわかる）
（原田憲一著：意識障害を診わける．診療新社，大阪，1997．より引用、改変）

コラム9：心理教育

心理教育とは、近年、臨床医学のさまざまな領域で取り入れられるようになった心理社会的治療の手法の一つで、疾病に罹患した患者や家族に対して、①疾病に関して的確な知識を伝え、②疾病に伴うさまざまな障害（生活障害を含む）に関する対処法を伝えることによって、③患者や家族自身が自律的に疾病や障害に対処していくことを支援するものである。従来、臨床で用いられてきたいわゆる「ムンテラ」には、多分に医師主導的なニュアンスがあるが、これとは異なる点に注目してもらいたい。

自殺企図後に心理教育を行う際の重要ポイントは、①当該の患者の行動が、死を意図して行った自殺企図行動であったことの確認、②自殺の危険因子と、人が自殺にまで至るプロセスに関する一般説明（自殺は複雑事象であるが、多くの場合、なんらかの環境的な要因によりメンタルヘルス不調となり、精神疾患を発症し、環境的要因と精神疾患との交互作用により自殺へと傾いていく）、③当該の患者の経過に即した自殺のプロセスの確認、④精神科受療の勧奨と、その他の環境要因を解決するために話し合い、⑤医療施設や保健・福祉に関する社会資源、自殺予防に資する各種情報の提供（県市町村の自殺対策窓口の紹介、いのちの電話等の民間団体）である。

これらの心理教育は、患者だけでなく、家族のような重要他者に対して、あるいは患者・家族に同時に行うことが推奨される。もちろん、上記の心理教育内容をひとりの救急医療スタッフが行うことは不可能であり、精神科医、臨床心理士やソーシャルワーカーの参与が望ましい。

文献：
浦田重治郎他（心理社会的介入共同研究班）：心理教育を中心とした心理社会援助プログラムガイドライン（暫定版）．厚生労働省精神・神経疾患研究委託費事業「統合失調症の治療およびリハビリテーションのガイドライン作成とその実証的研究」成果報告書．2004.
岩本洋子他：救命救急センターにおける自殺未遂者への対応．臨床精神医学．39：1451-1458．2010.

あとがき

自殺対策基本法（平成18年6月成立）に基づく、自殺総合対策大綱（平成19年6月策定）では、自殺未遂者ケアが自殺対策の重点項目のひとつとして位置づけられている。平成21（2009）年3月に自殺未遂者ケアを推進するために「自殺未遂患者への対応：救急外来（ER）・救急科・救命救急センタースタッフのための手引き」（日本臨床救急医学会）が作成され、全国の救急医療従事者を対象に手引きを活用した自殺未遂者ケアの研修会（厚生労働省主催）が開始された。さらに、この手引きは厚生労働省の自殺予防対策のウェブサイト（http://www.mhlw.go.jp/bunya/shougaihoken/jisatsu/）からダウンロードができるようになっており、日本全国の従事者に対する自殺未遂者ケアに関する支援体制が構築されている。

平成21年度より自殺対策緊急強化基金（内閣府）が各都道府県・政令市へ交付され、全国でさまざまな自殺対策事業が行われており、各地の自殺未遂者ケア研修会の一環でこの手引きが活用されている。この「来院した自殺未遂患者へのケア Q&A―実践編2011―」では、救急医療従事者がさまざまな自殺未遂事例への対応を実践するうえでのポイントを提示している。救急医療従事者にとって自殺未遂者ケアは必須の課題であり、従事者はそれぞれの現場で搬送される患者たちのこころの危機に直面して、懸命に対応にあたっている。救急医療従事者が適切なケアを提供し、わが国の自殺対策を推進の一助となっていくことを祈念する。（徘）

この冊子に関するご意見がございましたら、日本臨床救急医学会
自殺企図者のケアに関する検討委員会までお寄せください。

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来院した自殺未遂患者へのケア Q&A
―実践編2011―

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Is antipsychotic polypharmacy associated with metabolic syndrome even after adjustment for lifestyle effects?: a cross-sectional study

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Abstract

Background: Although the validity and safety of antipsychotic polypharmacy remains unclear, it is commonplace in the treatment of schizophrenia. This study aimed to investigate the degree that antipsychotic polypharmacy contributed to metabolic syndrome in outpatients with schizophrenia, after adjustment for the effects of lifestyle.

Methods: A cross-sectional survey was carried out between April 2007 and October 2007 at Yamanashi Prefectural KITA hospital in Japan. 334 patients consented to this cross-sectional study. We measured the components consisting metabolic syndrome, and interviewed the participants about their lifestyle. We classified metabolic syndrome into four groups according to the severity of metabolic disturbance: the metabolic syndrome; the pre-metabolic syndrome; the visceral fat obesity; and the normal group. We used multinomial logistic regression models to assess the association of metabolic syndrome with antipsychotic polypharmacy, adjusting for lifestyle.

Results: Seventy-four (22.2%) patients were in the metabolic syndrome group, 61 (18.3%) patients were in the pre-metabolic syndrome group, and 41 (12.3%) patients were in visceral fat obesity group. Antipsychotic polypharmacy was present in 167 (50.0%) patients. In multinomial logistic regression analyses, antipsychotic polypharmacy was significantly associated with the pre-metabolic syndrome group (adjusted odds ratio [AOR], 2.348; 95% confidence interval [CI], 1.181-4.668), but not with the metabolic syndrome group (AOR, 1.269; 95%CI, 0.679-2.371).

Conclusions: These results suggest that antipsychotic polypharmacy, compared with monotherapy, may be independently associated with an increased risk of having pre-metabolic syndrome, even after adjusting for patients' lifestyle characteristics. As metabolic syndrome is associated with an increased risk of cardiovascular mortality, further studies are needed to clarify the validity and safety of antipsychotic polypharmacy.

Background

Metabolic syndrome is a cluster of metabolic dysfunctions, including central obesity, hypertension, glucose, and lipid abnormalities. Those with the syndrome have a two- to threefold increase in cardiovascular mortality and a two-fold increase in all-cause mortality [1]. Patients with schizophrenia are more likely to have metabolic syndrome than the general population [2].

To date, a few research studies have reported an association between antipsychotic polypharmacy and metabolic syndrome [3,4]. Limited evidence currently exists regarding the benefits of antipsychotic polypharmacy, and antipsychotic monotherapy is consistently recommended in the treatment of patients with schizophrenia [5,6]. Antipsychotic polypharmacy is, however, commonplace in the treatment of schizophrenia [7-11], and has been reported to occur in a wide range (13-90%) of cases. In Japan, in particular, polypharmacy has been reported to occur at a higher rate than in other countries [12].

If antipsychotic polypharmacy, which is not recommended, is associated with a greater risk of metabolic syndrome, the spread of polypharmacy is a serious concern. However, it remains unclear among earlier studies whether antipsychotic polypharmacy is associated with metabolic syndrome as a direct result of patients' unhealthy lifestyle. Patients with schizophrenia are likely to make poor dietary choices, have low rates of physical activity, and smoke cigarettes [13], and their unhealthy lifestyle is assumed to be associated with an increased risk of metabolic syndrome. However, as little information is available on the association between metabolic syndrome and antipsychotic polypharmacy in conjunction with patients' lifestyle, further research is needed any such association.

In this cross-sectional study, we aimed to investigate the relationships between antipsychotic polypharmacy and metabolic syndrome in outpatients with schizophrenia, with adjustment for the effects of lifestyle.

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Methods

Study participants

Participants who lived in the community and received psychiatric outpatient treatment were recruited from April 2007 to October 2007. The study inclusion criteria were: regular attendance at Yamanashi Prefectural KITA Hospital, Japan; an ICD-10 diagnosis of schizophrenia, schizotypal and delusional disorders; and age 18 years or older.

During the study period, of all 599 patients who fulfilled the inclusion criteria in this study, 399 consented to participate in the study. As 65 of these patients did not complete the questionnaire, data from 334 patients were used in the analysis.

The study design was approved by the Ethics Committees of Yamanashi Prefectural KITA Hospital. Written informed consent was obtained from all participants.

Assessment

Assessment in this study consisted of sociodemographics (age, gender), duration of psychiatric treatment, family history of lifestyle-related disease, metabolic syndrome, prescribed antipsychotics, and participants' lifestyle. In addition, psychiatrists in charge of the participants assessed the patients on the Global Assessment of Functioning (GAF) scale.

Metabolic syndrome

Rather than using the discrete diagnostic category of metabolic syndrome, we divided metabolic syndrome into four groups based on severity of metabolic disturbance (metabolic syndrome, pre-metabolic syndrome, visceral fat obesity and normal), since metabolic syndrome is continuously disturbed in nature [14]. In accordance with the diagnostic criteria proposed by the Japanese Committee of the Metabolic Syndrome Diagnostic Criteria [15], metabolic syndrome was defined as visceral fat obesity (abdominal circumference: ≥85 cm for males, ≥90 cm for females) and at least two of the following three criteria: elevated blood glucose (fasting glucose level ≥110 mg/dL), lipid abnormalities (triglycerides ≥150 mg/dL and/or high-density lipoprotein (HDL) cholesterol <40 mg/dL), and elevated blood pressure (systolic blood pressure ≥130 mmHg and/or diastolic blood pressure ≥85 mmHg). Current treatment with diabetes, lipid-lowering, or antihypertensive medication fulfilled the criterion for elevated blood glucose, lipid abnormality, and elevated blood pressure, respectively. Pre-metabolic syndrome was defined as the presence of one of the above three criteria in addition to visceral fat obesity.

We classified metabolic syndrome in the following four groups: the normal group did not fulfill the criteria of visceral fat obesity, the visceral fat obesity group fulfilled only the criteria of visceral fat obesity, the pre-metabolic syndrome group was defined by the presence of only one of the three criteria above in addition to visceral fat obesity, and the metabolic syndrome group was defined by the presence of at least two of the three criteria above in addition to visceral fat obesity. Participants were given written instructions to fast overnight on the day before assessment, and asked to confirm their fasting status before blood samples were taken. A single venous blood sample was withdrawn and analyzed for glucose, triglycerides, and HDL cholesterol. Nurses measured abdominal circumference and blood pressure.

Prescribed antipsychotics

We investigated prescribed antipsychotics from patient charts on the day we measured the participant's metabolic syndrome parameters. All dosages of antipsychotic drugs were converted into chlorpromazine equivalents [16] in order to estimate the total daily chlorpromazine-equivalent dose.

In this study, polypharmacy was defined as the concomitant use of two or more antipsychotics, while monotherapy was defined as the use of only one antipsychotic.

Antipsychotic treatment in Japan was subject to special conditions during the study period. First, clozapine had not been launched at this time. Second, olanzapine and quetiapine were contraindicated for patients with diabetes or a history of diabetes because it was reported that some patients that were treated with olanzapine and quetiapine developed severe hyperglycemia and diabetic coma.

Assessment of participants' lifestyle

We assessed the participants' dietary habits, physical activity, and smoking habits. With regards to dietary habits, these were assessed by an originally designed self-reporting questionnaire that consisted of the following four items, which have been used in earlier studies: snack eating (Do you eat snacks?), intake of fatty foods (Do you

eat fatty foods?), preference for a high-salt diet (Do you put soy sauce or Worcestershire sauce on your food?), and consumption of soft drinks (Do you drink soft drinks?) [17,18]. Each item was scored on a 4-point scale (1 = never, 2 = rarely, 3 = sometimes, 4 = always).

To assess the participants' physical activity, we used the Exercise and Physical Activity Guide for Health Promotion 2006 [19]. In this guide, physical activity consists of exercise and non-exercise activities (e.g., walking, cleaning the floors, and walking up and down stairs). The units used to express the intensity and quantity of physical activity are "MET" and "MET × hour", respectively. MET is calculated as energy expenditure (oxygen uptake, mL/kg/min) during a specific physical activity divided by sitting/resting energy expenditure. Defining the MET of sitting/resting as 1, that of normal walking, for example, is 3. The unit "MET × hour" (expressed as "Ex" for Exercise (*Ekusasaizu* in Japanese)) was calculated by multiplying the MET by the duration of the activity (hour). The goal for physical activity was set at 23 Ex or more per week, with 3 MET of physical activity set as the minimum (cut off).

Using the Compendium of Physical Activities [19], we interviewed participants about their exercise and non-exercise activities with more than 3 MET in the one week prior to the study day, and calculated the quantity of their physical activity.

Participants' smoking habits were rated as 1 (= 21 or more cigarettes per day), 2 (= 6 to 20), 3 (= 1 to 5), or 4 (= no cigarette).

Data analyses

Analyses of variance, chi-square tests, and Kruskal-Wallis tests were used to compare demographic, treatment and clinical variables in the classification of metabolic syndrome.

To examine the effects of antipsychotic polypharmacy on metabolic syndrome, we conducted multinomial logistic regression analyses, with the classification of metabolic syndrome as the dependent variable. For the analyses, we entered the variables whose p-values were less than 0.1 in univariate tests into the model. A p value of <0.05 was considered statistically significant. Data were analyzed using SPSS 14.0 J for Windows.

Results

Characteristics, lifestyle, and antipsychotic treatment of participants (Table 1)

The mean age of the 334 participants was 44.2 years, and 42.8% were female. The mean GAF score was 53.5, 48.8% had a family history of lifestyle-related disease, and the mean duration of psychiatric treatment was 18.2 years. The mean value of physical activity was 22.4 Ex, and the mean score for smoking habit was 3.0.

The mean dose in chlorpromazine equivalents was 596.6 mg/day, and 35.0% received olanzapine and quetiapine. One hundred six (31.7%) patients received two antipsychotics, 48 (14.4%) patients were on three antipsychotics, and 13 (3.9%) patients were on four antipsychotics. According to the definition in this study that polypharmacy was the concomitant use of two or more antipsychotics, 167 participants (50.0%) were receiving antipsychotic polypharmacy.

Category of metabolic syndrome

Of the 334 participants, 176 (52.7%) fulfilled the visceral fat obesity criteria, 92 (27.5%) fulfilled the elevated blood glucose criteria, 138 (41.3%) fulfilled the lipid abnormality criteria, and 105 (31.4%) fulfilled the elevated blood pressure criteria. Seventy-four (22.2%) patients were in the metabolic syndrome group, 61 (18.3%) patients were in the pre-metabolic syndrome group, 41 (12.3%) patients were in the visceral fat obesity group, and 158 (47.3%) were in the normal group. The characteristics, lifestyle and antipsychotic treatment in each group are summarized in Table 1. The rate of polypharmacy in the groups of metabolic syndrome, pre-metabolic syndrome, visceral fat obesity and normal were 52.7%, 63.9%, 61.0%, and 40.5%, respectively.

Compared to the monotherapy group, the polypharmacy group was more likely to fulfil the visceral fat obesity criterion (61.7% vs. 43.7%, p = 0.0014) and the elevated blood glucose criterion (32.9% vs. 22.2%, p = 0.037), and less likely to fulfil the elevated blood pressure criterion (26.3% vs. 36.5%, p = 0.045). The prevalence of the metabolic syndrome group in monotherapy and polypharmacy showed no significant difference (23.4% vs. 21.0%, p = 0.60). However, the polypharmacy group was more likely to be the pre-metabolic syndrome group (46.7% vs. 34.1%, p = 0.019).

Multinomial logistic regression analyses (Table 2)

Multinomial logistic regression analyses revealed that the metabolic syndrome group was associated with being male, longer duration of psychiatric treatment, and heavier smoking habit. The pre-metabolic syndrome group was associated with being male and antipsychotic polypharmacy. The visceral fat obesity group was associated with being male and higher antipsychotic total daily dose.

Thus, overall, antipsychotic polypharmacy was not related to the severity of symptoms in the metabolic syndrome group but was related to the severity of symptoms in the pre-metabolic syndrome group.

Discussion

Our study shows that antipsychotic polypharmacy is not correlated with metabolic syndrome but is correlated

Table 1 Characteristics, lifestyle and antipsychotic treatment in total participants and four groups

	Total (n = 334)	Normal (n = 158)	visceral fat obesity (n = 41)	pre-metabolic (n = 61)	Metabolic (n = 74)	p
Characteristics						
Age, mean (SD), y	44.2 (12.3)	43.5 (13.2)	42.4 (11.4)	43.4 (12.2)	47.2 (10.6)	0.11
Female, % (n)	42.8 (143)	62.7 (99)	22.0 (9)	21.3 (13)	29.7% (22)	<0.01
GAF, mean (SD)	53.5 (15.3)	54.6 (15.0)	51.3 (15.5)	53.3 (15.6)	52.5 (15.6)	0.58
Family history, % (n)	48.8 (163)	48.7 (77)	48.8 (20)	44.3 (27)	52.7 (39)	0.81
Duration of psychiatric treatment, mean (SD), y	18.2 (12.1)	16.8 (12.2)	18.7 (11.8)	17.2 (11.3)	21.5 (12.1)	0.04
Lifestyle						
Snacks eating, % (n)						0.39
1 = never	12.9 (43)	13.3 (21)	9.8 (4)	13.1 (8)	13.5 (10)	
2 = rarely	26.9 (90)	28.5 (45)	24.4 (10)	27.9 (17)	24.3 (18)	
3 = sometimes	40.7 (136)	39.2 (62)	31.7 (13)	41.0 (25)	48.6 (36)	
4 = always	19.5 (65)	19.0 (30)	34.1 (14)	18.0 (11)	13.5 (10)	
Fatty foods, % (n)						0.18
1 = never	2.4 (8)	5.1 (8)	0.0 (0)	0.0 (0)	0.0 (0)	
2 = rarely	21.6 (72)	23.4 (37)	17.1 (7)	23.0 (14)	18.9 (14)	
3 = sometimes	59.0 (197)	57.0 (90)	65.9 (27)	59.0 (36)	59.5 (44)	
4 = always	17.1 (57)	14.6 (23)	17.1 (7)	18.0 (11)	21.6 (16)	
High salt diet, % (n)						0.77
1 = never	4.5 (15)	3.2 (5)	1.6 (1)	1.6 (1)	10.8 (8)	
2 = rarely	20.1 (67)	22.2 (35)	19.5 (8)	19.7 (12)	16.2 (12)	
3 = sometimes	42.2 (141)	43.0 (68)	36.6 (15)	50.8 (31)	36.5 (27)	
4 = always	33.2 (111)	31.6 (50)	41.5 (17)	27.9 (17)	36.5 (27)	
Consumption of soft drink, % (n)						0.16
1 = never	11.1 (37)	13.3 (21)	9.8 (4)	11.5 (7)	6.8 (5)	
2 = rarely	21.6 (72)	26.6 (42)	29.3 (12)	9.8 (6)	16.2 (12)	
3 = sometimes	41.9 (140)	36.7 (58)	29.3 (12)	49.2 (30)	54.1 (40)	
4 = always	25.4 (85)	23.4 (37)	31.7 (13)	29.5 (18)	23.0 (17)	
Smoking habit, per day, % (n)						<0.01
1 = 21 or more	18.6 (62)	13.9 (22)	7.3 (3)	24.6 (15)	29.7 (22)	
2 = 6 to 20	21.6 (72)	17.7 (28)	26.8 (11)	24.6 (15)	24.3 (18)	
3 = 1 to 5	3.9 (13)	5.1 (8)	2.4 (1)	3.3 (2)	2.7 (2)	
4 = none	56.0 (187)	63.3 (100)	63.4 (26)	47.5 (29)	43.2 (32)	
Physical activity, mean (SD), Ex	22.4 (37.3)	21.0 (38.1)	17.9 (19.5)	30.0 (51.9)	21.7 (27.3)	0.34
Antipsychotic treatment						
Total daily dose, mean (SD), mg/d	596.6 (453.4)	510.3 (419.6)	769.2 (437.6)	668.4 (452.3)	626.2 (497.9)	<0.01
Antipsychotics contraindicated for diabetes, % (n)	35.0 (117)	62.7 (99)	65.9 (27)	63.9 (39)	56.8 (42)	0.74
Antipsychotic polypharmacy, % (n)	50.0 (167)	40.5 (64)	61.0 (25)	63.9 (39)	52.7 (39)	0.01

with the wider range of the syndrome when adjusting for the effects of lifestyle in outpatients with schizophrenia. These findings indicate that antipsychotic polypharmacy contributes in part to metabolic syndrome.

It remains unclear why antipsychotic polypharmacy is correlated with metabolic disturbance. Earlier studies suggested that various receptors effects, such as H_1, D_2, 5-HT_{1A}, 5-HT_{2C}, α_2, and M_3, might contribute to metabolic disturbance [20]. We speculate that the complex receptor-binding profiles of antipsychotic polypharmacy might be one of the causes of metabolic disturbance.

Among earlier studies, the association between metabolic syndrome and antipsychotic polypharmacy was not certain. For example, Correll et al. [3] observed that patients who receive antipsychotic polypharmacy had significantly higher rates of metabolic syndrome in

Table 2 Multinomial logistic regression analyses

	visceral fat obesity		premetabolic syndrome		metabolic syndrome	
Variable	**AOR**	**95% CI**	**AOR**	**95% CI**	**AOR**	**95% CI**
Gender (male)	**7.104**	**2.990-16.879**	**6.122**	**2.955-12.683**	**3.427**	**1.835-6.401**
Smoking habit, per day						
21 or more	0.353	0.093-1.337	1.726	0.750-3.974	**2.298**	**1.074-4.916**
6 to 20	0.882	0.357-2.183	1.103	0.483-2.521	1.537	0.714-3.308
1 to 5	0.480	0.054-4.286	0.784	0.144-4.266	0.736	0.143-3.799
none (reference)	1	–	1	–	1	–
Duration of psychiatric treatment, y	1.006	0.974-1.039	0.990	0.962-1.019	**1.028**	**1.003-1.054**
Total daily dose (10 mg units)	**1.011**	**1.003-1.019**	1.007	0.999-1.015	1.005	0.998-1.012
Antipsychotic polypharmacy	1.580	0.709-3.521	**2.348**	**1.181-4.668**	1.269	0.679-2.371

The dependent variable has four categories: normal, visceral fat obesity, pre-metabolic, and metabolic syndrome. The latter three categories are compared with the normal category.

AOR: adjusted odds ratio, CI: confidence interval

Nagelkere's R square = 0.26.

univariate analyses, but antipsychotic polypharmacy was not independently associated with metabolic syndrome in logistic regression analyses which accounted for demographic and clinical variables. They speculated that antipsychotic polypharmacy was not a primary factor for metabolic syndrome, and that factors related to antipsychotic polypharmacy, such as inactivity, contributed to the risk of metabolic syndrome.

Physical activity was not associated with metabolic syndrome of any severity in this study. We infer that the association between metabolic syndrome and antipsychotic polypharmacy is not certain because of the effect of antipsychotic polypharmacy on lowering blood pressure, rather than because of the effect of inactivity. It was reported that polypharmacy was associated with a significantly higher drop in systolic pressure than monotherapy [21]. This might be due to the effects of a higher dose than that received during monotherapy or a drug interaction which created dopaminergic and noradrenergic deficiency conditions, such as Shy-Drager syndrome. Similarly, in the present study, patients receiving antipsychotic polypharmacy were less likely to fulfil the criterion of elevated blood pressure. Consequently, because antipsychotic polypharmacy tended not to be associated with elevated blood pressure, which is one of the three criteria for metabolic syndrome, polypharmacy may not have been correlated with metabolic syndrome, which needs to fulfil two or more of the three criteria, but rather with pre-metabolic syndrome, which needs to fulfil one or more of the criteria. We speculate that antipsychotic polypharmacy is directly associated with metabolic disturbance and increases the risk for metabolic syndrome, but the effect on lowering blood pressure masks the diagnosis of metabolic syndrome.

Another reason for our finding that polypharmacy contributes in some way to metabolic syndrome is that psychiatrists might be reluctant to prescribe additional antipsychotics for patients with metabolic syndrome to avoid worsening their metabolic profiles; however, for patients with pre-metabolic syndrome, they might not hesitate to prescribe additional antipsychotic.

Antipsychotic polypharmacy was not significantly associated with the visceral fat obesity group. That may be why the sample size in the group was small. We speculate that the association between polypharmacy and the visceral fat obesity may become significant if the sample size is larger.

Among the lifestyle factors, smoking habit was associated with prevalence of metabolic syndrome. It is considered to be an important risk factor for metabolic syndrome in the general population [22,23]. The prevalence of smoking in schizophrenia greatly exceeds that in the general population [24-26]. For the prevention of metabolic syndrome, it is necessary to provide guidance for lifestyle, such as smoking cessation advice, to patients with schizophrenia, especially those receiving antipsychotic polypharmacy.

The limitations of our study were a cross-sectional design, moderate sample size, high rate of refusal to participate in the study, and non-assessment of other psychotropic drugs except antipsychotics. In addition, special conditions were imposed on antipsychotic treatment in Japan at the time of the study, that is, clozapine had not yet been launched and olanzapine and quetiapine were contraindicated for patients with diabetes or a history of diabetes. Clozapine and olanzapine, in particular, are known as high-risk drugs for metabolic syndrome [27]. Therefore, the above special conditions are likely to have affected the results in this study.

Conclusions

Our study is the first attempt to clarify the relationship between metabolic syndrome, antipsychotic polypharmacy, and patients' lifestyle. The findings indicate that antipsychotic polypharmacy, compared with monotherapy, may be independently associated with an increased risk of having pre-metabolic syndrome, even after adjusting for patients' lifestyle characteristics. Despite the fact that there is little evidence regarding the efficacy of antipsychotic polypharmacy in schizophrenia and that it is not recommended in its treatment of schizophrenia, it has been common practice in the past. As metabolic syndrome is associated with an increased risk of cardiovascular mortality, further studies are needed to clarify the validity and safety of antipsychotic polypharmacy in this patient population.

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Authors' contributions

FM participated in the design and the coordination of the study, performed the statistical analyses and drafted the manuscript. KS conceived of the study and participated in the design and the coordination of the study. YF, RM, FK, MiK, HS and YaO participated in the design and the coordination of the study. HI and YaO participated in the analytical plan, the interpretation of the results, and assisted in drafting the manuscript.
MaK participated in the design of the study. HK assisted with the interpretation of the results and helped draft the manuscript. All authors read and approved the final manuscript.

Competing interests

The authors declare that they have no competing interests.

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References

1. Lakka HM, Laaksonen DE, Lakka TA, Niskanen LK, Kumpusalo E, Tuomilehto J, Salonen JT: **The metabolic syndrome and total and cardiovascular disease mortality in middle-aged men.** *JAMA* 2002, **288(21)**:2709-2716.
2. McEvoy JP, Meyer JM, Goff DC, Nasrallah HA, Davis SM, Sullivan L, Meltzer HY, Hsiao J, Scott Stroup T, Lieberman JA: **Prevalence of the metabolic syndrome in patients with schizophrenia: baseline results from the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) schizophrenia trial and comparison with national estimates form NHANES III.** *Schizophr Res* 2005, **80(1)**:19-32.
3. Correll CU, Frederickson AM, Kane JM, Manu P: **Does antipsychotic polypharmacy increase the risk for metabolic syndrome?** *Schizophr Res* 2007, **89**:(1-3)91-100.
4. Tirupati S, Chua LE: **Obesity and metabolic syndrome in a psychiatric rehabilitation service.** *Aust N Z J Psychiatry* 2007, **41(7)**:606-610.
5. Lehman AF, Lieberman JA, Dixon LB, McGlashan TH, Miller AL, Perkins DO, Kreyenbuhl J: **Practice guideline for the treatment of patients with schizophrenia, second edition.** *Am J Psychiatry* 2004, **161(2 Suppl)**:1-56.
6. Miller AL, Hall CS, Buchanan RW, Buckley PF, Chiles JA, Conley RR, Crismon ML, Ereshefsky L, Essock SM, Finnerty M, *et al*: **The Texas Medication Algorithm Project antipsychotic algorithm for schizophrenia: 2003 update.** *J Clin Psychiatry* 2004, **65(4)**:500-508.
7. Miller AL, Craig CS: **Combination antipsychotics: pros, cons, and questions.** *Schizophr Bull* 2002, **28(1)**:105-109.
8. Schumacher JE, Makela EH, Griffin HR: **Multiple antipsychotic medication prescribing patterns.** *Ann Pharmacother* 2003, **37**:(7-8)951-955.
9. Tapp A, Wood AE, Secrest L, Erdmann J, Cubberley L, Kilzieh N: **Combination antipsychotic therapy in clinical practice.** *Psychiatr Serv* 2003, **54(1)**:55-59.
10. Rittmannsberger H, Meise U, Schauflinger K, Horvath E, Donat H, Hinterhuber H: **Polypharmacy in psychiatric treatment. Patterns of psychotropic drug use in Austrian psychiatric clinics.** *Eur Psychiatry* 1999, **14(1)**:33-40.
11. Williams CL, Johnstone BM, Kesterson JG, Javor KA, Schmetzer AD: **Evaluation of antipsychotic and concomitant medication use patterns in patients with schizophrenia.** *Med Care* 1999, **37**:(4 Suppl Lilly): AS81-86.
12. Sim K, Su A, Fujii S, Yang SY, Chong MY, Ungvari GS, Si T, Chung EK, Tsang HY, Chan YH, *et al*: **Antipsychotic polypharmacy in patients with schizophrenia: a multicentre comparative study in East Asia.** *Br J Clin Pharmacol* 2004, **58(2)**:178-183.
13. Connolly M, Kelly C: **Life style and physical health in schizophrenia.** *Advances in Psychiatric treatment* 2005, **11**:125-132.
14. Ingram DG: **Is the metabolic syndrome a discrete diagnostic category or the end of a continuum? Taxomertic evidence for dimensionality in the National Health and Nutrition Examination Survey 1999-2004.** *Ann Epidemiol* 2009, **19(3)**:143-147.
15. syndrome: **Ctedsfm: Definition and the diagnostic standard for metabolic syndrome.** *Nippon Naika Gaakai Zasshi* 2005, **94(4)**:794-809.
16. Inagaki A, Inada T, Fujii Y, Yagi G: **Equivalent Dose of Psychortopics (in Japanese).** Tokyo: Seiwa Shoten; 1999.
17. Yoshimatsu H: **treatment manual for obesity (in Japanese).** Tokyo: Ishiyaku shuppan; 2003.
18. Okuma K, Okuma M: **behavior modification therapy. obesity.** *Nippon Rinsho* 2003, **61**:631-639.
19. **Exercise and Physical Activity Guide for Health Promotion 2006 ~ To Prevent Lifestyle-related Diseases ~ <Exercise Guide 2006>.** [http://www.nih.go.jp/eiken/programs/pdf/exercise_guide.pdf].
20. Nasrallah HA: **Atypical antipsychotic-induced metabolic side effects: insights from recepter-binding profiles.** *Mol Psychiatry* 2008, **13(1)**:27-35.
21. Silver H, Kogan H, Zlotogorski D: **Postural hypotension in chronically medicated schizophrenics.** *J Clin Psychiatry* 1990, **51(11)**:459-462.
22. Geslain-Biquez C, Vol S, Tichet J, Caradec A, D'Hour A, Balkau B: **The metabolic syndrome in smokers. The D.E.S.I.R. study.** *Diabetes Metab* 2003, **29(3)**:226-234.
23. Miyatake N, Wada J, Kawasaki Y, Nishii K, Makino H, Numata T: **Relationship between metabolic syndrome and cigarette smoking in the Japanese population.** *Intern Med* 2006, **45(18)**:1039-1043.
24. Hughes JR, Hatsukami DK, Mitchell JE, Dahlgren LA: **Prevalence of smoking among psychiatric outpatients.** *Am J Psychiatry* 1986, **143(8)**:993-997.
25. McCreadie RG: **Diet, smoking and cardiovascular risk in people with schizophrenia: descriptive study.** *Br J Psychiatry* 2003, **183**:534-539.
26. Lasser K, Boyd JW, Woolhandler S, Himmelstein DU, McCormick D, Bor DH: **Smoking and mental illness: A population-based prevalence study.** *JAMA* 2000, **284(20)**:2606-2610.
27. American Diabetes Association, American Psychiatric, Association of Clinical Endocrinologists, North American Association for the Study of Obesity: **Consensus development conference on antipsychotic drugs and obesity and diabetes.** *Diabetes Care* 2004, **27**:596-601.

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SPECIAL ARTICLE

WPA guidance on steps, obstacles and mistakes to avoid in the implementation of community mental health care

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This paper provides guidance on the steps, obstacles and mistakes to avoid in the implementation of community mental health care. The document is intended to be of practical use and interest to psychiatrists worldwide regarding the development of community mental health care for adults with mental illness. The main recommendations are presented in relation to: the need for coordinated policies, plans and programmes, the requirement to scale up services for whole populations, the importance of promoting community awareness about mental illness to increase levels of help-seeking, the need to establish effective financial and budgetary provisions to directly support services provided in the community. The paper concludes by setting out a series of lessons learned from the accumulated practice of community mental health care to date worldwide, with a particular focus on the social and governmental measures that are required at the national level, the key steps to take in the organization of the local mental health system, lessons learned by professionals and practitioners, and how to most effectively harness the experience of users, families, and other advocates.

Key words: Community mental health care, balanced care model, mental health services, human rights, community awareness, human resources, psychiatrists, training, quality assurance

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In 2008 the WPA General Assembly approved the Action Plan of the Association for the triennium of the Presidency of Professor Mario Maj. One of the items of the Plan is the production of guidelines on practical issues of interest to psychiatrists worldwide (1,2). The present document, providing guidance on lessons learned and mistakes to avoid in the implementation of community mental health care, is part of that project. In subsequent publications we shall describe in more detail the particular challenges and solutions identified in the various regions worldwide.

Mental health problems are common, with over 25% of people worldwide developing one or more mental disorders at some point in their life (3). They make an important contribution to the global burden of disease, as measured by disability-adjusted life years (DALYs). In 2004, neuropsychiatric disorders accounted for 13.1% of all DALYs worldwide, with unipolar depressive disorder alone contributing 4.3% towards total DALYs. In addition, 2.1% of total deaths worldwide were directly attributed to neuropsychiatric disorders. Suicide contributed a further 1.4% towards all deaths, with 86% of all suicides being committed in low- and middle-income countries (LAMICs) each year (4). A systematic review of psychological autopsy studies reported a median prevalence of mental disorder in suicide completers of 91% (5). Life expectancy is lower in people with mental health problems than in those without (in some countries dramatically so) also due to their higher levels of physical illnesses (6). Mental health problems, therefore, place a substantial burden on individuals and their families worldwide, both in terms of diminished quality of life and reduced life expectancy. The provision of high-quality mental health care is vital in reducing some of this burden (7).

In this context, the aim of this report is to present guidance on the steps, obstacles and mistakes to be avoided in the implementation of community mental health care, and to make realistic and achievable recommendations for the development and implementation of community-oriented mental health care worldwide over the next ten years. It is intended that this guidance will be of practical use to psychiatrists and other mental health and public health practitioners at all levels, including policy makers, commissioners, funders, non-governmental organizations (NGOs), service users and carers. Although a global approach has been taken, the focus is mainly upon LAMICs, as this is where challenges are most pronounced.

WHAT IS COMMUNITY-ORIENTED MENTAL HEALTH CARE?

There are wide inconsistencies between, and even within, countries in how community-oriented care is defined and interpreted. Historically speaking, in the more economically developed countries, mental health service provision has been divided into three periods (8):

- The rise of the asylum (from around 1880 to 1955), which was defined by the construction of large asylums that were far removed from the populations they served.
- The decline of the asylum or "deinstitutionalization" (after around 1955), characterized by a rise in community-based mental health services that were closer to the populations they served.
- The reform of mental health services according to an evidence-based approach, balancing and integrating elements of both community and hospital services (8-10).

Within a "balanced care model", most services are provided in community settings close to the populations served, with hospital stays being reduced as far as possible, and usually located in acute wards in general hospitals (11). Differing priorities apply to low, medium and high resource settings:

- In low-resource settings, the focus is on establishing and improving the capacity of primary health care facilities to deliver mental health care, with limited specialist back-up. Most mental health assessment and treatment occurs, if at all, in primary health care settings or in relation to traditional/religious healers. For example, in Ethiopia, most care is provided within the family/close community of neighbours and relatives: only 33% of people with persistent major depressive disorder reach either primary health care or traditional healers (12,13).
- In medium-resource settings, in addition to primary care mental health services, an extra layer of general adult mental health services can be developed as resources allow, in five categories: outpatient/ambulatory clinics; community mental health teams; acute inpatient services; community-based residential care; and work, occupation and rehabilitation services.
- In high-resource countries, in addition to the above-mentioned services, more specialized ones dedicated to specific patient groups and goals may be affordable in the same five categories described for medium-resource settings. These may include, for instance, specialized outpatient and ambulatory clinics, assertive community treatment teams, intensive case management, early intervention teams, crisis resolution teams, crisis housing, community residential care, acute day hospitals, day hospitals, non-medical day centres, recovery/employment/rehabilitation services.

It is this balanced care model approach that has been taken here in considering community-oriented care. In low-resource settings, community-oriented care will be characterized by:

- A focus on population and public health needs.
- Case finding and detection in the community.
- Locally accessible services (i.e., accessible in less than half a day).
- Community participation and decision-making in the planning and provision of mental health care systems.
- Self-help and service user empowerment for individuals and families.
- Mutual assistance and/or peer support of service users.
- Initial treatment by primary care and/or community staff.
- Stepped care options for referral to specialist staff and/or hospital beds if necessary.
- Back-up supervision and support from specialist mental health services.
- Interfaces with NGOs (for instance in relation to rehabilitation).
- Networks at each level, including between different services, the community, and traditional and/or religious healers.

Community-oriented care, therefore, draws on a wide range of practitioners, providers, care and support systems (both professional and non-professional), though particular components may play a larger or lesser role in different settings depending on the local context and the available resources, especially trained staff.

FUNDAMENTAL VALUES AND HUMAN RIGHTS

Underpinning the successful implementation of community-oriented mental health care is a set of principles that relate on the one hand to the value of community and on the other to the importance of self-determination and the rights of people with mental illness as persons and citizens (14,15). Community mental health services emphasize the importance of treating and enabling people to live in the community in a way that maintains their connection with their families, friends, work and community. In this process it acknowledges and supports the person's goals and strengths to further his/her recovery in his/her own community (16).

A fundamental principle supporting these values is the notion of people having equitable access to services in their own locality in the "least restrictive environment". While recognizing the fact that some people are significantly impaired by their illness, a community mental health service seeks to foster the service user's self-determination and his/her participation in processes involving decisions related to his/her treatment. Given the importance of families in providing support and key relationships, their participation (with the permission of the service user) in the processes of assessment, treatment planning and follow-up is also a key value in a community model of service delivery.

Various conventions identify and aim to protect the rights of service users as persons and citizens, including the recently ratified United Nations (UN) Convention on the Rights of Persons with Disability (UNCRPD) (17) and more specific charters such as the UN Principles for the Protection of Persons with Mental Illness and for the Improvement of Mental Care adopted in 1991 (18).

The above-mentioned and other international, regional and national documents specify the right of the person to be

treated without discrimination and on the same basis as other persons; the presumption of legal capacity unless incapacity can be clearly proven; and the need to involve persons with disabilities in policy and service development and in decision-making which directly affects them (18). This report has been written to explicitly align with the requirements of the UNCRPD and associated treaties and conventions.

METHODS USED BY THE WPA TASK FORCE

This guidance has been produced by taking into account the key ethical principles, the relevant evidence, and the combined experience of the authors and their collaborators. In relation to the available evidence, systematic literature searches were undertaken to identify peer-reviewed and grey literature concerning the structure, functioning and effectiveness of community mental health services or obstacles to their implementation. These literature searches were organized for most of the World Health Organization (WHO) Regions, reflecting the context of the report's main authors. There are limitations to this approach, in particular the WHO Eastern Mediterranean Region was not fully represented, and this report focuses upon adult mental health services. Accordingly, this guidance does not address the service needs of people with dementia or intellectual impairment, and of children with mental disorders.

Searches varied according to local expertise and resources. Medline was searched for every region. Other databases searched were EMBASE, PsycINFO, LILACS, SciELO, Web of Knowledge (ISI), WorldCat Dissertations and Theses (OCLC) and OpenSigle. Searches, adapted for each database, were for M.E.S.H. terms and text words relating to community mental health services and severe mental illness.

Other electronic, non-indexed sources, such as the WHO, Pan American Health Organization (PAHO), WPA, other mental health associations, and country-specific Ministry of Health websites, were also searched. Google was searched for PDFs published in European and African countries which contained the words "community mental health". Searches were limited to articles published in the languages spoken by the authors covering each WHO Region, and authors sought relevant advice from WHO Regional Advisors.

Electronic searches were supplemented by searches of the reference lists of all selected articles. Hand searches of issues from the past five years of three key journals relevant to Africa (African Journal of Psychiatry, South African Journal of Psychiatry, and International Psychiatry) were also conducted. In addition, key texts were identified: these included relevant papers and book chapters published by authors of the current work (19-24) and a special edition of the Lancet on Global Mental Health (25-29). WHO publications which provide information regarding community mental health services worldwide were also sourced (7,31-33).

For the Africa Region, original research was conducted in order to supplement published data. Twenty-one regional experts completed a semi-structured, self-report questionnaire concerning their experience in implementing community mental health care in sub-Saharan Africa (34). The experts were from 11 countries and one NGO active in several countries across sub-Saharan Africa.

COMMON ISSUES IDENTIFIED IN IMPLEMENTING COMMUNITY MENTAL HEALTH SERVICES

International and inter-cultural differences can play a significant role in shaping what mental health services are needed and possible within local settings (most particularly, the level of financial resources available (28)). Nevertheless, in preparing this report, we have been surprised to find that the most fundamentally important themes (both in terms of challenges and lessons learned) apply to many countries and regions. We therefore discuss next each of these key themes in turn.

Policies, plans and programmes

One challenge common to many countries worldwide is the difficulty in putting community mental health intentions into practice. We distinguish here between:

- National policy (or provincial or state policy in countries where health policy is set at that level): an overall statement of strategic intent (e.g., over a 5-10 year period) that gives direction to the whole system of mental health care.
- Implementation plan: an operational document setting out the specific steps needed to implement the national policy (e.g., what tasks are to be completed, by whom, by when, with which resources, and identifying the reporting lines, and the incentives and sanctions if tasks are completed or not completed).
- Mental health programmes: specific plans either for a local area (e.g., a region or a district) or for a particular sector (e.g., primary care) that specify how one component of the overall care system should be developed.

According to WHO's Mental Health Atlas (31), 62.1% of countries worldwide had a mental health policy, and 69.6% had a mental health programme in place in 2005 (with 68.3% and 90.9% of the global population covered respectively). Many of the countries without such policies were LAMICs. Even where comprehensive evidence-based mental health policies are in place, problems in implementing these policies are common (33,35). Some of the reasons may include health staff not complying with policies due to difficulties in accepting and implementing changing roles (33), the lack of accessible evidence-based information or guidelines for health staff, inadequate funding mechanisms, inadequate training of health care personnel, the lack of mechanisms for training and coaching health staff, poor supervision and support, and an overall lack of human resources (35). Detailed and highly practical implementation plans (taking into account available resources) are therefore necessary in enabling effective community mental health care provision.

Scaling up services for whole populations

A further challenge that needs to be addressed worldwide is the massive gap between population needs for mental health care (true prevalence of mental illness) and what is actually provided in mental health care (treated prevalence) (7), highlighting the importance of scaling up services for whole populations. The evidence concerning the substantial burden of mental disorders has not been translated into adequate investments in mental health care (29). The treatment gap is particularly pronounced in LAMICs, where commonly over 75% of people with mental disorders receive no treatment or care at all, and less than 2% of the health budget is spent on mental health (7). Whilst the high-income countries of the world have an average of 10.50 psychiatrists and 32.95 psychiatric nurses per 100,000 population (median figures), in low-income countries there are only 0.05 and 0.16 respectively (31). Furthermore, even within countries, the quality and level of services often vary greatly according to, for instance, patient group, location (with service provision usually being higher in urban areas), or socio-economic factors (3).

Similarly, only 10% of global mental health research is directed to the health needs of the 90% of population living in LAMICs, and only a fraction of this research activity is concerned with implementing and evaluating interventions and services (36). Methods to estimate resource needs are necessary in scaling up services. A systematic methodology for setting priorities in child health research has been developed taking into consideration that interventions should be effective, sustainable and affordable to reduce the burden of disease (37). A similar methodology was applied by the Lancet Global Mental Health Group, which focused on four groups of disorders whilst setting priorities for global mental health research: depressive, anxiety and other common mental disorders; alcohol- and other substance-abuse disorders; child and adolescent mental disorders; and schizophrenia and other psychotic disorders (30). It was recommended that interventions should be delivered by non-mental health professionals within existing routine care settings, and specialists should play a role in capacity building and supervision (38). A comprehensive review of packages of care for six leading neuropsychiatric disorders – attention/deficit hyperactivity disorder (ADHD), alcohol abuse, dementia, depression, epilepsy and schizophrenia – have also recently been proposed as means to extend treatment in LAMICs (20-24). An extensive set of treatment guidelines, also suitable for LAMICs, will be published by the WHO in 2010 as a part of their mhGAP programme. A survey of availability and feasibility of various treatments for the most prevalent mental disorders in the various age groups has been recently carried out by the WPA with its Member Societies (39).

Community awareness about mental illness

A further common barrier in identifying and treating mental disorders worldwide is the lack of awareness about them within communities, with stigma towards, and discrimination against, people with mental health problems being widespread. This is important, because effective awareness-raising campaigns can result in increased presentation of persons with mental illness to primary health care (40).

Three main strategies have been used to reduce public stigma and discrimination: protest, education, and social contact (41). Protest, by stigmatized individuals or members of the public who support them, is often applied against stigmatizing public statements, such as media reports and advertisements. Many protest interventions, for instance against stigmatizing advertisements or soap operas, have successfully suppressed negative public statements and for this purpose they are clearly very useful (42). However, it has been argued (41) that protest is not effective for improving attitudes toward people with mental illness.

Education interventions aim to diminish stigma by replacing myths and negative stereotypes with facts, and have reduced stigmatizing attitudes among members of the public. However, research on educational campaigns suggests that behaviour changes are often not evaluated.

The third strategy is personal social contact with persons with mental illness (43). For example, in a number of interventions in secondary schools, or with the police, education and personal social contact have been combined (44,45). Social contact appears to be the more efficacious part of the intervention. Factors that create an advantageous environment for interpersonal contact and stigma reduction may include equal status among participants, a cooperative interaction, and institutional support for the contact initiative (46).

For both education and contact, the content of programmes against stigma and discrimination matters. Biogenetic models of mental illness are often highlighted because viewing mental illness as a biological, mainly inherited, problem may reduce shame and blame associated with it. Evidence supports this optimistic expectation (i.e., that a biogenetic causal model of mental illness will reduce stigma) in terms of reduced blame. However, focusing on biogenetic factors may increase the perception that people with mental illness are fundamentally different, and thus biogenetic interpretations have been associated with increased social distance (47). Therefore, a message of mental illness as being "genetic" or "neurological" may be overly simplistic and unhelpful for reducing stigma. Indeed, in many LAMICs, conveying a message emphasizing the heritable nature of mental illness fuels stigma, for instance making marriage more difficult.

Anti-stigma initiatives can take place nationally as well as locally. National campaigns often adopt a social marketing

approach, whereas local initiatives usually focus on target groups. An example of a large multifaceted national campaign is *Time to Change* in England (48). It combines mass-media advertising and local initiatives. The latter try to facilitate social contact between members of the general public and mental health service users as well as target specific groups such as medical students and teachers. The programme is evaluated by public surveys assessing knowledge, attitudes and behaviour, and by measuring the amount of experienced discrimination reported by people with mental illness. Similar initiatives in other countries, such as *See Me* in Scotland (49), *Like Minds, Like Mine* in New Zealand (50), or the WPA anti-stigma initiative (51), along with similar programmes in other countries, including Japan, Brazil, Egypt and Nigeria, have reported positive outcomes (40).

In sum, there is evidence for the effectiveness of measures against stigma and against discrimination (52). On a more cautious note, individual discrimination, structural discrimination and self-stigma lead to innumerable mechanisms of stigmatization. If one mechanism of discrimination is blocked or diminished through successful initiatives, other ways to discriminate may emerge (53,54). Therefore, to substantially reduce discrimination, stigmatizing attitudes and behaviours of influential stakeholders need to change fundamentally.

Developing powerful consensus for engagement

The collaborative engagement of a wide variety of supportive stakeholders is critical to successful implementation of community-oriented mental health care. It is important to have a systemic view of the change process. The support is needed of politicians, board members and health managers whose primary focus may not be on mental health, clinicians, key members of the community including NGO providers, service users and their families, and traditional and religious healers. To involve them in the imperative for change will require different strategies and a change management team that includes people with a variety of expertise. Overall, having clear reasons and objectives for the shift to community-oriented care is essential. Messages should be concise, backed by evidence and consistent.

Developing consensus for change requires a lot of work in meeting and communicating with people. The main means of communication need to include written material and opportunities to meet with stakeholder groups. Politicians and administrators will require a compelling business case. However, others will need summaries of plans, slide presentations and the opportunity to meet and work through proposals and concerns. E-mails and website information and surveys are now valuable supplements to the process. The emphasis must be on a willingness to communicate in good faith and to do so openly and honestly doing "what it takes" to convince people of the benefits of the change process.

It is important to bear in mind that in some cases prejudice and self-interest will have to be confronted. It is helpful, at the beginning of the process, to identify both those who are likely to support change, and those who are likely to oppose it. A willingness to listen to concerns and to find ways of incorporating them, if possible, into the planning and implementation process is essential because, when such an attitude is communicated, there is an opportunity for people to feel included in the process. That done, boldness and firmness will communicate to remaining detractors the seriousness of the intent to implement change; it will also encourage supporters to believe that their aspirations for better mental health care will be realized, and thus embolden them in turn.

Engaging stakeholders requires both formal and informal opportunities to meet, receive advice and work through issues. The establishment of reference groups early on in the change process is a key formal mechanism to achieving this. These should include all the key stakeholders, in particular service users, families, clinicians and service providers, with the latter being essential to facilitate integrated systems of care further on in the process. While it is important to structure the overall process with formal meetings and communications, it is also important to be willing to convene informal meetings upon request to "trouble-shoot" situations of concern. The consultation process should result in an amalgam of "bottom-up" and "top-down" contributions to the change process. Reports on progress are an essential way of maintaining trust and building excitement to the process of successful implementation.

It is also important to bear in mind that good mental health services have established processes for ensuring that the voices of service users, their families and community providers are heard on an ongoing basis. The aim is not simply to achieve discontinuous change, but to promote an ongoing quality improvement in which consumers of mental health services know they have a major stake. Without such effective and united consortia, policy makers may find it easy to disregard the different demands of a fragmented mental health sector, and instead respond positively to health domains (e.g., HIV/AIDS) which demonstrate the self-discipline of united approach with a small number of fully agreed priorities.

Mistakes to be avoided

Several key mistakes are commonly made in the process of attempting to implement community mental health care. First, there needs to be a carefully considered sequence of events linking hospital bed closure to community service development. It is important to avoid closing hospital-based services without having successor services already in place to support discharged patients and new referrals, and also to avoid trying to build up community services while leaving hospital care (and budgets) intact. In particular, there needs to be at each stage of a reform process a workable balance between enough (mainly acute) beds and the provision of other parts of the wider system of care that can support people in crisis.

A second common mistake is to attempt system reform without including *all* the relevant stakeholders. Such initiatives especially need to include psychiatrists, who may otherwise feel subject to "top-down" decision making and react, either in the interests of patients or in their own interests, by attempting to delay or block any such changes. Other vital stakeholders to be directly included in the process will often include policy makers and politicians, health service planners, service users and carers, service providers including those in state and private practice, national and international NGOs, and those working in alternative, complementary, indigenous and religious healing traditions, and relevant national and professional associations. Typically, those groups not fully involved in a reform process will make their views known by seeking to undermine the process.

A further common mistake is linking inappropriately the reform of mental health care with narrow ideological or party political interests. This tends to lead to instability, as a change of government may reverse the policies of their predecessors. Such fault lines of division or fragmentation may also occur, for example, between service reforms proposed by psychologists and psychiatrists, or between socially and biologically oriented psychiatrists, or between clinicians and service user/consumer groups. Whatever the particular points of schism, such conflicts weaken the chance that service reforms will be comprehensive, systemic and sustainable, and they also run the risk that policy makers will refuse to adopt proposals that are not fully endorsed by the whole mental health sector.

Additional issues that may compromize the integrity of community based services include: a) an exclusive focus of community services on psychotic conditions, so that the vast majority of people with mental disorders are neglected or dealt with by professionals who do not have the appropriate expertise; and b) the neglect of patients' physical health.

Payment for services

A fundamental component in the successful implementation of mental health service provision is that of funding (10). As indicated above, funding for mental health services in LAMICs tends to be very low. This may be due in part to a stigmatizing attitude toward mental disorders, and to an absence of the recognition of the economic benefits that can accrue from improved mental health care. Ideally, the share of its health funding that a country devotes to mental health care will be informed by careful consideration of the comparative health benefits of spending on alternative forms of care. The data needed to carry out such an analysis are, however, typically not available in LAMICs.

Furthermore, whatever funding there is also tends to be concentrated on inpatient services. Correcting this is, initially, a matter of budgetary re-allocation: using resources that could have been used for other purposes to increase funding for community-oriented care.

The issue then arises of how to pay public providers (hospitals, stand-alone programs, and possibly independent individual providers such as psychiatrists) for the services that they render. The simplest forms of payment are global budgets for facilities and programs, which may be carried over from year to year with minor adjustments for inflation, and salaries for individual providers. These simple payment mechanisms have the advantage of administrative simplicity. At the same time, they have at least two important drawbacks. First, they provide no incentive for increasing either the quantity or the quality of service provision. Second, population shifts are likely to cause the demand for the services of different providers to evolve and, without taking changes in local demand into account, inequities in payment across providers are likely to emerge and grow over time. This in turn will compromize access to overburdened providers, while possibly resulting in overprovision (e.g., excessive lengths of stay) by other providers. Accordingly, countries with the technical and administrative capacity to introduce more complex payment systems should consider doing so.

For hospitals, a fairly simple alternative which is applicable where care is sectorized is to modulate budgets on the basis of the population of the facility's catchment area. Countries with the technical capacity to do so may wish to adjust the payment level per person on the basis of socio-demographic variables known to be related to the need for inpatient mental health care (for example, poverty).

For hospitals that have overlapping catchment areas, a combination of prospective payment (payment on the basis of number of admissions) and retrospective payment (payment on the basis of bed-days actually provided) may be preferable to exclusive reliance on one or the other. Pure retrospective payment encourages overprovision of services; pure prospective payment, given the difficulty of assessing reliably the degree of need for care of a person admitted for a psychiatric condition, may encourage underprovision.

For stand-alone programs or individual providers, the two main options beyond a fixed budget or a salary are fee-for-service and capitation. Fee-for-service payment encourages a higher volume of services without regard to outcomes. If certain services (e.g., prescription of medications) are paid at a higher rate per unit time than others (e.g., psychotherapy), then fee-for-service payment will also influence the mix of services provided. In addition, fee-for-service payment tends to maximize contacts with patients who are less ill, more compliant, and easier to treat. Difficult or more severely ill patients receive less care unless payments are adjusted by severity – so-called case-mix adjustments. Efficient uses of clinical time such as telephone or computer contacts are ignored because they are not reimbursed.

Capitation payment encourages increasing the number of people served. It may lead to greater accountability for the care of specific patients. In and of itself, however, unless there is competition for patients across providers, it provides no incentive for quality. Furthermore, programmes often fill up to capacity and have difficulty shifting patients to less intensive services.

Countries with the technical and administrative capacity (and political leeway) to do so should consider introducing incentives for increasing quality, either for hospitals, programs, or individual providers. Following Donabedian's seminal work, quality is commonly conceptualized as related to structure, process and outcomes (55). Adjusting payments to hospitals, programs or individual providers on the basis of structure or process indicators (e.g., formal qualifications of staff, achievement of a certain score on a model fidelity scale) assumes that these indicators actually predict quality. To the extent that they do, providing incentives for achieving a high score on those indicators is likely to be beneficial, with a neutral effect on which types of patients the provider will seek to serve. Adjusting payments based on outcomes (for example, physiological indicators of metabolic syndrome, rehospitalisation rates, employment rates) has the advantage of being directly related to a system's ostensible goals. It encourages, however, selection of less ill patients. More research is needed on how to design effective systems for encouraging quality of community-oriented mental health care that are practicable in countries with more or less developed technical and administrative capabilities.

In sum, payment systems influence patient selection, quality and amount of treatments, and outcomes, in more or less favourable ways, and different ones require varying degrees of technical and administrative capacity to be implemented successfully. Determining the optimal system or combination of systems for a particular health care setting probably depends heavily on history, infrastructure, financial resources, human resources, and other factors.

Training staff, human resources and roles of psychiatrists

Human resources are the most critical asset in mental health service provision. The gradual transformation to community-based care has resulted in changes in the ways human resources have been utilized (56). The essential changes have been a reallocation of staff from hospital to community-based service settings, the need for a new set of competencies which include recovery and rehabilitation, and the training of a wider range of workers, including informal community care workers, within the context of the practical needs of a country (57). Further, in many LAMICs, trained psychiatrists work under conditions of heavy and relentless clinical activities, and may not have dedicated time during the week for any service development duties.

Another perspective to human resource development has been the increasing emphasis on integration of mental health into a primary care setting, thereby increasing access to the vast majority of the underserved. This has necessitated the training of general health staff in basic skills in mental health care such as detection of mental disorders, provision of basic care, and referral of complex problems to specialist care. In most developing countries, there is a need for a well-rounded generalist who is capable of coping with most psychiatric problems with little access to any mental health practitioner. Further important issues are lack of insurance, out of pocket expenses, and the economic burden falling on families.

The broadening scope and the shift to community-based mental health services introduce greater levels of complexity, affecting the role of psychiatrists, broadening it to areas such as promotion and social inclusion. Psychiatrists need to work in more settings, with more staff groups. Planning and management will take a more central place. Psychiatrists are seen to possess a unique expertise, and occupy leading positions in most countries, functioning as advisers to governments and chairing drafting groups that are responsible for the production of policies and action plans. There are countries where such groups comprise only psychiatrists. They have therefore a unique opportunity to shape the process of reform in the best interest of patients, families and carers, the public and staff.

While psychosocial rehabilitation is an important part of the overall process of successful management of chronic mental disorders, its practice is still rare compared to the use of medicines (58). In many developing countries, training is scarce for occupational therapists, psychologists or social workers. In countries with few psychiatrists, numerous medical, administrative and leadership duties leave psychiatrists little time to work with rehabilitation units. Even so, in many LAMICs other resources are available – e.g., strong family and community networks, faith groups, informal employment opportunities – that might be mobilized to support the rehabilitation of people with longer-term mental disorders.

Organization development, quality assurance and service evaluation

Initiation of community mental health care services generally requires strong leadership among stakeholders based on community-oriented care concepts. It is practical to learn from successful models by using basic tools including timetables, assessment forms, job descriptions, and operational policies (9).

Coaching and maintenance activities are needed to make services robust and sustainable. Manualization of operational procedures, reference materials and ongoing supervision are essential. As community-oriented care becomes established in several regions, service components are gradually standardized, and manualized standard care becomes available.

Quality assurance is feasible even in settings with limited resources. Quality monitoring can be incorporated into routine activities by selecting target services, collecting data, and using the results for system problem-solving and future direction. External evaluation takes place at different levels. Local government checks whether service providers meet the requirement of laws or acts, while payers focus on examining the necessity of services provided. Professional peers and consumers also participate in independent evaluation.

Since the primary purpose of mental health services is to improve outcomes for individuals with mental illness, it is crucial to assess outcomes of treatments and services. Also, the results can be used to justify the use of resources. More research is, therefore, needed to provide the best possible services that would directly link to better outcomes for those in need of care.

RECOMMENDATIONS

Drawing upon the literature reviewed by our WPA Task Force, and by our own accumulated experience, we have recognized a series of commonly occuring challenges and obstacles to implementing a community-oriented system of mental health care. At the same time we have identified related steps and solutions which may work in responding positively and effectively to these barriers (19,27), as set out in Table 1.

We recommend that people interested in planning and implementing systems of mental health care which balance community-based and hospital-based service components give careful consideration to anticipating the challenges identified here, and to learning the lessons from those who have grappled with these issues so far.

Table 1 Obstacles, challenges, lessons learned and solutions in implementing community-oriented mental health care

	Obstacles and challenges	Lessons learned and solutions
Society	Disregard for, or violation of, human rights of people with mental illness	- Oversight by: civil society and service user groups, government inspectorates, international NGOs, professional associations. - Increase population awareness of mental illness and of the rights of people with mental illness and available treatments.
	Stigma and discrimination, reflected in negative attitudes of health staff	- Encourage consumer and family/carer involvement in policy making, medical training, service provision (e.g., board member, consumer provider), service evaluation (consumer satisfaction survey).
	Need to address different models of abnormal behavior	- Traditional and faith-based paradigms need to be amalgamated, blended, or aligned as much as possible with medical paradigms.
Government	Low priority given by government to mental health	- Government task force on mental illness outlines mission as a public health agenda. - Mission can encompass values, goals, structure, development, education, training, and quality assurance for community-oriented mental health system from a public health perspective. - Establish cross-party political support for the national policy and implementation plan. - Effective advocacy on mental health gap, global burden of disease, impact of mental health conditions, cost-effectiveness of interventions, reduced life expectancy. - Use of WHO and other international agencies for advocacy, linking with priority health conditions and funds, positive response to untoward events. - Identifying champions within government who have administrative and financial authority.
	Absent or inappropriate mental health policy	- Advocate for and formulate policy based upon widespread consultation with the full range of stakeholder groups, incorporating a rationalized public health perspective based on population needs, integration of service components. - Consumer involvement in policy making.
	Absent, old or inappropriate mental health legislation	- Create powerful lobby and rationale for mental health law. - Modernize mental health law so that it is relevant to community-oriented care. - Watchdog or inspectorate to oversee proper implementation of mental health law.
	Inadequate financial resources in relation to population level needs	- Help policy makers to be aware of the gap between burden of mental illness and allocated resources, and that effective treatments are available, and affordable. - Advocate for improved mental health expenditure using relevant information, arguments and targets, e.g. global burden of disease, mhGAP unmet needs. - Recruit key political and governance champions to advocate for adequate funding of initiatives.
	Lack of alignment between payment methods and expected services and outcomes	- Design a system that directly relates required service components and financially reimbursable categories of care, e.g., for evidence-based practices. - Provide small financial incentives for valued outcomes. - Create categories of reimbursement consistent with system strategy. - Develop and use key performance indicators. - Reserve transitional cost to reallocate hospital staff to move to community.
	Need to address infrastructure	- Government to plan and finance efficient use of buildings, essential supplies and electronic information systems and other to direct, monitor, and improve the system and outcomes.
	Need to address structure of community-oriented service system	- Design the mental health system from local primary care to regional care to central specialty care and fill in gaps with new resources as funding grows.